INSTITUTUL POLITEHNIC „TRAIAN VUIA" TIMIȘOARA
FACULTATEA DE ELECTROTEHNICĂ

Ing. MARIAN GH. DANCĂU

TEZĂ DE DOCTORAT

ANEXA A5-A6

conducător științific:

Prof. dr. ing. EUGEN POP

-1983-

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ANEXA A5.A:

PROGRAM PENTRU SIMULAREA EXPERIMENTULUI SC PENTRU CAZUL FUNCTIEI LOGICE **SAU* (DOMINANTA DE 1)

ANEXA A5.B:

PROGRAM PENTRU SIMULAREA EXPERIMENTULUI SC PENTRU CAZUL FUNCTIEI LOGICE **SI ** (DOMINANTA DE 0)

ANEXA A5.C:

LISTING CONSOLA SI

PROGRAM PENTRU IMPLEMEMTAREA ALGORITMULUI ** SC ** PE CALCULATORUL I-100

ANEXA A5.D:

PROGRAM PENTRU DETERMINAREA DEPENDENTEI TENSIUNII DIN NODUL CREAT PRIN DEFECT DE SCURTCIRCUIT,DE TENSIUNEA DE ALIMENTARE VCC SI DENUMARUL DE IESIRI IN SCURTCIRCUIT.

CIRCUIT INTEGRAT : 74H04

LIMBAJ : BASCH

E.T.A. : ENERTEC-SCHLUMBERGER TIP T-425

ANEXA A5.E:

EXEMPLU DE UTILIZARE A ECHIAMENTULUI DE TESTARE AUTOMATA ** MOSTEST 03D ** PENTRU TESTAREA MODULELOR DE MEMORIE TIP MMI102.PROGRAM DE TEST SCRIS IN LIMBAJUL ** MTL **.

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ANEXA A5.A:

PROGRAM PENTRU SIMULAREA EXPERIMENTULUI SC PENTRU CAZUL FUNCTIEI LOGICE **SAU** (DOMINANTA DE 1)

```
100  REM      ********************************************
110  REM      * PROGRAM PENTRU SIMULAREA EXPERIMENTULUI *
120  REM      *                    BC                    *
130  REM      *        PENTRU FUNCTIA LOGICA S           *
140  REM      ********************************************
150  REM
1000 CLEAR 1000
1010 N=8  REM   numar de ranguri de adresa
1020 NM=2^N  REM  calculul dimensiunii memoriei simulate
1030 DIM ME(NM)
1040 DIM AA(N+1)          REM  adresele aparente
1050 DIM AF(N+1)          REM  adresele fizice
1060 DIM B$(N)
1070 DIM R(N,N)           REM  matricea rezultat
1080 DIM RA$(N)           REM  rezultat (tip defect )
1090 DIM RS(N,N)          REM  rezultat (adrese in scurtcircuit)
1100 DIM D(N+1)           REM  cuvinte informatie
1110  REM
1120  REM  ***** CALCULUL ADRESELOR APARENTE
1130 FOR I=1 TO N
1140 AA(I)=NOT(2^(I-1))AND(NM-1)
1150 D(I)=I               REM  cuvintul de informatie
1160 NEXT I
1170 AA(N+1)=NM-1  :D(N+1)=0
1180  REM
1190  REM  ***** CALCULUL ADRESELOR FIZICE
1200 FOR I=1 TO N+1
1210 AS=AA(I)
1220 GOSUB 20000
1230 AF(I)=AS
1240 NEXT I
1250  REM
1260  REM
1270  REM  ***** TIPARIRE ADRESE APARENTE SI FIZICE
1280  REM
1290 LPRINT "*********************************************";STRING$(2*(N-8),"*")
1300 LPRINT "* RANG * ADRESE ";STRING$(N-8," ");"APARENTE * ADRESE";STRING$(N-8," ");" FIZICE   *"
1310 LPRINT "*      *   bin";STRING$(N-8," ");"       dec *   bin"STRING$(N-8," ");"       dec *"
1320 LPRINT "*********************************************";STRING$((2*(N-8)),"*")
1330 FOR J=0 TO N
1340 LPRINT USING "* a### *";J;
1350 AS=AA(J+1)
1360 GOSUB 19000          REM  subrutina conversie in binar
1370 LPRINT " ";AS$;
1380 LPRINT USING "   ### *";AS;
1390 AS=AF(J+1)
1400 GOSUB 19000
1410 LPRINT " ";AS$;
1420 LPRINT USING "   ###*";AS;
1430 LPRINT " *"
1440 NEXT J
1450 LPRINT "*********************************************"
1460  REM
1470  REM
1480  REM
1490  REM  ***************** EXPERIMENTUL SC
1500  REM
1510 FOR K=0 TO N-1
1520 FOR J=0 TO N-1
1530 I=(J+K)-N*INT((J+K)/N)       REM  se formeaza indicele modulo N
```

```
1540 ME(AF(I))=D(I)                    REM  operatiaa de inscriere
1550 NEXT J
1560 ME(AF(N+1))=D(N+1)                REM  inscriere in A(2p)
1570  REM
1580 FOR I=1 TO N
1590 R(I,K+1)=ME(AF(I))                REM  operatia de citire
1600 NEXT I
1610 NEXT K
1620  REM                          s-a obtinut matricea rezultat
1630  REM  *** INTERPRETAREA MATRICII REZULTAT
1640  REM
1650  REM
1660 FOR I=1 TO N
1670 FOR J=1 TO N
1680 IF R(I,J)=D(N+1) THEN 1690 ELSE 1710
1690 J=N : RA$(I)="LINIE BLOCATA"
1700 GOTO 1750
1710 IF R(I,J)=D(I) THEN 1750     REM  salt pentru elem.bun
1720 RA$(I)="SCURTC.INTRE "       REM  NU ESTE NICI D(N+1) NICI D(I)
1730 R$(I,K(I,J))=STR$(R(I,J)-1)
1740 R$(I,I)=STR$(I-1)
1750 NEXT J
1760 NEXT I
1770  REM
1780  REM  ***** TIPARIRE MATRICE REZULTAT
1790 LPRINT " MATRICE REZULTAT ":PRINT "":
1800 FOR I=1 TO N
1810 FOR J=1 TO N
1820 LPRINT USING " ###";R(I,J);
1830 NEXT J
1840 LPRINT "".
1850 NEXT I
1860 LPRINT ""
1870 LPRINT ""
1880 LPRINT ""
1890 LPRINT ""
1900  REM
1910  REM  ***** TIPARIRE REZULTATE
1920  REM
1930 LPRINT "REZULTATELE EXPERIMENTULUI 3C"
1940 LPRINT "==========================="
1950 FOR I=1 TO N
1960 LPRINT USING "A##     = "+RA$(I);I-1;
1970 FOR J=1 TO N
1980 LPRINT R$(I,J);
1990 NEXT J
2000 LPRINT ""
2010 NEXT I
2020  REM
2030  REM
2040  REM
2050 END
19000  REM  ***************** CONVERSIE NUMAR-BINAR
19010  REM
19020 AS$=""
19030 FOR I=N-1 TO 0 STEP -1
19040 AX=(AS)AND(2^I)
19050 IF AX=0 THEN AS$=AS$+"0" ELSE AS$=AS$+"1"
19060 NEXT I
19070 RETURN
```

```
20000  REM
20010  REM  ****************** SUBRUTINA INSERARE DEFECTE
20020 LI=254      REM  LINIA 0 BLOCATA PE 0
20030 HI=126      REM  LINIA 7 BLOCATA PE 1
20040 B=2^3+2^4+2^5       REM  LINIILE 3,4,5 IN SCURT.
20050 GOSUB 20200
20060 B=2^1+2^2           REM  LINIILE1,2    IN SCURT.
20070  REM
20080  REM
20200 AS=(AS)AND(LI)OR(HI)
20210 IF (AS)AND(B)<>(HI)AND(B) THEN AS=(AS)OR(B)
20220 RETURN
25000 LPRINT STRING$(15," ");
25010 LPRINT CHR$(27);CHR$(77);CHR$(27);CHR$(64);
25020 LPRINT CHR$(27);CHR$(70);CHR$(18);CHR$(128);
25030 LPRINT CHR$(27);CHR$(76);CHR$(15);CHR$(192);
25040 LPRINT CHR$(27);CHR$(67);CHR$(13);CHR$(2);CHR$(13);CHR$(10);
```

RAND	ADRESE APARENTE		ADRESE FIZICE	
	bin	dec	bin	dec
a 0	00000001	1	10000000	128
a 1	00000010	2	10000110	134
a 2	00000100	4	10000110	134
a 3	00001000	8	10111000	184
a 4	00010000	16	10111000	184
a 5	00100000	32	10111000	184
a 6	01000000	64	11000000	192
a 7	10000000	128	10000000	128
a 8	00000000	0	10000000	128

MATRICE REZULTAT

0	0	0	0	0	0	0	0
3	3	3	2	3	3	3	3
3	3	3	2	3	3	3	3
6	6	6	6	6	4	5	6
6	6	6	6	6	4	5	6
6	6	6	6	6	4	5	6
7	7	7	7	7	7	7	7
0	0	0	0	0	0	0	0

REZULTATELE EXPERIMENTULUI SC

```
A 0     = LINIE BLOCATA
A 1     = SCURTC.INTRE  1 2
A 2     = SCURTC.INTRE  1 2
A 3     = SCURTC.INTRE  3 4 5
A 4     = SCURTC.INTRE  3 4 5
A 5     = SCURTC.INTRE  3 4 5
A 6     =
A 7     = LINIE BLOCATA
```

ANEXA A5.B:

PROGRAM PENTRU SIMULAREA EXPERIMENTULUI SC PENTRU CAZUL FUNCTIEI LOGICE **SI ** (DOMINANTA DE 0)

```
100  REM      ********************************************
110  REM      * PROGRAM PENTRU SIMULAREA EXPERIMENTULUI *
120  REM      *                    BC                    *
130  REM      *        PENTRU FUNCTIA LOGICA S           *
140  REM      ********************************************
150  REM
1000 CLEAR 1000
1010 N=8  REM   numar de ranguri de adresa
1020 NM=2^N  REM  calculul dimensiunii memoriei simulate
1030 DIM ME(NM)
1040 DIM AA(N+1)          REM  adresele aparente
1050 DIM AF(N+1)          REM  adresele fizice
1060 DIM B$(N)
1070 DIM R(N,N)           REM  matricea rezultat
1080 DIM RA$(N)           REM  rezultat (tip defect )
1090 DIM RS(N,N)          REM  rezultat (adrese in scurtcircuit)
1100 DIM D(N+1)           REM  cuvinte informatie
1110  REM
1120  REM  ***** CALCULUL ADRESELOR APARENTE
1130 FOR I=1 TO N
1140 AA(I)=NOT(2^(I-1))AND(NM-1)
1150 D(I)=I               REM  cuvintul de informatie
1160 NEXT I
1170 AA(N+1)=NM-1  :D(N+1)=0
1180  REM
1190  REM  ***** CALCULUL ADRESELOR FIZICE
1200 FOR I=1 TO N+1
1210 AS=AA(I)
1220 GOSUB 20000
1230 AF(I)=AS
1240 NEXT I
1250  REM
1260  REM
1270  REM  ***** TIPARIRE ADRESE APARENTE SI FIZICE
1280  REM
1290 LPRINT "*********************************************";STRING$(2*(N-8),"*")
1300 LPRINT "* RANG * ADRESE ";STRING$(N-8," ");"APARENTE * ADRESE";STRING$(N-8," ");" FIZICE   *"
1310 LPRINT "*      *   bin";STRING$(N-8," ");"       dec *   bin"STRING$(N-8," ");"       dec *"
1320 LPRINT "*********************************************";STRING$((2*(N-8)),"*")
1330 FOR J=0 TO N
1340 LPRINT USING "* a### *";J;
1350 AS=AA(J+1)
1360 GOSUB 19000          REM  subrutina conversie in binar
1370 LPRINT " ";AS$;
1380 LPRINT USING "   ### *";AS;
1390 AS=AF(J+1)
1400 GOSUB 19000
1410 LPRINT " ";AS$;
1420 LPRINT USING "   ###*";AS;
1430 LPRINT " *"
1440 NEXT J
1450 LPRINT "*********************************************"
1460  REM
1470  REM
1480  REM
1490  REM  ***************** EXPERIMENTUL SC
1500  REM
1510 FOR K=0 TO N-1
1520 FOR J=0 TO N-1
1530 I=(J+K)-N*INT((J+K)/N)       REM  se formeaza indicele modulo N
```

```
1540 MB(AF(I))=D(I)                    REM  operatiaa de inscriere
1550 NEXT J
1560 MB(AF(N+1))=D(N+1)                REM  inscriere in A(2p)
1570  REM
1580 FOR I=1 TO N
1590 R(I,K+1)=MB(AF(1))                REM  operatia de citire
1600 NEXT I
1610 NEXT K
1620  REM                          s-a obtinut matricea rezultat
1630  REM  *** INTERPRETAREA MATRICII REZULTAT
1640  REM
1650  REM
1660 FOR I=1 TO N
1670 FOR J=1 TO N
1680 IF R(I,J)=D(N+1) THEN 1690 ELSE 1710
1690 J=N : RA$(I)="LINIE BLOCATA"
1700 GOTO 1750
1710 IF R(I,J)=D(1) THEN 1750          REM  salt pentru elem.bun
1720 RA$(I)="SCURTC.INTRE "            REM  NU ESTE NICI D(N+1) NICI D(I)
1730 R$(I,R(I,J))=STR$(R(1,J)-1)
1740 R$(I,1)=STR$(I-1)
1750 NEXT J
1760 NEXT I
1770  REM
1780  REM  ***** TIPARIRE MATRICE REZULTAT
1790 LPRINT " MATRICE REZULTAT ":PRINT "";
1800 FOR I=1 TO N
1810 FOR J=1 TO N
1820 LPRINT USING " ##";R(I,J);
1830 NEXT J
1840 LPRINT ""
1850 NEXT I
1860 LPRINT ""
1870 LPRINT ""
1880 LPRINT ""
1890 LPRINT ""
1900  REM
1910  REM  ***** TIPARIRE REZULTATE
1920  REM
1930 LPRINT "REZULTATELE EXPERIMENTULUI 3C"
1940 LPRINT "=============================="
1950 FOR I=1 TO N
1960 LPRINT USING "A##     = "+RA$(I);I-1;
1970 FOR J=1 TO N
1980 LPRINT R$(I,J);
1990 NEXT J
2000 LPRINT ""
2010 NEXT I
2020  REM
2030  REM
2040  REM
2050 END
19000  REM  ***************** CONVERSIE NUMAR-BINAR
19010  REM
19020 AS$=""
19030 FOR I=N-1 TO 0 STEP -1
19040 AX=(AS)AND(2^I)
19050 IF AX=0 THEN AS$=AS$+"0" ELSE AS$=AS$+"1"
19060 NEXT I
19070 RETURN
```

```
20000  REM
20010  REM  ****************** SUBRUTINA INSERARE DEFECTE
20020 LI=254      REM  LINIA 0 BLOCATA PE 0
20030 HI=126      REM  LINIA 7 BLOCATA PE 1
20040 B=2^3+2^4+2^5       REM  LINILE 3,4,5 IN SCURT.
20050 GOSUB 20200
20060 B=2^1+2^2           REM  LINIILE1,2     IN SCURT.
20070  REM
20080  REM
20200 AS=(AS)AND(LI)OR(HI)
20210 IF ((AS)AND(B))<>B THEN AS=(AS)AND(NOT(B))
20220 RETURN
25000 LPRINT STRING$(15," ");
25010 LPRINT CHR$(27);CHR$(77);CHR$(27);CHR$(84);
25020 LPRINT CHR$(27);CHR$(70);CHR$(15);CHR$(128);
25030 LPRINT CHR$(27);CHR$(76);CHR$(15);CHR$(192);
25040 LPRINT CHR$(27);CHR$(67);CHR$(13);CHR$(4);CHR$(13);CHR$(10);
```

RAND	ADRESE APARENTE bin	dec	ADRESE FIZICE bin	dec
a 0	11111110	254	11111110	254
a 1	11111101	253	11111000	248
a 2	11111011	251	11111000	248
a 3	11110111	247	11000110	198
a 4	11101111	239	11000110	198
a 5	11011111	223	11000110	198
a 6	10111111	191	10111110	190
a 7	01111111	127	11111110	254
a 8	11111111	255	11111110	254

MATRICE REZULTAT

0	0	0	0	0	0	0	0
3	3	3	2	3	3	3	3
3	3	3	2	3	3	3	3
6	6	6	6	6	4	5	6
6	6	6	6	6	4	5	6
6	6	6	6	6	4	5	6
7	7	7	7	7	7	7	7
0	0	0	0	0	0	0	0

REZULTATELE EXPERIMENTULUI SC

A 0 = LINIE BLOCATA
A 1 = SCURTC.INTRE 1 2
A 2 = SCURTC.INTRE 1 2
A 3 = SCURTC.INTRE 3 4 5
A 4 = SCURTC.INTRE 3 4 5
A 5 = SCURTC.INTRE 3 4 5
A 6 =
A 7 = LINIE BLOCATA

ANEXA A5.C:

LISTING CONSOLA SI
PROGRAM PENTRU IMPLEMENTAREA ALGORITMULUI ** SC ** PE
CALCULATORUL I-100

TESTARE LINII DE ADRESE
****
MODULE CU AMPLIFICATOARE DE ADRESA INVERSOARE
TESTARE MATRICE ADRESE PARE

MATRICEA REZULTAT

1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8
0	0	0	0	0	0	0	0	0	0	0	0
10	10	10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12	12	12	12

REZULTATELE EXPERIMENTULUI SC

LINIA A 0:

LINIA A 1:

LINIA A 2:

LINIA A 3:

LINIA A 4:

LINIA A 5:

LINIA A 6:

LINIA A 7:

LINIA A 8:LINIE BLOCATA

LINIA A 9:

LINIA A 10:

LINIA A 11:

TESTARE MATRICE ADRESE IMPARE

MATRICEA REZULTAT

1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9
11	11	11	11	11	11	11	11	11	11	10	11
11	11	11	11	11	11	11	11	11	11	10	11
12	12	12	12	12	12	12	12	12	12	12	12

REZULTATELE EXPERIMENTULUI SC

LINIA A 0:

LINIA A 1:

LINIA A 2:

LINIA A 3:

LINIA A 4:

LINIA A 5:

LINIA A 6:

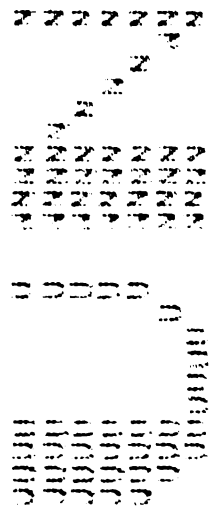
LINIA A 7:

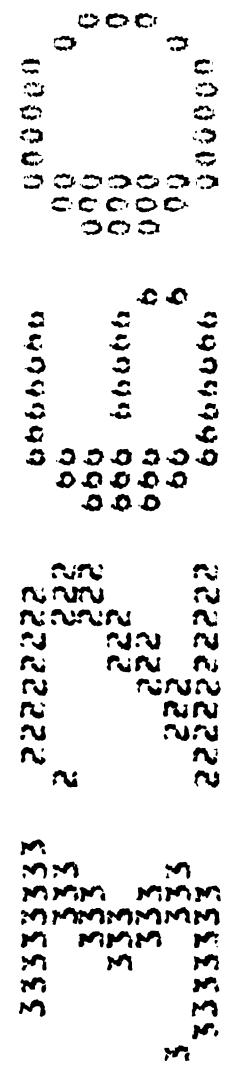
LINIA A 8:

LINIA A 9: 10 10 10 10 10 10 10 10 10 10 10

LINIA A 10: 9

LINIA A 11:





```
      JOB AAAAAA,AN:3260,PN:0001
TWE   STARTED


      CENTRUL DE CALCUL AL ITC FILIALA TIMISOARA                SYSTEM  R=006
      0003  AAAAAA      AN = 3260   PM = 0001   DATE = 20/10/83-293
      H.DEB = 14H 47M 20S   H.FIN = 14H 47M 26S   TIME = 00000109
      LGP = 00040   MEM = 00006   IO = 00000022   IT = 00000002   ODE = 000
      PR = 01 CR = 01
```

```
         SYSRUN LISTMM
TMM      STARTED
```

```
                                ;*****************************************************************
                                ;       THIS PROGRAM WILL EXERCISE MOS MEMORY
                                ; USING THE SC-ALGORITHM
                                ;DATE:05-OCT-83
                                ;AUTHORS:M.P & I.D.
                                ;       I.Y.C. TIMISOARA
                                ;*****************************************************************
                                ;   BUFFER AREA
                                        .ENABLE ABS     ;**********FOR DEBUGGING
                                        .DSABLE GBL
                                        .=1000
001000  012706  002000                  MOV     #2000,SP
                                        .=2000
002000  012     015     122     REZ:    .ASCII  <12><15>/REZULTATELE EXPERIMENTULUI SC   /<12><15>/*/
002003  105     122     125
002006  114     120     101
002011  122     105     114
002014  105     040     105
002017  130     120     105
002022  122     111     115
002025  105     116     124
002030  125     113     125
002033  111     040     123
002036  103     040     040
002041  040     012     015
002044  114
                                        .EVEN
002046  012     015     114     PRI:    .ASCII  <12><15>/LINIA A   :*/
002051  111     116     111
002054  101     040     101
002057  040     040     040
002062  072     100
                                        .EVEN
002064  012     015     116     BLO:    .ASCII  /LINIE  BLOCATA*/
002067  111     105     040
002072  111     102     114
002075  117     103     101
002100  124     101     102
                                        .EVEN
002102  040     040     040     R21:    .ASCII  /     */
002105  040     040     100
                                        .EVEN
002112  012     015     100     CRLF:   .ASCII  <12><15>/*/
                                        .EVEN
002116  012     015     124     TITLE:  .ASCII  <12><15>/TESTARE LINII DE ADRESE/<12><15>
002121  124     105     123
002124  124     101     122
002127  105     040     114
002132  111     111     111
002135  040     124     123
002140  040     101     122
002143  122     105     123
002146  123     117     115
002151  052             052             .ASCII  /**********************/<12><15>/*/
002157  052     052     052
```

```
 002162      052      052      052
 002165      052      052      052
 002170      052      052      052
 002173      052      052      052
 002176      052      052      012
 002201      015      100
27
28          002204      012      015      115  MATR:   .ASCII  <12><15>/MATRICEA REZULTAT/<12><15>/*/
 002207      101      124      122
 002212      111      103      105
 002215      101      040      122
 002220      105      132      125
 002223      114      124      101
 002226      124      012      015
 002231      100
29                                               .EVEN
30                                               .EVEN
31            2232      124      105      123  PARE:   .ASCII  /TESTARE MATRICE ADRESE PARE/<12><15>/*/
 002235      124      101      122
 002240      105      040      115
 002243      101      124      122
 002246      111      103      105
 002251      040      101      104
 002254      122      105      123
 002257      105      040      120
 002262      101      122      105
 002265      012      015      100
32                                               .EVEN
33          002270      124      105      123  IMPARE: .ASCII  /TESTARE MATRICE ADRESE IMPARE/<12><15>/*/
 002273      124      101      122
 002276      105      040      115
 002301      101      124      122
 002304      111      103      105
 002307      040      101      104
 002312      122      105      123
 002315      105      040      111
 002320      115      120      101
 002323      122      105      012
 002326      015      100
34                                               .EVEN
35                                  ;XOR:   0            ;****MUST BE DEFINED FOR 'OR'LOGICAL FUNCTIONS
36                                                       ;IF DEFAULT,LOGICAL FUNCTION IS 'AND'
37          002330   000000      PARIMP: 0                ;EVEN OR ODD ADDRESSES
38                   177572      SR0=177572           ;**********MMU REGISTER************
39          002332   000000      MMAVA:  0            ;***  BYTE FOR MMU AVALABLE *****
40          002334               RIJ:    .BLKW   304      ;196 WORDS FOR MATRIX
41          003144               TIP:    .BLKB   112      ;72 COLUMNS FOR A LINE
42                                           .EVEN
43          003256   177560      KCSR:   177560       ;CONTROL STATUS AND BUFFER
44          003260   177562      KDBR:   177562       ;REGISTERS FOR TT:
45          003262   177564      TCSR:   177564
46          003264   177566      TDBR:   177566
47          003266               TCHAM:                       ; TABELA CODARE HAMMING
48          003266   000017              .WORD   15.                  ; 1
49          003270   000063              .WORD   51.                  ; 2
50          003272   000074              .WORD   60.                  ; 3
51          003274   000125              .WORD   85.                  ; 4
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    52    003276  000132           .WORD   90.          ; 5
    53    003300  000146           .WORD   102.         ; 6
    54    003302  000151           .WORD   105.         ; 7
    55    003304  000226           .WORD   150.         ; 8
    56    003306  000231           .WORD   153.         ; 9
    57    003310  000245           .WORD   165.         ; 10
    58    003312  000252           .WORD   170.         ; 11
    59    003314  000303           .WORD   195.         ; 12
    60    003316  000000           .WORD   0            ; 0
    61    003320           TDHAM:                  ; TABELA DECODARE HAMMING
    62    003320  000000           .WORD   0.      ; 0
    63    003322  000000           .WORD   0.      ; 1
    64    003324  000000           .WORD   0.      ; 2
    65    003326  000000           .WORD   0.      ; 3
    66    003330  000000           .WORD   0.      ; 4
    67    003332  000000           .WORD   0.      ; 5
    68    003334  000004           .WORD   4.      ; 6
    69    003336  000004           .WORD   4.      ; 7
    70    003340  000005           .WORD   5.      ; 8
    71    003342  000005           .WORD   5.      ; 9
    72    003344  000001           .WORD   1.      ; 10
    73    003346  000001           .WORD   1.      ; 11
    74    003350  000001           .WORD   1.      ; 12
    75    003352  000001           .WORD   1.      ; 13
    76    003354  000001           .WORD   1.      ; 14
    77    003356  000001           .WORD   1.      ; 15
    78    003360  000000           .WORD   0.      ; 16
    79    003362  000000           .WORD   0.      ; 17
    80    003364  000002           .WORD   2.      ; 18
    81    003366  000002           .WORD   2.      ; 19
    82    003370  000001           .WORD   1.      ; 20
    83    003372  000001           .WORD   1.      ; 21
    84    003374  000010           .WORD   8.      ; 22
    85    003376  000010           .WORD   8.      ; 23
    86    003400  000011           .WORD   9.      ; 24
    87    003402  000011           .WORD   9.      ; 25
    88    003404  000000           .WORD   0.      ; 26
    89    003406  000000           .WORD   0.      ; 27
    90    003410  000003           .WORD   3.      ; 28
    91    003412  000003           .WORD   3.      ; 29
    92    003414  000001           .WORD   1.      ; 30
    93    003416  000001           .WORD   1.      ; 31
    94    003420  000000           .WORD   0.      ; 32
    95    003422  000000           .WORD   0.      ; 33
    96    003424  000002           .WORD   2.      ; 34
    97    003426  000002           .WORD   2.      ; 35
    98    003430  000012           .WORD   10.     ; 36
    99    003432  000012           .WORD   10.     ; 37
   100    003434  000003           .WORD   3.      ; 38
   101    003436  000003           .WORD   3.      ; 39
   102    003440  000002           .WORD   2.      ; 40
   103    003442  000002           .WORD   2.      ; 41
   104    003444  000013           .WORD   11.     ; 42
   105    003446  000013           .WORD   11.     ; 43
   106    003450  000003           .WORD   3.      ; 44
   107    003452  000003           .WORD   3.      ; 45
   108    003454  000001           .WORD   1.      ; 46
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109     003456  000001          .WORD   1.                      ;47
110     003460  000002          .WORD   2.                      ;48
111     003462  000002          .WORD   2.                      ;49
112     003464  000002          .WORD   2.                      ;5[illegible]
113     003466  000002          .WORD   2.                      ;5[illegible]
[illegible]
147     003572  000004          .WORD   4.                      ;85
148     003574  000004          .WORD   4.                      ;86
149     003576  000004          .WORD   4.                      ;87
150     003600  000005          .WORD   5.                      ;88
151     003602  000005          .WORD   5.                      ;89
152     003604  000005          .WORD   5.                      ;90
153     003606  000005          .WORD   5.                      ;91
154     003610  000001          .WORD   1.                      ;92
155     003612  000001          .WORD   1.                      ;93
156     003614  000005          .WORD   5.                      ;94
157     003616  000005          .WORD   5.                      ;95
158     003620  000002          .WORD   2.                      ;96
159     003622  000002          .WORD   2.                      ;97
160     003624  000006          .WORD   6.                      ;98
161     003626  000006          .WORD   6.                      ;99
162     003630  000006          .WORD   6.                      ;100
163     003632  000006          .WORD   6.                      ;101
164     003634  000006          .WORD   6.                      ;102
165     003636  000006          .WORD   6.                      ;103
```

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003640  000007          .WORD   7.      ; 104
003642  000007          .WORD   7.      ; 105
003644  000007          .WORD   7.      ; 106
003646  000007          .WORD   7.      ; 107
003650  000007          .WORD   7.      ; 108
003652  000007          .WORD   7.      ; 109
003654  000003          .WORD   3.      ; 110
003656  000003          .WORD   3.      ; 111
003660  000016          .WORD   14.     ; 112
003662  000016          .WORD   14.     ; 113
003664  000007          .WORD   7.      ; 114
003666  000007          .WORD   7.      ; 115
003670  000004          .WORD   4.      ; 116
003672  000004          .WORD   4.      ; 117
003674  000006          .WORD   6.      ; 118
003676  000006          .WORD   6.      ; 119
003700  000007          .WORD   7.      ; 120
003702  000007          .WORD   7.      ; 121
003704  000005          .WORD   5.      ; 122
003706  000005          .WORD   5.      ; 123
003710  000006          .WORD   6.      ; 124
003712  000006          .WORD   6.      ; 125
003714  000017          .WORD   15.     ; 126
003716  000017          .WORD   15.     ; 127
003720  000000          .WORD   0.      ; 128
003722  000000          .WORD   0.      ; 129
003724  000011          .WORD   9.      ; 130
003726  000011          .WORD   9.      ; 131
003730  000012          .WORD   10.     ; 132
003732  000012          .WORD   10.     ; 133
003734  000010          .WORD   8.      ; 134
003736  000010          .WORD   8.      ; 135
003740  000011          .WORD   9.      ; 136
003742  000011          .WORD   9.      ; 137
003744  000013          .WORD   11.     ; 138
003746  000013          .WORD   11.     ; 139
003750  000010          .WORD   8.      ; 140
003752  000010          .WORD   8.      ; 141
003754  000001          .WORD   1.      ; 142
003756  000001          .WORD   1.      ; 143
003760  000014          .WORD   12.     ; 144
003762  000014          .WORD   12.     ; 145
003764  000010          .WORD   8.      ; 146
003766  000010          .WORD   8.      ; 147
003770  000010          .WORD   8.      ; 148
003772  000010          .WORD   8.      ; 149
003774  000010          .WORD   8.      ; 150
003776  000010          .WORD   8.      ; 151
004000  000011          .WORD   9.      ; 152
004002  000011          .WORD   9.      ; 153
004004  000011          .WORD   9.      ; 154
004006  000011          .WORD   9.      ; 155
004010  000011          .WORD   9.      ; 156
004012  000011          .WORD   9.      ; 157
004014  000015          .WORD   13.     ; 158
004016  000015          .WORD   13.     ; 159
004020  000012          .WORD   10.     ; 160
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223     004022  000012                  .WORD   10.             ; 161
224     004024  000016                  .WORD   14.             ; 162
225     004026  000016                  .WORD   14.             ; 163
226     004030  000012                  .WORD   10.             ; 164
227     004032  000012                  .WORD   10.             ; 165
228     004034  000012                  .WORD   10.             ; 166
229     004036  000012                  .WORD   10.             ; 167
230     004040  000013                  .WORD   11.             ; 168
231     004042  000013                  .WORD   11.             ; 169
232     004044  000013                  .WORD   11.             ; 170
233     004046  000013                  .WORD   11.             ; 171
234     004050  000017                  .WORD   15.             ; 172
235     004052  000017                  .WORD   15.             ; 173
236     004054  000013                  .WORD   11.             ; 174
237     004056  000013                  .WORD   11.             ; 175
238     004060  000013                  .WORD   11.             ; 176
239     004062  000013                  .WORD   11.             ; 177
240     004064  000002                  .WORD   2.              ; 178
241     004066  000002                  .WORD   2.              ; 179
242     004070  000012                  .WORD   10.             ; 180
243     004072  000012                  .WORD   10.             ; 181
244     004074  000010                  .WORD   8.              ; 182
245     004076  000010                  .WORD   8.              ; 183
246     004100  000011                  .WORD   9.              ; 184
247     004102  000011                  .WORD   9.              ; 185
248     004104  000013                  .WORD   11.             ; 186
249     004106  000013                  .WORD   11.             ; 187
250     004110  000003                  .WORD   3.              ; 188
251     004112  000003                  .WORD   3.              ; 189
252     004114  000012                  .WORD   10.             ; 190
253     004116  000012                  .WORD   10.             ; 191
254     004120  000014                  .WORD   12.             ; 192
255     004122  000014                  .WORD   12.             ; 193
256     004124  000014                  .WORD   12.             ; 194
257     004126  000014                  .WORD   12.             ; 195
258     004130  000010                  .WORD   8.              ; 196
259     004132  000010                  .WORD   8.              ; 197
260     004134  000014                  .WORD   12.             ; 198
261     004136  000014                  .WORD   12.             ; 199
262     004140  000015                  .WORD   13.             ; 200
263     004142  000015                  .WORD   13.             ; 201
264     004144  000011                  .WORD   9.              ; 202
265     004146  000011                  .WORD   9.              ; 203
266     004150  000015                  .WORD   13.             ; 204
267     004152  000015                  .WORD   13.             ; 205
268     004154  000015                  .WORD   13.             ; 206
269     004156  000015                  .WORD   13.             ; 207
270     004160  000016                  .WORD   14.             ; 208
271     004162  000016                  .WORD   14.             ; 209
272     004164  000014                  .WORD   12.             ; 210
273     004166  000014                  .WORD   12.             ; 211
274     004170  000004                  .WORD   4.              ; 212
275     004172  000004                  .WORD   4.              ; 213
276     004174  000015                  .WORD   13.             ; 214
277     004176  000015                  .WORD   13.             ; 215
278     004200  000014                  .WORD   12.             ; 216
279     004202  000014                  .WORD   12.             ; 217
```

```
        004204  000005                  .WORD   5.                      ; 218
        004206  000005                  .WORD   5.                      ; 219
        004210  000015                  .WORD   13.                     ; 220
        004212  000015                  .WORD   13.                     ; 221
        004214  000017                  .WORD   15.                     ; 222
        004216  000017                  .WORD   15.                     ; 223
        004220  000016                  .WORD   14.                     ; 224
        004222  000016                  .WORD   14.                     ; 225
        004224  000014                  .WORD   12.                     ; 226
        004226  000014                  .WORD   12.                     ; 227
        004230  000017                  .WORD   15.                     ; 228
        004232  000017                  .WORD   15.                     ; 229
        004234  000006                  .WORD   6.                      ; 230
        004236  000006                  .WORD   6.                      ; 231
        004240  000007                  .WORD   7.                      ; 232
        004242  000007                  .WORD   7.                      ; 233
        004244  000016                  .WORD   14.                     ; 234
        004246  000016                  .WORD   14.                     ; 235
        004250  000015                  .WORD   13.                     ; 236
        004252  000015                  .WORD   13.                     ; 237
        004254  000017                  .WORD   15.                     ; 238
        004256  000017                  .WORD   15.                     ; 239
        004260  000016                  .WORD   14.                     ; 240
        004262  000016                  .WORD   14.                     ; 241
        004264  000016                  .WORD   14.                     ; 242
        004266  000016                  .WORD   14.                     ; 243
        004270  000016                  .WORD   14.                     ; 244
        004272  000016                  .WORD   14.                     ; 245
        004274  000012                  .WORD   10.                     ; 246
        004276  000012                  .WORD   10.                     ; 247
        004300  000013                  .WORD   11.                     ; 248
        004302  000013                  .WORD   11.                     ; 249
        004304  000017                  .WORD   15.                     ; 250
        004306  000017                  .WORD   15.                     ; 251
        004310  000017                  .WORD   15.                     ; 252
        004312  000017                  .WORD   15.                     ; 253
        004314  000017                  .WORD   15.                     ; 254
        004316  000017                  .WORD   15.                     ; 255
        004320  000000          TYPDAT: 0               ;GET CHAR BUFFER
                000002                  .RADIX  2
                                        .IF     NDF,XOR
        004322  000001          A:      1
        004324  000002                  10
        004326  000004                  100
        004330  000010                  1000
        004332  000020                  10000
        004334  000040                  100000
        004336  000100                  1000000
        004340  000200                  10000000
        004342  000400                  100000000
        004344  001000                  1000000000
        004346  002000                  10000000000
        004350  004000                  100000000000
        004352  000000                  0
        004354     115     117     104  AMPLIF: .ASCII  /MODULE CU AMPLIFICATOARE  DE ADRESA  INVERSOARE/<1010><1101>' ./
  004357     125     114     105
  004362     040     103     125
```

```
004365  000101  000115
004370  000111  000111
004373  000111  000103
004376  000124  000117
004401  000122  000105
004404  000040  000040
004407  000040  000101
004412  000122  000105
004415  000101  000040
004420  000111  000116
004423  000105  000122
004426  000117  000131
004431  000105  000015
004434  000012
```

```
                        .LEVEL
                        .IFF
A:                      .WORD   ^B1111111111110
                        .WORD   ^B1111111111101
                        .WORD   ^B1111111111011
                        .WORD   ^B1111111110111
                        .WORD   ^B1111111101111
                        .WORD   ^B1111111011111
                        .WORD   ^B1111110111111
                        .WORD   ^B1111101111111
                        .WORD   ^B1111011111111
                        .WORD   ^B1110111111111
                        .WORD   ^B1101111111111
                        .WORD   ^B1011111111111
                        .WORD   ^B0111111111111
                        .WORD   ^B1111111111111
AMPLIF:                 .ASCII  /MODULE CU AMPLIFICATOARE DE ADRESA NEINVERSOARE/<1010><1101>'<
                        .EVEN
                        .ENDC
                        .RADIX  8
;.TYPE TITLE
START:                  MOV             #TITLE,R0
                JSR     PC,TYPOUT
                MOV     #AMPLIF,R0
                JSR     PC,TYPOUT
;**********  HERE IS PARITY  DISABLE  ********
                CLR     @#172110
;******* HERE IS MMU SETTING UP  *****
MMU:            CLR     @#SR0   ;DISABLE MMU
                LDC     @#MMAVA ;SET UP AVAILABLE MMU
                MOV     #1600,R2
                MOV     #172340,R1      ;R1 IS POINTING TO PAR0
                CLR     (R1)+   ;PAR0 WILL POINT TO BANK 0
52$:            ADD     #200,R2
                MOV     R2,(R1)+        ;SET UP PAR1-PAR6
                CMP     R1,#172356
                BLOS    52$
                MOV     #7600,(R1)      ;PAR7 IS POINTING TO I/O PAGE
                MOV     #172300,R1      ;SET UP PDR0-PDR7
54$:            MOV     #77406,(R1)+    ;ENABLE RWE
                CMP     R1,#172316
                BLOS    54$
                INC     @#SR0           ;ENABLE MMU
;       SELECT THE LINES OF ADDRESSES
```

```
                                          MOV     #PARE,R0
                                          JSR     PC,TYPOUT
                                  MAIN:
                                  ; INITIATE THE MATRIX INDEX
                                          CLR     R0                      ; J=0
                                      30$: CLR    R1                        ; I=0
                                  ; COMPUTE K MODULO 14
                                  2$:     MOV     R0,R2
                                          MOV     R1,R3
                                          ADD     R2,R3                   ; CLT K=I+J
                                          CMP     #14,R3                  ; K<14 ?
                                          BGT     1$
                                          SUB     #14,R3
                                  ;GET ADDRESS ,CODE THE DATA WORD AND WRITE IT
                                  1$:     JSR     PC,GETADR
                                          JSR     PC,CODARE
                                  ; BRANCH IN THE LOOP
                                          INC     R1
                                          CMP     #14,R1
                                          BGT     2$
                                  ; THE LAST ELEMENT
                                          MOV     #14,R3
                                          JSR     PC,GETADR
                                          JSR     PC,CODARE
                                  ; READ A MEMORY LOCATION AND WRITE IT
                                  ; INTO MATRIX.
                                          CLR     R1                      ; I=0
                                  3$:     MOV     R1,R3
                                          JSR     PC,GETADR
                                          JSR     PC,DECOD
                                          JSR     PC,WRIJ
                                          INC     R1
                                          CMP     #14,R1
                                          BGT     33
                                          INC     R0                      ; J=J+1
                                          CMP     #14,R0                   ; BRANCH IN LOOP
                                          BGT     30$
                                  ; PRINT THE RESULTING MATRIX
                                          MOV     R0,-(SP)
                                          MOV     #MATR,R0
                                          JSR     PC,TYPOUT
                                          MOV     (SP)+,R0
                                          JSR     PC,TIPAR
                                  ; TYPE THE TEST RESULTS
                                          MOV     #REZ,R0
                                          JSR     PC,TYPOUT
                                  ; BEGIN ANALYSIS
                                          CLR     R1                      ; I=0
                                  15$:    CLR     R2                       ; PUT I IN OUTPUT BUFFER
                                          MOV     #PRI,R0
                                          ADD     #11,R0
                                            MOV     R1,-(SP)
                                          JSR     PC,$CBDMG
                                            MOV     (SP)+,R1
                                          MOV     #PRI,R0
                                          JSR     PC,TYPOUT               ; PRINT LINIA AI'
                                          CLR     R0                      ; J = 0
```

```
                                        ; GET MATRIX ELEMENT
004764  004767  000542          13$:  JSR     PC,GETRIJ       ; R2 = R(I,J)
004770  005201                        INC     R1
004772  020201                        CMP     R2,R1
004774  001420                        BEW     11$             ; R2 = I+1 ?
004776  005702                        TST     R2              ; NO, R2 = 0 ?
005000  001442                        BEW     62$             ; YES, A VERY LARGE BRANCH
005002  010046                        MOV     R0,-(SP)        ; SAVE J,I
005004  010146                        MOV     R1,-(SP)
005006  005302                        DEC     R2              ; R2 = 1
005010  010201                        MOV     R2,R1           ;
005012  012700  002100                MOV     #R21,R0
005016  004767  001200                JSR     PC,$CBDMG
005022  012700  002100                MOV     #R21,R0
005026  004767  001012                JSR     PC,TYPOUT       ; PRINT 'R2-1'
005032  012601                        MOV     (SP)+,R1        ; RESTORE I,J
005034  012600                        MOV     (SP)+,R0
005036  005301                  11$:  DEC     R1              ; RESTORE I
005040  005200                        INC     R0
005042  022700  000014                CMP     #14,R0
005046  003346                        BGT     13$             ; BRANCH IN LOOP
005050  005201                  14$:  INC     R1              ; I=I+1
005052  010046                        MOV     R0,-(SP)        ; LINE OK
005054  012700  002112                MOV     #CRLF,R0
005060  004767  000760                JSR     PC,TYPOUT       ; PRINT <CR><LF>
005064  012600                        MOV     (SP)+,R0
005066  022701  000014                CMP     #14,R1
005072  003316                        BGT     15$
                                ; TRY AGAIN
005074  005767  175230                  TST PARIMP
005100  001404                        BEW     25$
005102  000167  001160                JMP     STOP
005106  000167  000372          62$:  JMP     12$
005112  012767  000001  175210  25$:  MOV     #1,PARIMP
                000033                .REPT   33
                                      MOV     #CRLF,R0
                                      JSR     PC,TYPOUT
                                      .ENDR
005454  012700  002270                MOV     #IMPARE,R0
005460  004767  000364                JSR     PC,TYPOUT
005464  012700  002046                MOV     #PRI,R0
005470  062700  000012                ADD     #12,R0
005474  112720  000040                MOVB    #40,(R0)+
005500  112710  000040                MOVB    #40,(R0)
005504  000167  177052                JMP     MAIN
005510  005301            12$:  DEC     R1
005512  010046                        MOV     R0,-(SP)
005514  012700  002064                MOV     #BLD,R0
005520  004767  000324                JSR     PC,TYPOUT       ; LINE IS STUCK-AT
005524  012600                        MOV     (SP)+,R0
005526  000167  177322                JMP     14$
005532  000167  176704          20$:  JMP     START
005536  010046            GETRIJ: MOV   R0,-(SP)        ; SAVE J
005540  010146                    MOV   R1,-(SP)        ; SAVE I
005542  070027  000014            MUL   #14,R0
005546  160100                    SUB   R1,R0
005550  011601                    MOV   (SP),R1
```

```
                                        ADD     R1,R0
                                        ASL     R0
                                        MOV     #RIJ,R1         ; RIJ+(I+14*J)*2
                                        ADD     R1,R0
                                        MOV     (R0),R2
                                        MOV     (SP)+,R1
                                        MOV     (SP)+,R0
                                        RTS     PC
                                GETADR: MOV     R3,-(SP)        ; PUSH K INTO STACK
                                        MOV     #A,R3           ; GET ADDRESS OF ADDRESS TABLE
                                        ASL     R5              ; K IS WORD ALIGNEATED
                                        ADD     R5,R3           ; GET EFECTIVE ADDRESS IN R5
                                        MOV     (R3),R3
                                        ASL     R3
                                        ADD     #1000,R3        ; ADDRESS OF THE SECOND MEMORY BOARD
                                        MOV     R3,R5
                                        MOV     (SP)+,R3        ; RESTORE K
                                        RTS     PC              ; EXIT
                                CODARE: MOV     R4,-(SP)        ; PUSH R4 INTO STACK
                                        MOV     R3,-(SP)        ; PUSH K INTO STACK
                                        MOV     #TCODAM,R4      ; GET HAMMING TABLE ADDRESS
                                        ASL     R3
                                        ADD     R3,R4
                                        MOV     (R4),R0         ; GET CODED DATA WORD
                                        TST     #PARIMP         ; IS YOUR ADDRESS EVEN ?
                                        BEQ     3$              ; YES
                                        SWAB    R1              ; NO, ODD ADDRESS
                                3$:     MOV     R1,(R5)         ; PUT D(K) INTO A(K)
                                        MOV     (SP)+,R3        ; RESTORE REGISTERS
                                        MOV     (SP)+,R4
                                        RTS     PC              ; EXIT
                                DECOD:  MOV     R4,-(SP)        ; PUSH R4 INTO STACK
                                        MOV     (R5),R5         ; GET DATA FROM ADDRES
                                        TST     #PARIMP         ; EVEN ADDRESS ?
                                        BEQ     2$              ; YES, BRANCH
                                        SWAB    R5              ; ODD ADDRESS
                                2$:     BIC     #177400,R5      ; CLEAR HIGH ORDER BYTE
                                        ASL     R5
                                        MOV     #TDUAM,R4       ; GET DECODING ADDRESS
                                        ADD     R5,R4
                                        MOV     (R4),R5         ; GET DATA
                                        MOV     (SP)+,R4        ; RESTORE R4
                                        RTS     PC              ; EXIT
                                WRIJ:   MOV     R0,-(SP)        ; PUSH I AND J INTO STACK
                                        MOV     R1,-(SP)
                                        MUL     #14,R0          ; GET ADDRESS
                                        MOV     R1,R0           ; RIJ+(I+14*J)*2
                                        MOV     (SP),R1         ; I
                                        ADD     R1,R0           ; I+14*J
                                        ASL     R0              ; (I+14*J)*2
                                        MOV     #RIJ,R1         ; GET MATRIX ADDRESS
                                        ADD     R1,R0           ; RIJ+(I+14*J)*2
                                        MOV     R5,(R0)         ; WRITE DATA INTO MATRIX
                                        MOV     (SP)+,R1        ; RESTORE REGISTERS
                                        MOV     (SP)+,R0
                                        RTS     PC              ; EXIT
                                PRINTI: MOV     R1,-(SP)        ; SAVE REGISTERS
```

```
                                        MOV R0,-(SP)            ; GET BUFFER ADDRESS
                                    MOV     #TIP,R0
                                      MOVB    #12,107(R0)
                                      MOVB    #15,110(R0)
                                    MOVB    #100,112(R0)        ; PUT TERMINATOR
                                      MOVB    #100,111(R0)
                                    JSR     PC,TYPOUT           ; TYPE THE LINE
                                    MOV     #TIP,R0             ; CLEAR BUFFER
                                    MOV     #110,R1             ; BUFFER LENGTH
                                10$:CLRB    (R0)+
                                    DEC     R1
                                    TST     R1
                                    BNE     10$
                                    MOV     (SP)+,R0            ; RESTORE REGISTERS
                                    MOV     (SP)+,R1
                                    RTS     PC                  ; EXIT
                                TYPOUT:
                                TYPA: MOVB    (R0)+,TYPDAT      ; GET CHAR
                                    CMPB    #100,TYPDAT         ; CHECK FOR '@' CHAR
                                    BNE     TYPB                ; BRANCH IF NOT '@'
                                    RTS     PC                  ; TERMINATOR CHAR, EXIT
                                TYPB: MOVB    TYPDAT,@TDBR      ; OUTPUT CHAR TO PRINTER
                                    TSTB    @TCSR               ; WAIT FOR TT READY
                                    BPL     .-4
                                    BR      TYPA                ; GET NEW CHAR
                                TYPAR:  MOV R0,-(SP)
                                        MOV     R1,-(SP)
                                        MOV     R2,-(SP)
                                        MOV     R3,-(SP)
                                        MOV     R4,-(SP)
                                        MOV     R5,-(SP)
                                    MOV     #RIJ,R5             ; GET MATRIX ADDRESS
                                    CLR     R3                  ; I=0
                                6$: CLR     R4                  ; J=0
                                    MOV     #TIP,R0             ; GET OUTPUT BUFFER ADDRESS
                                7$: MOV     (R5),R1             ; GET THE NUMBER TO BE CONVERTED
                                    JSR     PC,$CBDMG           ; CONVERT NUMBER TO DECIMAL
                                    INC     R4                  ; J=J+1
                                    CMP     #14,R4              ; FINISH A LINE ?
                                    BGT     4$                  ; NO, BRANCH
                                    JSR     PC,PRINTL           ; YES,PRINT LINE
                                    MOV     #RIJ,R5
                                INC R3      ; I=I+1
                                    CMP     #14,R3              ; FINISH ALL COLUMNS ?
                                    BGT     5$                  ; NO, GO AWAY
                                      MOV       (SP)+,R5
                                      MOV       (SP)+,R4
                                      MOV       (SP)+,R3
                                      MOV       (SP)+,R2
                                      MOV       (SP)+,R1
                                      MOV       (SP)+,R0
                                    RTS     PC                  ; EXIT
                                5$:   MOV       R3,R2
                                        ASL     R2
                                    ADD     R2,R5               ; GET NEW ELEMENT
                                    BR      6$                  ; LOOP FOR A NEW LINE
                                4$: ADD     #30,R5              ; LOOP IN LINE
```

```
606     006220  000743                          BR      7$
607     006222  010146                  $CBDMG: MOV     R1,-(SP)
608     006224  112720  000040                  MOVB    #40,(R0)+
609     006230  022701  000012                  CMP     #10.,R1
610     006234  101407                          BLOS    42$
611     006236  112720  000040                  MOVB    #40,(R0)+
612     006242  062701  000060          40$:    ADD     #60,R1
613     006246  110120                          MOVB    R1,(R0)+
614     006250  012601                          MOV     (SP)+,R1
615     006252  000207                          RTS     PC
616     006254  112720  000061          42$:    MOVB    #61,(R0)+
617     006260  162701  000012                  SUB     #10.,R1
618     006264  000766                          BR      40$
619                     020000          NSPP=   20000           ;****************ONLY  EBUGGING ***************
620     006266  004436                  STOP:   .END    START
```

```
.MAIN.          MACRO M1113  01-NOV-83 00:21   PAGE 1-13
SYMBOL TABLE

A       004322          IMPARE  002270          PARIMP  002330          STOP    000266          TYPA    006044
AMPLIF  004354          KCSR    003256          PRI     002046          TOHAM   003266          TYPB    006062
BLO     002064          KDBR    003260          PRINTI  005752          TCSR    003262          TYPDAT  004320
CODARE  005620          MAIN    004556          REZ     002000          TDBR    003264          TYPOUT  006044
CRLF    002112          MATR    002204          RIJ     002334          TDHAM   003320          WRIJ    005714
DECOD   005656          MMAVA   002332          R21     002104          TIP     003144          WSPP  = 020000
GETADR  005570          MMU     004462          SP0   = 177572         TIPAR   006100          SCBDMG  006222
GETRIJ  005532          PARE    002232          START   004436          TITLE   002116

. ABS.          006266      000
                000000      001
ERRORS DETECTED:  0

RTUAL MEMORY USED:  619 WORDS  ( 3 PAGES)
DYNAMIC MEMORY:  2822 WORDS  ( 10 PAGES)
ELAPSED TIME:  00:00:29


        CENTRUL DE CALCUL AL ITC FILIALA TIMISOARA              SYSTEM  B-006
        0043  AAAAAA      AN = 3260   PN = 0002   DATE = 20/10/83-293
        H.DEB = 14H 47M 27S   H.FIN = 14H 48M 12S   TIME = 00000743
        LGP = 00040   MEM = 00004   LO = 00000703   IN = 00000001   ODE = 000
        MT = 01 PR = 01 CR = 01
```

ANEXA A5.D:

PROGRAM PENTRU DETERMINAREA DEPENDENTEI TENSIUNII DIN NODUL CREAT PRIN DEFECT DE SCURTCIRCUIT,DE TENSIUNEA DE ALIMENTARE VCC SI DENUMARUL DE IESIRI IN SCURTCIRCUIT.

CIRCUIT INTEGRAT : 74H04
LIMBAJ : BASCH
E.T.A. : ENERTEC-SCHLUMBERGER TIP T-925

```
   >
MCS 1.0
     : BAMO

? .
CORRECTION SOURCE
DISQUE ? "SCM1"
   342  FIN
? L1
     1  D$="SN74H04- NIVELE SC.>"
? E 80

     1  D$="SN74H04- NIVELE SC.>"
     2  EQU ;
     3  E1=B3 ;                    %INTRAREA 1
     4  S1=B4 ;                  %IESIRE1
     5  E2=B5 ;
     6  S2=B6 ;
     7  E3=B7 ;
     8  S3=B8 ;
     9  E4=B16 ;
    10  S4=B15 ;
    11  E5=B18 ;
    12  S5=B17 ;
    13  E6=B20 ;
    14  S6=B19 ;
    15  VCC=B25
    16 %
    17 %
    18 % CONTINUITE
    19 % ----------
    20  BM E1,E2,E3,E4,E5,E6,S1,S2,S3,S4,S5,S6,VCC
    21  * BZAP
    22 % TEST FONCTIONNEL
    23 % ----------------
    24  TFC ;
    25  BE E1,E2,E3,E4,E5,E6 ;
    26  BL2 ;
    27  BS S1,S2,S3,S4,S5,S6
    28  0#
    29  Z$0,21=Z$0,21+1
    30  TFC ;
    31  TV B E1,E2,E3,E4,E5,E6 H S1,S2,S3,S4,S5,S6 T %T1
    32     H E1 B S1 T                                  %
    33     H E2,S1 B S2,E1 T                            %
    34     H E3,S2 B S3,E2 T                            %
    35     H E4,S3 B S4,E3 T                            %
    36     H E5,S4 B S5,E4 T                            %
    37     H E6,S5 B S6,E5 T                            %
    38  FTV
    39  Z$0,21=Z$0,21-1
    40  RET
    41  * BF02
    42  %
    43 %
    44 SKIP DIM T3
    45 % TESTE DE SCURTCIRCUIT
    46 %
    47 %
    48 %
    49 %
    50 %
    51  * BSTA
    52 %
    53 %
    54  IMA N3 EV
```

```
55  C$="VCC="
56  T=4.5          % VALOARE INITIALA A TENSIUNII DE ALIMENTARE
57 SCL %INCEPUT BUCLA
58   CS V2 =0V L300MA
59  CS V2 =T
60  V$=2
61  * MVAL
62  CNA C$0,4,?=T
63  BM S1
64  AM V<5.5V L20MA;
65     I=1UA
66  G#
67  TFC ;
68  TV H E1 B E2,E3,E4,E5,E6,S1,S2,S3,S4,S5,S6 E
69  FTV
70  RET
71  * MTES
72 %
73 %
74 %
75 %
76    T=T+.1
77    IF T<5.5 :SCL
78 %
79    GO MDEB
80 %

?

FIN CORRECTION
?
```

BUPT

ORDER ADJ.:

EXAMPLE OF OUTLIER/LEVERAGE & EXCHANGEABILITY OF INFLUENCE ADJUSTED
** MODIFIED COV ** FIXED-EFFECTS MODELLOGS TO RECIPROCAL 1.0
CMD1102.FRACOMMAN OF TEST SCORES TO LINEAR ** ATL **"

```
0091   PRINT "PT GAL.NOM.COL.DIA. FINAL  LINEW MULTIPLE "
0092   OPT
0093   JFK TGmi>
0094   END
0095 NOREL
0096   TITLE "TEST NO MULTIPLE"
0097   TIN TB=0010,0040
0098   CALL TESTBLDG
0099   GTO INCEPUT
0100 %
0101 TESTBLDG %PE  DATOS CURRENT
0102   NAME "M.UN "
0103   CALL PWSN
0104   CALL TEST
0105   NAME "M.U1"
0106   CALL PWS1
0107   CALL TEST
0108   NAME "M.U1"  "
0109   CALL PWS1    "
0110   CALL TEST
0111   NAME "M.U2"
0112   CALL PWS2
0113   CALL [illegible]
0114   NAME "M.U3"
0115   CALL PWS3
0116   CALL TEST
0117   RELP
0118   RET
0119   RET
0120 PWS1
0121   PWS U1=-4.50
0122   PWS U2=+5.50
0123   PWS U3=+13.20
0124   RET
0125 PWS2
0126   PWS U1=-5.50
0127   PWS U2=+5.50
0128   PWS U3=+13.20
0129   RET
0130   USO
0131   PWS U1=-4.50
0132   PWS U2=+5.50
0133   PWS U3=+13.20
0134   RET
0135 PWS3
0136   PWS U1=-4.50
0137   PWS U2=+4.50
0138   PWS U3=+13.20
0139   RET
0140 PWS4
0141   PWS U1=-4.50
0142   PWS U2=+4.50
0143   PWS U3=+10.60
0144   RET
0145 PWS5
0146   PWS U1=-5.50
0147   PWS U2=+7.50
0148   PWS U3=+13.20
0149   RET
0150 PWS7
```

```
 PWS U1=-5.50
 PWS U2=+5.50
 PWS U3=+10.60
 RET
PWSB
 PWS U1=-5.50
 PWS U2=+4.50
 PWS U3=+10.80
 RET
PWSN
 PWS U1=-5
 PWS U2=+5
 PWS U3=+12
 RET
TEST %SHORT
 CGO CK
 CGO FAULTS
 CGO [illegible]
 CGO [illegible]
 CGO INDATA %INTERFACE ONE
 [illegible] 3000
 CGO REFRST
 RET
PWSLIM
 PWS U1=-5
 PWS U2=+5
 PWS U3=+12
 TIM TT=0660
 TIM TO=0490
 TIM TR=0200
 TIM TL=0025,0500,+
 TIM TA=0025,0500,+
 TIM TB=0010,0030,-
 TIM TC=0025,0550,-
 TIM TD=0400
 RET
TESTSEL
  PRINT "VER.SEL.[illegible]" ZN
 SET 3710 FF FF
 CGO TXDATA
 SET 3710 00 00
 RET
TESTEL
 CGO PARITY
 PRINT "[illegible]
 OFF
 WAIT 9000
 [illegible]
 OFF
 CGO [illegible]
 RET
[illegible]
 TIM TC=0025,0[illegible],
 RET
[illegible]
 TIM TC=0070 0,[illegible]9,-
 RET
[illegible]
 TIM TC=0025,0[illegible]40,
 RET
```

BUFT

```
 OS
MCS 1.0
     : A SPAREZ DOSCMD FEDIT GET AUXDOS AUX RA EAL EDCMD INTST PUBLIC SVAREA INTERP
SUBINY T INSTAB SIMINS AUXI TIMING INTRSV INITT CODSB INCCOD TABCOD TABIS INTREZ
CODSPA INTEND SISDEF ( P X NOL NOO O=S L=S N=MOSO3D D=TDD.82.06.16 )
     ASM 1.0
```

```
PASS 1 COMPLETE
```

```
                    1 *H REZERVARI SPATIU MEMORIE
                    2 ;SPAREZ
                    3 ;
0200                4  ORG 200H
                    5 ESPACL
0200                6  DEFS 26*128-4 ;SPATIU PENTRU EDITARE
                    7  ;PE DISC,ODATA CU FISIERUL SE PUN SI EIPTR,EFPTR
                    8 ESPACH
0EFC                9 EIPTR DEFS 2
0EFE               10 EFPTR DEFS 2
0F00               11 LINCNT DEFS 2
0F02               12 ETEMP DEFS 2
                   13 ; LOCATII REZERVATE INTERPRETORULUI DE COMENZI
0F04               14 INPTR DEFS 2  ;INPUT POINTER =ADRESA ULTINULUI CARACTER
                   15                ; ANALIZAT DIN COMANDA
0F06               16 INPBF DEFS 130 ; SPATIUL PENTRU COMANDA INTRODUSA
                   17                ; PRIMUL OCTET=NR DE CARACTERE .
0F88               18 PRMPT DEFS  1  ; PROMPTER
0F89   01          19 TTYFLG DEFB 1 ;FLAG CE INDICA DACA IESIREA SE
                   20                ;FACE PE CALEA SERIE (01) SAU PE CALEA
                   21                ;PARALEL (02)
0F8A               22 ERRTN DEFS 2 ;ADRESA DE REVENIRE IN CAZ DE ERR.
0F8C               23 EDRTN DEFS 2 ;ADRESA DE REVENIRE DI EDITOR LA
                   24               ; COMANDA QUIT
                   25 ;
                   26 ;
                   27 ; REZ SPATIU DOS
                   28 ;
0F8E               29 NXTTRK DEFS 1 ;NEXT TRACK .LOCATIE DE MEMORIE
                   30               ;UTILIZATA DE SUBRUTINA DE INIT DISC
0F8F               31 FNBUF DEFS 8 ;0 CARAC PENTRU NUME FISIER IN LUCRU
0F97               32 FNAD  DEFS 1 ;ADRESA PISTA FISIER IN LUCRU
                   33 ;
0F98               34 DIRBUF DEFS 512 ;BUFFER PENTRU PISTA DIR (4 SECTOARE)
                   35 ;********************************** END OF FILE "SPAREZ"
```

```
 LOC   OBJ CODE   STMT SOURCE STATEMENT                                ASM 1.0

                    36 *H INTRARE MICRODOS
                    37 ;*********************************************
                    38 ;
1200                39  ORG ($.AND.0FF00H)+256 ;SE INCEPE DE LA O ADR XX00H
                    40 DOSTCK EQU 90A0H
                    41 ;
                    42 DOSTART
1200   C30A12       43  JP DOSBGN ;SALT PESTE MARTOR
                    44  ;
1203   4D4F532D     45  DEFM 'MOS-03D' ;MARTOR TESTAT DE FDBOOT ;DACA
                    46  ; NU SE GASESTE AICI ACEST TEXT NU SE INTRA
                    47  ; MICRODOS
                    48  ;
                    49 DOSBGN
120A   3E3A         50  LD A,3AH ;SE PROGRAMEAZA PORTUL 8155 PENTRU DAF P
120C   D398         51  OUT (CSR1),A
120E   3E01         52  LD A,1 ;SE INIT MODUL "SERIAL OUTPUT " (TTY)
1210   32890F       53  LD (TTYFLG),A
                    54 ;
                    55 ;******* PUNCT DE REVENIRE IN DOS *******
                    56 DOSREV
1213   F3           57  DI ;SE INIT STAREA INTRERUPERILOR
1214   31A090       58  LD SP,DOSTCK
1217   CD6F20       59  CALL INTSTO ;STAREA 0 (NICI UNA PERMISA)
                    60  ;SE INIT SUBRUTINA GETCH
                    61  ;
121A   21D11C       62  LD HL,CI
121D   222F1D       63  LD (GETCH+1),HL ;SE FACE 'CALL CI' IN PRIMA
                    64  ;    INSTR DIN GETCH
1220   FB           65  EI
1221   21CF14       66  LD HL,DOSGNON
1224   06FF         67  LD B,255 ;SE TIP SIGNON
1226   CD951A       68  CALL PUTMSG
                    69  ;
                    70 ;
```

```
                        71 *H DOS COMMAND IDENTIFIER
                        72 ;*************************************
                        73 ; DGETCM = ASTEPTARE SI IDENTIF COMENZI
                        74 ;
                        75 ;
                        76 DGETCM
1229    31A090          77  LD SP,DOSTCK ;INIT STIVA
122C    212912          78  LD HL,DGETCM ;SE IMPINGE IN STIVA ADR DE RET
                        79                ;PT SUBRUTINELE DE EXEC A C-ZILOR
122F    E5              80  PUSH HL
1230    228A0F          81  LD (ERRTN),HL ;SE INIT SI ADRESA DE RET IN CAZ
                        82                ;DE EROARE
1233    3E3A            83  LD A,':' ;INIT PROMPTER
1235    32880F          84  LD (PRMPT),A
1238    211312          85  LD HL,DOSREV ;INIT ADRESA DE REV DIN EDITOR
123B    228C0F          86  LD (EDRTN),HL;
                        87 ;
                        88 ;
123E    CD7214          89  CALL GET    ;ASTEAPTA O COMANDA
1241    FE52            90  CP 'R' ; READ FILE ?
1243    CA8012          91  JP Z,RFCMD
1246    FE57            92  CP 'W' ; WRITE FILE ?
1248    CA8F12          93  JP Z,WFCMD
124B    FE44            94  CP 'D' ;DEBUGGER OR DELETE FILE ?
124D    CAC212          95  JP Z,DFCMD
1250    FE49            96  CP 'I' ;INIT DISC OR INTERPRETER ?
1252    CAE512          97  JP Z,INITCD
1255    FE45            98  CP 'E' ;EDITOR ?
1257    CA8513          99  JP Z,EDSTART
125A    FE4F           100  CP 'O' ; OUTPUT CONTROLL ?
125C    CAFF12         101  JP Z,OUTCMD
125F    FE43           102  CP 'C' ;CAT CMD ?
1261    CAE212         103  JP Z,CATCMD
1264    FE50           104  CP 'P' ;PRINT FILE COMMAND ?
1266    CA3313         105  JP Z,DPRCMD
1269    C3B819         106  JP ERROR ;EROARE DACA NU E NICI UNUL DIN
126C                   107  DEFS 20 ;LASA SPATIU PENTRU INTROD DE ALTE COM
                       108    ;CELE DE MAI SUS
                       109 ;
                       110 ;
```

```
                    111 *H COMENZI MICRODOS
                    112 ;
                    113 ;*****************************************
                    114 ; RFCMD = READ FILE CMD
                    115 ;
                    116 ;
                    117 RFCMD
1280    CDEA17      118  CALL NEXTCH ;POINTER PE URM CARACTER
1283    FE41        119  CP 'A'      ;NUMELE FISIERULUI MAI MARE CA 'A'
1285    FAB819      120  JP M,ERROR
1288    CDBC15      121  CALL PUTFLN ;SE PUNE NUMELE LA FNBUF
128B    CD2816      122  CALL RDFILE ;SE CITESTE FISIERUL
128E    C9          123  RET         ;GATA
                    124 ;
                    125 ;
                    126 ;*****************************************
                    127 ;
                    128 ; WFCMD = WRITE FILE CMD
                    129 ;
                    130 WFCMD
                    131 ; SE FACE VERIF DACA EXISTA FISIER IN MEMORIE
                    132 ;
128F    2AFE0E      133  LD HL,(EFPTR) ;SE VERIF CA EOF ESTE IN ZONA
                    134  ; ESPACL,ESPACH
1292    110102      135  LD DE,ESPACL+1
1295    CD421A      136  CALL HILO
1298    D2B912      137  JP NC,WFCM1 ;NU EX FISIER DACA CY=0
129B    11FC0E      138  LD DE,ESPACH
129E    CD421A      139  CALL HILO
12A1    DAB912      140  JP C,WFCM1 ;NE EX. DACA (EFPTR)>=ESPACH
12A4    3EFF        141  LD A,0FFH ;SE VERIF CA EX MARCA EOF LA
                    142             ;ADR INDIC DE EFPTR
12A6    BE          143  CP (HL)
12A7    C2B912      144  JP NZ,WFCM1 ;NE EX FISIRE DACA NU
                    145 ;
12AA    CDEA17      146  CALL NEXTCH ;POINTER PE PRIM CARAC DIN NUME
12AD    FE41        147  CP 'A'      ;INCEPE CU O LITERA
12AF    FAB819      148  JP M,ERROR
12B2    CDBC15      149  CALL PUTFLN ;SE PUNE NUMELE LA FNBUF
12B5    CD6116      150  CALL WRFILE ;SE SCRIE FISTERUL
12B8    C9          151  RET         ;GATA
                    152 ;
                    153 WFCM1 ;DACA SE AJUNGE AICI NE EXISTA FISIER
12B9    06FF        154  LD B,255
12BB    215E15      155  LD HL,FILMS9
12BE    CD951A      156  CALL PUTMSG
12C1    C9          157  RET
                    158 ;
                    159 ;
                    160 ;*****************************************
                    161 ;
                    162 ; DFCMD = DELETE FILE CMD
                    163 ;
                    164 DFCMD ;SE VERIF INTII CA S-A INTRODUS 'DEL'
12C2    2A040F      165  LD HL,(INPTR)
12C5    23          166  INC HL
12C6    23          167  INC HL
12C7    7E          168  LD A,(HL) ;ACEST CARAC ESTE 'L' PT 'DELETE'
```

```
12C8   FE4C        169  CP 'L'
12CA   C21E80      170  JP NZ,MONREV ;SALT IN MONIT DEBUGGER
12CD   2B          171  DEC HL
12CE   7E          172  LD A,(HL) ;SE ADUCE AL 2-LEA CARACTER
12CF   FE45        173  CP 'E' ;DACA NU E 'E' => EORARE
12D1   C2B819      174  JP NZ,ERROR
                   175 ;
                   176  ;
12D4   CDEA17      177  CALL NEXTCH ;INPTR POINTER PE URM CARAC
12D7   FE41        178  CP 'A' ;NUMELE FISIERULUI INCEPE CU O LITERA
12D9   FAB819      179  JP M,ERROR
12DC   CDBC15      180  CALL PUTFLN ;PUNE NUMELE FISIERULUI LA FNBUF
12DF   C31216      181  JP DELFILE ;SALT LA SUBR. DELFILE SI FACE
                   182              ;RETURN DE ACOLO
                   183 ;
                   184 ;
                   185 ;*****************************************
                   186 ;
                   187 ; CATCMD = CATALOGARE DISC
                   188 ;
12E2   C3D616      189 CATCMD JP CAT ;SALT LA SUBR. CAT
                   190 ;
                   191 ;
                   192 ;*****************************************
                   193 ;
                   194 INITCD
                   195  ; SE VERIF CA S-A INTRODUS 'INIT DISC'
12E5   2A040F      196  LD HL,(INPTR) ;HL PINTER IN INPUT BUFFER
12E8   11F612      197  LD DE,INMAR   ;DE POINTER PE UN TEXT MARTOR
12EB   0E09        198  LD C,INMARL   ;LUNGIME TEXT MARTOR IN C
12ED   CDC51B      199  CALL CMPM     ;SUBRUTINA DE COMPAR MEMO
12F0   D25C13      200  JP NC,INTCMD  ;DACA NU SINT IDENTICE ESTE C-DA
                   201                ;DE INTRARE IN INTERPRETER
12F3   C32017      202  JP INITD      ;SALT IN SUBRUTINA DE INIT DISC
                   203                ;SI RETURN DE ACOLO
12F6   494E4954    204 INMAR  DEFM 'INIT DISC'
                   205 INMARL EQU $-INMAR
                   206 ;
                   207 ;*****************************************
                   208 ; OUTCMD = COMANDA DE CONTROL OUTPUT
                   209 ;
                   210 ; FORMA COMENZII :
                   211 ; OUT TTY DISPLAY CR =OUTPUT SI LA TTY SI DISP
                   212 ;
                   213 ;
                   214 OUTCMD
12FF   CDEA17      215  CALL NEXTCH
1302   FE0D        216  CP ASCICR ;DACA S-A DAT CDA OUT CR
1304   C8          217  RET Z ;NU SE FACE NIMIC
1305   0600        218  LD B,0 ;IN B SE VA FORMA NOUL FLAG
                   219 OUTCM1
1307   FE54        220  CP 'T' ;TTY ?
1309   CA1913      221  JP Z,OUTT
130C   FE44        222  CP 'D' ;DISPLAY
130E   CA2513      223  JP Z,OUTD
1311   FE0D        224  CP ASCICR
1313   CA2E13      225  JP Z,OUTCM2
1316   C3B819      226  JP ERROR ;EROARE DACA NU E T,D SAU CR
```

```
                    227 ;
                    228 OUTT
1319    3E01        229  LD A,1
131B    B0          230  OR B
131C    47          231  LD B,A ;SE PUNE BIT 0,PE 1
131D    C5          232  PUSH BC
131E    CDEA17      233  CALL NEXTCH
1321    C1          234  POP BC
1322    C30713      235  JP OUTCM1
                    236 ;
                    237 OUTD
1325    3E3A        238  LD A,3AH ;SE PROG.DIN NOU PORTUL
1327    D398        239  OUT (CSR1),A
1329    3E02        240  LD A,2
132B    C31B13      241  JP OUTT+2 ;IN CONTIN E CA LA OUTT
                    242 ;
                    243 OUTCM2 ;IESIREA DIN COMANDA :
132E    78          244  LD A,B ;SE DEPUNE NOUL FLAG FORMAT
132F    32890F      245  LD (TTYFLG),A ;LA ADRESA TTYFLG
1332    C9          246  RET ;GATA
                    247 ;
                    248 ;
                    249 ;*****************************************
                    250 ; D P R C M D
                    251 ;
                    252 ; COMANDA DE TIPARIRE FISIERE
                    253 ;
                    254 DPRCMD
1333    CDEA17      255  CALL NEXTCH ;ADUCE IN A URM.CARAC.DUPA "PRINT"
1336    FE0D        256  CP ASCICR ;ESTE CR?
1338    C8          257  RET Z ;GATA
1339    FE41        258  CP 'A' ;EROARE DACA NUMELE NU INCEPE CU LITERA
133B    FAB819      259  JP M,ERROR
133E    CDBC15      260  CALL PUTFLN ;PREGATESTE NUMELE FISIERULUI
1341    CD2816      261  CALL RDFILE ;ADUCE FISIERUL IN MEMORIE
1344    D21312      262  JP NC,DOSREV ;SALT LA DOSREV IN CAZ DE EROARE
1347    CD4D13      263  CALL PRTFIL ;TIPARESTE FISIERUL ADUS DIN MEMO
134A    C33313      264  JP DPRCMD ;REIA BUCLA PT ALTE FISIERE
                    265 ;
                    266 ;
                    267 ;
                    268 PRTFIL      ;SUBRUTINA CARE TIPARESTE ZONAA DE MEMO
                    269             ;DE LAA ESPACL PINA LA EOF
134D    210002      270  LD HL,ESPACL ;HL=POINTER PE ESPACL
                    271  ;
1350    06FF        272  LD B,255; PREG.B PT PUTMSG
1352    3EFF        273  LD A,0FFH ;MARCA DE EOF
1354    BE          274  CP (HL) ;S-A AJUNS LA EOF ?
1355    C8          275  RET Z ;RETURN DACA DA.
1356    CD951A      276  CALL PUTMSG ;TIPARESTE PINA LA ASCICR INCLUSIV
1359    C35013      277  JP PRTFIL+3 ;REINTRA IN BUCLA
                    278 ;
                    279 ;
                    280 ;*****************************************
                    281 ;
                    282 ;I N T C M D ; COMANDA INTERPRETER
                    283 ;
                    284 ;
```

```
                    285 INTCMD
                    286 ;
                    287 ; PROGRAM PENTRU INCARCAREA INTERPRETER DE PE
                    288 ; DISC
                    289 ;
135C    CD3F80      290  CALL INIFDC ;SE INIT FDC
135F    219A7F      291  LD HL,APF
1362    3604        292  LD (HL),4 ;SE INCARCA INTERP DE PE PISTA 4
1364    23          293  INC HL ;SE INCARCA SI SECTORUL LA ADR CORESP
1365    3601        294  LD (HL),01 ;ESTE SECTORUL 1
1367    215500      295  LD HL,INTLEN ;LUNGIMEA (IN SECTOARE) A INT
136A    229C7F      296  LD (ALF),HL
136D    210022      297  LD HL,INSTAR
1370    229E7F      298  LD (AAF),HL
1373    21047F      299  LD HL,ADREV ;SE MAI INIT PARAM PT FLOPPY
1376    36C9        300  LD (HL),0C9H ;COD DE RET
1378    CD4880      301  CALL SR ;SUBRUTINA CITIRE FLOPPY
137B    3A01A0      302  LD A,(0A001H) ;SE CITESTE STAREA FDC
137E    A7          303  AND A
137F    C21312      304  JP NZ,DOSREV ;REVENIRE IN OS IN
                    305  ;                CAZ DE DISK ERROR
1382    C30022      306  JP INSTAR ;SE LANSEAZA INTERPRETERUL
                    307 ;************************************ END OF FILE 'DOSCMD'
```

```
                    308 *HEADING INTRARE EDITOR
                    309 ;*********************************************
                    310 ESTACK EQU DOSTCK
                    311 ;
                    312 EDSTART ;FUNCT INTRARE EDITOR
1385   31A090       313  LD SP,ESTACK ;INIT SP
                    314  ;SE INIT SUBRUTINA GETCH
1388   21D11C       315  LD HL,CI
138B   222F1D       316  LD (GETCH+1),HL ;SE FACE CALL CI IN PRIMA INSTR.
                    317                     ;DIN GETCH
138E   3E3F         318  LD A,'?' ;INIT PROMPTER PROVIZORIU
1390   32880F       319  LD (PRMPT),A
1393   21F913       320  LD HL,EGETCM ;INIT ADRESA DE REVENIRE LA EROARE
1396   228A0F       321  LD (ERRTN),HL
1399   214514       322  LD HL,ESGNON ;SE VA TIPARI SIGNON MESSAGE
139C   06FF         323  LD B,255
139E   CD951A       324  CALL PUTMSG
                    325 ;
13A1   210002       326  LD HL,ESPACL ;INIT EDITOR INPUT POINTER
13A4   22FC0E       327  LD (EIPTR),HL
13A7   210000       328  LD HL,0 ;INIT CONTOR LINII
13AA   22000F       329  LD (LINCNT),HL
                    330 ;
13AD   215914       331  LD HL,EMES1 ;TIPARESTE 'NEW FILE ?'
13B0   0609         332  LD B,EMES1L
13B2   CD951A       333  CALL PUTMSG
                    334  ;
13B5   CD7214       335  CALL GET ;ASTEAPTA RASPUNS
13B8   FE59         336  CP 'Y' ;ESTE Y ?
13BA   C2C513       337  JP NZ,$+11 ;SARE URM INSTRUCTII DACA NU
13BD   210002       338  LD HL,ESPACL ;INIT EOF LA INCEPUT
13C0   22FE0E       339  LD (EFPTR),HL
13C3   36FF         340  LD (HL),0FFH ;PUNE SI MARCA DE EOF
                    341  ;
                    342 ; SE VERIFICA DACA ESTE MARCA DE EOF LA
                    343 ; ADRESA INDICATA DE EFPTR SI DACA ACEASTA
                    344 ; ESTE IN SPATIUL DE EDITARE
13C5   2AFE0E       345  LD HL,(EFPTR)
13C8   110002       346  LD DE,ESPACL ; DACA (EOFPTR)<ESPACL EROARE
13CB   CD421A       347  CALL HILO
13CE   D28513       348  JP NC,EDSTART
13D1   11FC0E       349  LD DE,ESPACH ; DACA (EOFPTR)>ESPACH EROARE
13D4   CD421A       350  CALL HILO
13D7   DA8513       351  JP C,EDSTART
13DA   3EFF         352  LD A,0FFH
13DC   BE           353  CP (HL) ;SE VERIF MARCA DE EOF
13DD   C28513       354  JP NZ,EDSTART
                    355 ;
13E0   216214       356  LD HL,EMES2 ;SE TIP 'CLEAR SAVE AREA'
13E3   0610         357  LD B,EMES2L
13E5   CD951A       358  CALL PUTMSG
13E8   CD7214       359  CALL GET ;SE ASTEAPTA RASPUNS
13EB   FE59         360  CP 'Y'
13ED   C2F913       361  JP NZ,$+12 ;SALT PESTE URM.3 INSTR.PT 'NO'
13F0   210000       362  LD HL,0 ;SE INIT PE ZERO
13F3   228A20       363  LD (RLINB),HL ;NR DE LINII DIN SAVE AREA
13F6   228C20       364  LD (RBYTNB),HL ;SI NR DE OCTETI DE ACOLO
                    365 ;
```

```
                    366 *HEADING EDITOR COMMAND IDENTIFY
                    367 ;
                    368 EGETCM ;PUNCT DE REVENIRE DUPA EXECUTIA UNEI C-ZI.
13F9    31A090      369  LD SP,ESTACK ;INIT STACKP
13FC    21F913      370  LD HL,EGETCM ;SE IMPINGE IN STIVA ADRESA
13FF    E5          371  PUSH HL       ;DE RETURN PT SUBRUTINELE DE
                    372                 ;EXECUTIE A COMENZILOR
1400    3E2E        373  LD A,'.' ;INIT PROMPTER
1402    32880F      374  LD (PRMPT),A
1405    CD7214      375  CALL GET ;ASTEPTA O COMANDA
1408    FE30        376  CP '0' ;NU SE DA MESAJ EROARE DACA SE INTRODUCE
140A    F8          377  RET M ;UN CARACTER DE CONTROL DIN GRESEALA
140B    FE49        378  CP 'I' ;INPUT ?
140D    CA641E      379  JP Z,INCMD
1410    FE44        380  CP 'D'
1412    CA1F1E      381  JP Z,DELCMD ;DELETE COMMAND
1415    FE54        382  CP 'T' ;TOP ?
1417    CA391D      383  JP Z,ETCMD
141A    FE4E        384  CP 'N' ;NEXT ?
141C    CA461D      385  JP Z,ENCMD
141F    FE55        386  CP 'U' ;UP ?
1421    CA731D      387  JP Z,EUCMD
1424    FE50        388  CP 'P' ;PRINT COMMAND ?
1426    CA911D      389  JP Z,PRCMD
1429    FE47        390  CP 'G' ;GO TO LINE COMMAND ?
142B    CAEE1D      391  JP Z,GLCMD
142E    FE43        392  CP 'C' ;CORRECTION COMMAND ?
1430    CA9D1E      393  JP Z,CCMD
1433    FE46        394  CP 'F' ; FIND LABEL COMMAND ?
1435    CA541F      395  JP Z,FCMD
1438    FE4F        396  CP 'O' ;OUTPUT CONTRLOLL COMMAND ?
143A    CAFF12      397  JP Z,OUTCMD
143D    FE51        398  CP 'Q' ;QUIT COMMAND ?
143F    CA6A20      399  JP Z,QCMD
1442    C3B819      400  JP ERROR
                    401 ;
                    402 ;
                    403 ;------------------------------ MESAJE ----------------------
                    404 ;
1445    464D4520    405 ESGNON DEFM 'FME TEXT EDITOR 2.0'
1458    0D          406        DEFB ASCICR
1459    4E455720    407 EMES1  DEFM 'NEW FILE '
                    408 EMES1L EQU  $-EMES1
1462    434C4541    409 EMES2  DEFM 'CLEAR SAVE AREA '
                    410 EMES2L EQU  $-EMES2
                    411 ;********************************************** END OF FILE "FEDIT"
```

```
                    412 *HEADING GET ROUTINE
                    413 ;*********************************************
                    414 ; FUNCTION : GET
                    415 ; INTRARI  :  --
                    416 ; IESIRI   : A= PRIMUL CARACTER INTRODUS
                    417 ;             B= LUNGIMEA LINIEI INTRODUSE
                    418 ;             HL= POINTER PE PRIMUL CARACTER DIN BUFFER
                    419 ; DISTRUGE :A,B,C,H,L,F,S
                    420 ; CALL      ;GETCH,ECHO
                    421 ;
                    422 ; DESCRIERE :
                    423 ;     ACEASTA SUBRUTINA TRIMITE UN CARACTER PROMPT
                    424 ;LA TTY SI APOI ASTEAPTA SA FIE INTRODUSE UN NR.DE
                    425 ;MAX.127 CARACTERE.ACESTE CARACTERE SINT DEPUSE IN
                    426 ;BUFFER-UL DE INTRARE.PRIMUL OCTET DIN BUFFER ESTE
                    427 ;NUMARUL DE CARACTERE INTRODUSE.
                    428 ;     PE DURATA INTRODUCERII SE POT FACE CORECTII
                    429 ;CU BACKSPACE SI RUBOUT SAU SE POATE ANULA INTREA-
                    430 ;GA LINIE CU SEMNUL EXCLAMARII.
                    431 ;  CARACTERE SPECIALE : EXCL=LINE DELETE
                    432 ;                       BACKSP=CHAR DELETE
                    433 ;                       RUBOUT=CHAR DEL.(PT. TTY)
                    434 ;
                    435 ;
                    436 ;
                    437 ;
                    438 ;
                    439 GET
1472    21070F      440  LD HL,INPBF+1 ;SE INIT INPUTPTR PE INPBF+1
1475    22040F      441  LD (INPTR),HL
                    442 ;
1478    3A880F      443  LD A,(PRMPT)    ;ADUCE & TIPARESTE CARACTERUL PROMPT
147B    4F          444  LD C,A
147C    CD961C      445  CALL ECHO
                    446 GET10
147F    21060F      447  LD HL,INPBF ;HL POINTER IN INPUT BUFFER
1482    0600        448  LD B,0 ;CHAR COUNTER NULL
1484    3600        449  LD (HL),0
1486    04          450  INC B
1487    23          451  INC HL
                    452 GET20
1488    CD2E1D      453  CALL GETCH
148B    FE7F        454  CP 7FH ;  ESTE RUB OUT ?
148D    CA9F14      455  JP Z,GET15
1490    FE08        456  CP 08H    ; ESTE BACKSPACE ?
1492    C2AD14      457  JP NZ,GET30 ;SALT DACA NU.
1495    2B          458  DEC HL
1496    05          459  DEC B
1497    C28814      460  JP NZ,GET20 ;MAI ADU UN CARAC.DACA COUNTER#0
                    461 GET16
149A    23          462  INC HL
149B    04          463  INC B ;CORECTEAZA POINTER & COUNTER
149C    C38814      464  JP GET20
                    465 GET15
149F    2B          466  DEC HL
14A0    05          467  DEC B
14A1    CA9A14      468  JP Z,GET16
14A4    C5          469  PUSH BC
```

```
14A5   4E          470  LD C,(HL), ; TIPARESTE CARACTERUL DE STERS.
14A6   CD961C      471  CALL ECHO
14A9   C1          472  POP BC
14AA   C38814      473  JP GET20
                   474 GET30
14AD   FE21        475  CP 21H ; ESTE CARACTER LINEDEL ?
14AF   CA7F14      476  JP Z,GET10 ; DACA DA,SALT LA INCEPUT.
14B2   77          477  LD (HL),A  ; DEPUNE CARACTERUL IN BUFFER.
14B3   FE0D        478  CP ASCICR ; A FOST CARRIAGE RETURN ?
14B5   CAC814      479  JP Z,GET40 ; IN AC.CAZ TERMINA LINIA.
14B8   23          480  INC HL
14B9   04          481  INC B
14BA   3E80        482  LD A,128 ; VERIFICA DACA NU SINT PREA MULTE CAR.
14BC   B8          483  CP B
14BD   C28814      484  JP NZ,GET20
14C0   0E3F        485  LD C,'?' ;ERR
14C2   CD961C      486  CALL ECHO
14C5   C37214      487  JP GET
                   488 GET40
14C8   21060F      489  LD HL,INPBF
14CB   70          490  LD (HL),B
14CC   23          491  INC HL
14CD   7E          492  LD A,(HL)  ; PRIMUL CARACTER DIN LINIE --> ACC.
14CE   C9          493  RET
                   494 ;
                   495 ;
                   496 ;
                   497 ;
                   498 ;********************************** END OF FILE 'GET
```

```
                    499 *H SUBRUTINE MICRODOS
                    500 ;*****************************************
                    501 ; MESAJE ALE MICRO DOS
                    502 ;
                    503 DOSGNON ; SIGNON MOCRODOS
14CF  464D4520      504  DEFM 'FME MICRO DOS 1.0'
14E0  0D            505  DEFB ASCICR
                    506 ;
                    507 ;
                    508 ;*****************************************
                    509 ; MESAJE LEGATE DE LUCRUL CU FISIERE
                    510 ;
                    511 FILMS1
14E1  46494C45      512  DEFM 'FILE NOT FOUND'
14EF  0D            513  DEFB ASCICR
                    514 ;
                    515 FILMS2
14F0  4449534B      516  DEFM 'DISK FULL'
14F9  0D            517  DEFB ASCICR
                    518 ;
                    519 FILMS3
14FA  46494C45      520  DEFM 'FILENAME TRACK'
1508  0D            521  DEFB ASCICR
                    522 ;
                    523 FILMS4
1509  44454C45      524  DEFM 'DELETE OLD FILE ?'
                    525 FLMS4L EQU $-FILMS4
151A  0D            526  DEFB ASCICR
                    527 ;
                    528 FILMS5
151B  4449534B      529  DEFM 'DISK NAME '
                    530 FLMS5L EQU $-FILMS5
1525  0D            531  DEFB ASCICR
                    532 ;
                    533 FILMS6
1526  494E5345      534  DEFM 'INSERT NEW DISK. '
1537  52454144      535  DEFM 'READY ?'
153E  0D            536  DEFB ASCICR
                    537 FILMS7
153F  20494E53      538  DEFM ' INSERT OLD DISK. READY ?'
1558  0D            539  DEFB ASCICR
                    540 ;
1559  4F2E4B2E      541 FILMS8 DEFM 'O.K.'
155D  0D            542  DEFB ASCICR
                    543 ;
                    544 FILMS9
155E  4E4F2046      545  DEFM 'NO FILE IN MEMORY'
156F  0D            546  DEFB ASCICR
                    547 ;=========================================
                    548 ;*H SUBRUTINE AUX MICRODOS
                    549 ;
                    550 TRKDIR EQU 20 ;PISTA DIRECTOARE ESTE PISTA 20
                    551 ;*****************************************
                    552 ; RDDIR ;READ DIRECTORY
                    553 ;
                    554 ; CITESTE PISTA DIRECTOARE
                    555 ;
                    556 RDDIR
```

```
1570    219A7F      557  LD HL,APF ;SE COMPLETE VECTORUL FLOPPY
1573    3614        558  LD (HL),TRKDIR ;NUMARUL PISTEI DIR.
1575    23          559  INC HL ;SE INCEPE CU SECTORUL 1
1576    3601        560  LD (HL),1
1578    210400      561  LD HL,4 ;LUNGIMEA ESTE DE 8 SECTOARE
157B    229C7F      562  LD (ALF),HL
157E    21980F      563  LD HL,DIRBUF ;ADRESA DIN MEM.
1581    229E7F      564  LD (AAF),HL
1584    21047F      565  LD HL,ADREV ;SE COMPLET ADREV A FLOPPY
1587    36C9        566  LD (HL),0C9H ;COD DE RET
1589    CD4880      567  CALL SR ;SUBRUTINA CITIRE FLOPPY
158C    3A01A0      568  LD A,(0A001H) ;SE CITESTE STAREA FDC
158F    A7          569  AND A ;TREBUIE SA FIE ZERO
1590    C21312      570  JP NZ,DOSREV ; ;SALT IN MON DEBUGGER LA EROARE
1593    C3B91A      571  JP SRET ;RETURN CU SUCCES
                    572 ;
                    573 ;*****************************************
                    574 ;
                    575 ; WRDIR ;SCRIERE PISTA DIRECTOARE
                    576 ;
                    577 ;
                    578 WRDIR
1596    219A7F      579  LD HL,APF ;SE COMPLETE VECTORUL FLOPPY
1599    3614        580  LD (HL),TRKDIR ;NUMARUL PISTEI DIR.
159B    23          581  INC HL ;SE INCEPE CU SECTORUL 1
159C    3601        582  LD (HL),1
159E    210400      583  LD HL,4 ;LUNGIMEA ESTE DE 8 SECTOARE
15A1    229C7F      584  LD (ALF),HL
15A4    21980F      585  LD HL,DIRBUF ;ADRESA DIN MEM.
15A7    229E7F      586  LD (AAF),HL
15AA    21047F      587  LD HL,ADREV ;SE COMPLET ADREV A FLOPPY
15AD    36C9        588  LD (HL),0C9H ;COD DE RET
15AF    CD4E80      589  CALL SW ;SUBRUTINA SCRIERE FLOPPY
15B2    3A01A0      590  LD A,(0A001H) ;SE CITESTE STAREA FDC
15B5    A7          591  AND A ;TREBUIE SA FIE ZERO
15B6    C21312      592  JP NZ,DOSREV ; ;SALT IN MON DEBUGGER LA EROARE
15B9    C3B91A      593  JP SRET ;RETURN CU SUCCES
                    594 ;
                    595 ;*****************************************
                    596 ; FUNCTION =PUTFLN
                    597 ; INPUTS    = (INPTR) =POINTER PE NUME FISIER
                    598 ; OUTPUT    =
                    599 ; DESCRIERE :SUBRUTINA PUTFLN PUNE NUMELE
                    600 ;
                    601 PUTFLN
15BC    2A040F      602  LD HL,(INPTR) ;POINTERUL IN HL
15BF    118F0F      603  LD DE,FNBUF    ;ADRESA DE DESTIN IN DE
15C2    0608        604  LD B,8 ;NR MAX DE CARAC DIN NUME
15C4    7E          605  LD A,(HL) ;SE ADUCE CARAC
15C5    FE41        606  CP 'A' ;NUMAI CARAC CU COD ASCII > 41H
15C7    FAB819      607  JP M,ERROR
                    608 PUTFN1
15CA    7E          609  LD A,(HL) ;ADUCE CARACTER
15CB    FE0D        610  CP ASCICR ;ESTE CR ?
15CD    CAE015      611  JP Z,PUTFN2
15D0    FE20        612  CP ' ' ;ESTE BLANC
15D2    CAE015      613  JP Z,PUTFN2
15D5    FAB819      614  JP M,ERROR ;NU SE ADMIT CARACTERE DE CONTROL
```

```
                    615  ;IN NUMELE FISIERULUI
                    616  ;ESTE DECI UN CARAC VALID DE NUME FISIER.
15D8    12          617  LD (DE),A ;MUTA CARACTERUL IN SPATIUL FNBUF
15D9    23          618  INC HL
15DA    13          619  INC DE
15DB    05          620  DEC B ; DECREM CONTORUL
15DC    C2CA15      621  JP NZ,PUTFN1
15DF    C9          622  RET ;GATA
                    623  ;
                    624 PUTFN2 ;SE COMPLETEAZA RESTUL DE CARAC
                    625        ;(PINA LA 8) CU BLANCURI
15E0    3E20        626  LD A,' '
                    627 PUTFN3
15E2    12          628  LD (DE),A
15E3    13          629  INC DE
15E4    05          630  DEC B
15E5    C2E215      631  JP NZ,PUTFN3
15E8    C9          632  RET
                    633 ;*****************************************
                    634 ;
                    635 ; FDFILE  ;FIND FILE
                    636 ;
                    637 ; LA APELAREA ACESTEI SUBRUTINE IN CEI
                    638 ; 8 OCTETI DE LA FNBUF SE AFLA NUMELE
                    639 ; FISIERULUI CAUTAT COMPLETAT CU BLANCURI
                    640 ; PINA LA 8 CARACTERE
                    641 ;   IN CAZ DE RETURN CU SUCCES,LA FNAD SE
                    642 ; VA GASI NR PISTEI PE CARE SE AFLA FISIERUL
                    643 ;
                    644 FDFILE
15E9    CD7015      645  CALL RDDIR ;SE CITESTE PISTA DIRECTOARE
15EC    118F0F      646  LD DE,FNBUF ;DE=PINTER PE NUMELE FISIER CAUTAT
15EF    21A00F      647  LD HL,DIRBUF+8 ;HL=POINTER PE PRIMUL NUME DIN
                    648                  ;DIRECTOR
15F2    0E08        649  LD C,8          ;NR DE CARAC DIN NUME FILE
15F4    0638        650  LD B,76-TRKDIR  ;NR TOTAL DE FISIERE POSIB
                    651 FDFIL1
15F6    CDC51B      652  CALL CMFM ;SE COMPARA CELE 2 NUME
15F9    DA0916      653  JP C,FDFIL2 ;SALT DACA S-A GASIT NUMELE
15FC    05          654  DEC B       ;DECREM CONTOR
15FD    CACA19      655  JP Z,FRET   ;INSUCCES DACA S-A EPUIZAT NR
                    656               ;DE FISIERE
1600    C5          657  PUSH BC
1601    010800      658  LD BC,8      ;HL VA FI POINTER PE URM.NUME DIN DIR
1604    09          659  ADD HL,BC
1605    C1          660  POP BC
1606    C3F615      661  JP FDFIL1 ;SE INCEARCA DIN NOU
                    662 ;
                    663 FDFIL2      ;CIND SE AJUNGE AICI S-A GASIT FISIERUL
                    664  ;SE CALCULEAZA NR PISTEI DIN VAL LUI B
1609    3E4D        665  LD A,76+1 ;NR ULTIMEI PISTE+1 IN A
160B    90          666  SUB B      ;SE SCADE VAL CONTORULUI
160C    32970F      667  LD (FNAD),A ;S-A GASIT NR PISTEI
160F    C3B91A      668  JP SRET     ;RETURN CU SUCCES
                    669 ;
                    670 ;
                    671 ;*****************************************
                    672 ; DELFILE   ;DELETE FILE
```

```
                    673 ;
                    674 ; LA APELUL ACESTEI SUBRUTINE IN FNBUF SE AFLA
                    675 ; NUMELE FISIERULUI DE STERS
                    676 ;
                    677 DELFILE
1612    CDE915      678  CALL FDFILE ;CAUTA FISIERUL
1615    D25616      679  JP NC,DLFIL2 ;ER FILE NOT FOUND PT CY=0
                    680  ;
                    681  ; IN HL SE AFLA ACUM CHIAR ADRESA UNDE
                    682  ; SE AFLA NUMELE FISIERULUI;CEI 8 OCTETI
                    683  ; SE UMPLU CU BLANCURI
1618    0608        684  LD B,8 ;B=CONTOR BUCLA
161A    3E20        685  LD A,' ' ;BLANC IN H
161C    77          686  LD (HL),A
161D    23          687  INC HL
161E    05          688  DEC B
161F    C21C16      689  JP NZ,$-3 ;REIA BUCLA DACA B>0
                    690  ;
1622    CD9615      691  CALL WRDIR ;SCRIE DIN NOU PISTA DIR.
1625    C3B91A      692  JP SRET     ;RETURN CU SUCCES
                    693 ;
                    694 ;*****************************************************
                    695 ;
                    696 ; RDFILE   ;SUBRUTINA CITIRE FISIER
                    697 ; LA APELUL ACESTEI SUBRUTINE LA FNBUF S-A COMPLETAT
                    698 ; NUMELE FISIERULUI.
                    699 ;
                    700 RDFILE
1628    CDE915      701  CALL FDFILE ;CAUTA NR PISTEI
162B    D25616      702  JP NC,RDFIL2 ;SALT DACA DU S-A GASIT
                    703  ; SE COMPLETEAZA VECTORUL FLOPPY
162E    219A7F      704  LD HL,APF
1631    3A970F      705  LD A,(FNAD) ; SE COMPL NR PISTEI
1634    77          706  LD (HL),A
1635    23          707  INC HL ;SE VA INCEPE DE LA PRIMUL SECT.
1636    3601        708  LD (HL),1
1638    211A00      709  LD HL,26   ;LUNGIMEA ESTE DE 26 SECTOARE
163B    229C7F      710  LD (ALF),HL
163E    210002      711  LD HL,ESPACL ;ADRESA DE INCARCARE ESTE ESPACL
1641    229E7F      712  LD (AAF),HL
1644    21047F      713  LD HL,ADREV
1647    36C9        714  LD (HL),0C9H ;COD DE RET
1649    CD4880      715  CALL SR ;CITIRE FLOPPY
164C    3A01A0      716  LD A,(0A001H) ;SE CITESTE STAREA FDC
164F    A7          717  AND A ;TREBUIE SA FIE ZERO
1650    C21312      718  JP NZ,DOSREV ; ;SALT IN MON DEBUGGER LA EROARE
1653    C3B91A      719  JP SRET ;RETURN CU SUCCES
                    720 ;
                    721 DLFIL2
                    722 RDFIL2 ;EROARE 'FILE NOT FOUND'
1656    21E114      723  LD HL,FILMS1
1659    06FF        724  LD B,255
165B    CD951A      725  CALL PUTMSG
165E    C3CA19      726  JP FRET ;RETURN INSUCCES
                    727 ;
                    728 ;*****************************************************
                    729 ;
                    730 ; WRFILE  =WRITE FILE
```

```
                    731 ;
                    732 ; LA APLELUL AC. SUBRUTINE S-A COMPLETAT LA
                    733 ; FNBUF NUMELE CU CARE SE DORESTE SCRIEREA
                    734 ; PE DISC A FISIERULUI
                    735 ;  IN CAZ CA DISCUL ESTE PLIN SE SEMNALEAZA
                    736 ; 'DISK FULL' SE SE FACE FRET
                    737 ;  IN CAZ CA MAI EXISTA UN FISIER CU ACELASI
                    738 ; NUME SE CERE APROBAREA OPERATORULI
                    739 ; PENTRU STERGEREA VECHII VARIANTE A FISIERULUI.
                    740 ;
                    741 WRFILE
1661  CDE915        742  CALL FDFILE ;CAUTA UN FISIER CU ACELASI NUME
1664  D29F16        743  JP NC,WRFIL2 ;SALT DACA NU S-A GASIT
                    744  ;
1667  210915        745  LD HL,FILMS4
166A  0611          746  LD B,FLMS4L ;SE TIP "DLETE OLD FILE"
166C  CD951A        747  CALL PUTMSG
166F  CD7214        748  CALL GET ;SE ADTEAPTA APROBAREA DE STERGERE
1672  FE59          749  CP 'Y' ;DACA NU S-A RASPUNS 'YES' ;SE RENUNTA
1674  C2CA19        750  JP NZ,FRET
                    751  ; IN CAZUL APROBARII SE COMPL.VECTORUL
                    752 WRFIL1
1677  219A7F        753  LD HL,AFF
167A  3A970F        754  LD A,(FNAD) ; SE COMPL NR PISTEI
167D  77            755  LD (HL),A
167E  23            756  INC HL ;SE VA INCEPE DE LA PRIMUL SECT.
167F  3601          757  LD (HL),1
1681  211A00        758  LD HL,26   ;LUNGIMEA ESTE DE 26 SECTOARE
1684  229C7F        759  LD (ALF),HL
1687  210002        760  LD HL,ESPACL ;ADRESA DE INCARCARE ESTE ESPACL
168A  229E7F        761  LD (AAF),HL
168D  21047F        762  LD HL,ADREV
1690  36C9          763  LD (HL),0C9H ;COD DE RET
1692  CD4E80        764  CALL SW ;SCRIERE FLOPPY
1695  3A01A0        765  LD A,(0A001H) ;SE CITESTE STAREA FDC
1698  A7            766  AND A ;TREBUIE SA FIE ZERO
1699  C21312        767  JP NZ,DOSREV ; ;SALT IN MON DEBUGGER LA FROARE
169C  C3B91A        768  JP SRET ;RETURN CU SUCCES
                    769 ;
                    770 WRFIL2 ;NU MAI EXIXTA UN FISIER CU ACELASI
                    771        ;NUME SI SE CAUTA O PISTA GOALA
169F  21A00F        772  LD HL,DIRBUF+8 ;PINTER PE PRIMUL ENTRY
16A2  3E20          773  LD A,' '        ;SE RECUNOASTE PISTA GOALA DUPA
                    774                  ;BLANC IN PRIMA POZ A NUMELUI
16A4  0638          775  LD B,76-TRKDIR   ;NR TOTAL DE FISIERE POSIB
16A6  110800        776  LD DE,8          ;PASUL IN DIRECTOR
                    777 ;
16A9  BE            778  CP (HL)
16AA  CAB516        779  JP Z,WRFIL3 ;SALT DACA S-A GASIT O FISTA GOALA
16AD  19            780  ADD HL,DE ;MUTA POINTERUL
16AE  05            781  DEC B ;DECREM CONTOR
16AF  CACB16        782  JP Z,WRFIL5 ;DACA B=0 => DISK FULL
16B2  C3A916        783  JP $-9 ; SE REIA BUCLA
                    784  ;
                    785 WRFIL3 ;S-A GASIT O PISTA GOALA
16B5  3E4D          786  LD A,76+1 ;SE CALC ADRESA AC.PISTE
16B7  90            787  SUB B
16B8  32970F        788  LD (FNAD),A ;SE DEPUNE LA FNAD
```

```
16BB   EB          789  EX DE,HL ; ADRESA ENTRY IN DE    .
16BC   218F0F      790  LD HL,FNBUF ;ADRESA SURSA IN HL
16BF   010800      791  LD BC,8 ;8 CARAC DE MUTAT
16C2   CD1118      792  CALL LDIR ;SE MUTA NUMELE FISIERULUI IN
                   793             ;PISTA DIR.
16C5   CD9615      794  CALL WRDIR ;SE SCRIE NOUA PISTA DIRECTOARE
16C8   C37716      795  JP WRFIL1 ;SE SCRIE FISIERUL PE DISC
                   796 ;
                   797 WRFIL5 ;CIND SE AJUNGE AICI ESTE ER FULL
16CB   21F014      798  LD HL,FILMS2 ;ADR.MES.'DISK FULL'
16CE   06FF        799  LD B,255
16D0   CD951A      800  CALL PUTMSG
16D3   C3CA19      801  JP FRET ;RETURN 'FALSE' (INSUCCES)
                   802 ;
                   803 ;
                   804 ;*****************************************
                   805 ;
                   806 ; C A T =SUBRUTINA CATALOGARE DISC
                   807 ;
                   808 CAT
16D6   CD7015      809  CALL RDDIR ;SE CITESTE PISTA DIR.
16D9   0608        810  LD B,8
16DB   21980F      811  LD HL,DIRBUF ;SE TIPARESTE NUMELE DISCULUI
16DE   CD951A      812  CALL PUTMSG
16E1   CDB219      813  CALL CROUT
16E4   CDB219      814  CALL CROUT
16E7   21FA14      815  LD HL,FILMS3 ;ADRESA MES 'FILENAME TRACK'
16EA   06FF        816  LD B,255
16EC   CD951A      817  CALL PUTMSG
                   818 ;
16EF   21A00F      819  LD HL,DIRBUF+8
16F2   1E15        820  LD E,TRKDIR+1 ;E=CONTOR DE PISTA DE LA TRKDIR+1 LA 76
                   821  ;
                   822 CAT1
16F4   7E          823  LD A,(HL) ;SE ADUCE PRIMUL CARAC
16F5   FE20        824  CP ' ' ;DACA E BLANC E PISTA GOALA
16F7   CA1917      825  JP Z,CAT3 ;SE TRECA ATUNCI LA PISTA URM
16FA   0608        826  LD B,8 ;SE TIP NUME FISIER
16FC   CD951A      827  CALL PUTMSG
16FF   0E20        828  LD C,' ' ;SE TIP UN BLANC
1701   CD961C      829  CALL ECHO
                   830  ;SE TRANSF NR PISTEI IN ZEC.
1704   4B          831  LD C,E
1705   0600        832  LD B,0
1707   CD5418      833  CALL CHEXZ
170A   79          834  LD A,C
170B   CD691A      835  CALL NMOUT ;SE TIP NR PISTA IN ZECIMAL
170E   CDB219      836  CALL CROUT ;SE TIP CR,LF
                   837 CAT2
1711   1C          838  INC E ;SE INCREM CONTOR PISTA
1712   3E4D        839  LD A,76+1
1714   BB          840  CP E ;SE COMPARA CU CONTORUL
1715   C8          841  RET Z ;RETURN DACA S-A AJUNS LA ULTIMA PISTA
1716   C3F416      842  JP CAT1 ;REIA BUCLA DACA NU
                   843 ;
                   844 CAT3 ;SARE PESTE UN ENTRY
1719   010800      845  LD BC,8
171C   09          846  ADD HL,BC ;ADUNA 8 LA HL
```

```
171D   C31117       847  JP CAT2 ;REINTRA IN BUCLA
                    848 ;
                    849 ;
                    850 ;*********************************************
                    851 ;
                    852 ; I N I T D =INIT DISC
                    853 ;
                    854 INITD
1720   212615       855  LD HL,FILMS6
1723   06FF         856  LD B,255 ;SE TIP 'INSERT NEW DISK'
1725   CD951A       857  CALL PUTMSG ;SE TIP 'READY ?'
1728   CD7214       858  CALL GET
172B   FE59         859  CP 'Y' ;DACA NU SE RASP. 'YES'
172D   C2CA19       860  JP NZ,FRET ;NU SE MAI FACE NIMIC
                    861  ;SE UMPLE LOCUL NUMELUI DIN DIRBUF CU BLANCURI
1730   21980F       862  LD HL,DIRBUF
1733   3E20         863  LD A,' '
1735   0608         864  LD B,8
                    865  ;
1737   77           866  LD (HL),A
1738   23           867  INC HL
1739   05           868  DEC B
173A   C23717       869  JP NZ,$-3 ;BUCLEAZA PINA CIND B=0
                    870 ;
173D   211B15       871  LD HL,FILMS5
1740   060A         872  LD B,FLMS5L ;SE TIP 'DISK NAME '
1742   CD951A       873  CALL PUTMSG
1745   CD7214       874  CALL GET
1748   FE41         875  CP 'A' ;SE COMPARA CU CODUL LUI 'A'
174A   FAB819       876  JP M,ERROR ;EROARE DACA NUMELE NU INCEPE
                    877               ;CU O LITERA
174D   21070F       878  LD HL,INFBF+1
1750   11980F       879  LD DE,DIRBUF ;SE MUTA IN DIRBUF TOATE CARAC >20H
                    880 ;
                    881 INITD1
1753   7E           882  LD A,(HL)
1754   FE21         883  CP ' '+1
1756   FA5F17       884  JP M,INITD2
1759   12           885  LD (DE),A
175A   23           886  INC HL
175B   13           887  INC DE
175C   C35317       888  JP INITD1
                    889 INITD2
                    890  ;SE UMPLE TOATA PISTA DIRECTOARE CU BLANCURI
175F   21A00F       891  LD HL,DIRBUF+8
1762   01F801       892  LD BC,512-8 ;NUMAR DE OCTETI DE UMPLUT
                    893 INITD3
1765   3620         894  LD (HL),' '
1767   23           895  INC HL
1768   0B           896  DEC BC
1769   79           897  LD A,C
176A   B0           898  OR B
176B   C26517       899  JP NZ,INITD3 ;BUCLEAZA PINA CIND BC=0
                    900 ;
                    901 ; S-A TERMINAT PREGATIREA PISTEI DIRECTOARE
                    902 ; A NOULUI DISC FLOPPY
                    903 ;
176E   3EC9         904  LD A,0C9H ;COD RETURN
```

```
1770    32047F      905  LD (ADREV),A
1773    CD4280      906  CALL SF ;APEL LA SUBRUTINA DE FORMATARE DISC
1776    CD9615      907  CALL WRDIR ;SE SCRIE PISTA DIRECTOARE
                    908  ;
1779    D21312      909  JP NC,DOSREV ; ;SALT IN MONIT IN CAZ DE ERR
                    910  ;
                    911  ; ACUM URMEAZA O BUCLA IN CARE SE CITESC CITE
                    912  ; 2 PISTE DE PE VECHEA DISCHETA SI SE SCRIU
                    913  ; PE CEA NOUA ;FIIND 20 DE PISTE DE SCRIS,OPERATIU-
                    914  ; NEA SE REPETA DE 10 ORI.NR PISTEI DE PE
                    915 ; CARE SE CITESTE( SE SCRIE ) SE PASTR. LA
                    916 ; ADRESA NXTRK
                    917  ;
177C    3E00        918  LD A,0 ;SE INIT NXTRK
177E    328E0F      919  LD (NXTTRK),A
                    920  ;
1781    3E01        921  LD A,1 ;SE VA CITI(SCRIE) SE LA SECT 1
1783    329B7F      922  LD (ASF),A
1786    218200      923  LD HL,5*26 ;SE VOR CITI CITE 2 PISTE
1789    229C7F      924  LD (ALF),HL
178C    210022      925  LD HL,RSPACL ;SPATIUL DE MEMORIE
                    926                ;ESTE CEL IN CARE DE
                    927                ;OBICEI SE INCARCA INTERPRETERUL
178F    229E7F      928  LD (AAF),HL  ;ACEASTA VA FI INTOTDEAUNA ADRESA
                    929                ;DE TRANSFER
                    930  ;
                    931 INITD4
1792    3A8E0F      932  LD A,(NXTTRK)
1795    329A7F      933  LD (APF),A ;SE INIT ADRESA PISTEI
                    934  ;SE TIP NR PISTEI
1798    4F          935  LD C,A
1799    0600        936  LD B,0
179B    CD5418      937  CALL CHEXZ ;CONVERSIE IN ZECIMAL
179E    79          938  LD A,C
179F    CD691A      939  CALL NMOUT
                    940 ;
17A2    213F15      941  LD HL,FILMS7 ;SE TIP INSERT OLD DISK
17A5    06FF        942  LD B,255
17A7    CD951A      943  CALL PUTMSG
17AA    CD7214      944  CALL GET ;SE ASTEAPTA RASPUNS
17AD    FE59        945  CP 'Y'
17AF    C2B819      946  JP NZ,ERROR ;EROARE DACA NU ESTE YES
                    947  ;
17B2    CD4880      948  CALL SR ;SE CITESTC 2 PISTE DE PE OLD DISK
                    949  ;
17B5    212615      950  LD HL,FILMS6 ;SE TIP 'INSERT NEW DISK'
17B8    06FF        951  LD B,255
17BA    CD951A      952  CALL PUTMSG
17BD    CD7214      953  CALL GET ;SE ASTEAPTA RASPUNS
17C0    FE59        954  CP 'Y'
17C2    C2B819      955  JP NZ,ERROR ;EROARE DACA NU ESTE YES
                    956  ;
17C5    CD4E80      957  CALL SW ;SE SCRIU CELE 2 PISTE PE DISCUL NOU
                    958
17C8    3A8E0F      959  LD A,(NXTTRK) ;SE INCR.CU 2 IN PISTEI
17CB    3C          960  INC A
17CC    3C          961  INC A
17CD    3C          962  INC A
```

```
17CE    3C          963  INC A
17CF    3C          964  INC A
17D0    00          965  NOP
17D1    00          966  NOP
17D2    00          967  NOP
17D3    00          968  NOP
17D4    00          969  NOP
17D5    00          970  NOP
                    971  ; SE VERIF CA NU A AJUNS LA TRKDIR
17D6    FE14        972  CP TRKDIR
17D8    F2E117      973  JP P,INITD5 ;GATA DACA A DEPASIT TRKDIR
17DB    320E0F      974  LD (NXTTRK),A ;
17DE    C39217      975  JP INITD4 ;BUCLEAZA
                    976 ;
                    977 ;
                    978 INITD5 ;CIND SE AJUNGE AICI S-A TERMINAT
                    979        ;INITIALIZAREA DISCULUI SI IN UDF
                    980        ;SE AFLA DISCUL NOU FORMAT
17E1    215915      981  LD HL,FILMS8 ;SE TIP 'O.K.'
17E4    06FF        982  LD B,255
17E6    CD951A      983  CALL PUTMSG
17E9    C9          984  RET     ;RETURN ;TOTUL E GATA
                    985 ;********************************** END OF FILE "AUXDOS"
```

```
                    986 *HEADING GENERAL UTILITY ROUTINES.
                    987 ;**********************************************
                    988 ;NEXTCH ;ADUCE PRIMUL CARACTER NONBLANC
                    989 ; DE DUPA PRIMUL BLANC DIN SPATIUL DE INTRARE
                    990 ; CORECTEAZA INPTR ;SI REVINE CU EL IN HL
                    991 ;
                    992 NEXTCH
17EA  2A040F        993  LD HL,(INPTR)
17ED  7E            994  LD A,(HL) ;CAUTA UN BLANC SAU CR
17EE  FE0D          995  CP ASCICR
17F0  CA0118        996  JP Z,NXCH1 ;RETURN DACA ESTE CR
17F3  FE20          997  CP ' '
17F5  23            998  INC HL
17F6  C2ED17        999  JP NZ,$-9
                   1000 ;
17F9  7E           1001  LD A,(HL) ;CAUTA UN CARAC.NONBLANC
17FA  FE20         1002  CP ' '
17FC  23           1003  INC HL
17FD  CAF917       1004  JP Z,$-4
                   1005  ;
1800  2B           1006  DEC HL ;CORECTEAZA HL
                   1007 NXCH1
1801  22040F       1008  LD (INPTR),HL
1804  C9           1009  RET
                   1010 ;
                   1011 ;**********************************************
                   1012 ;FETCHR ;FETCH A CRARACTER
                   1013 ;****
                   1014 FETCHR
1805  E5           1015  PUSH HL
1806  2A040F       1016  LD HL,(INPTR)
1809  7E           1017  LD A,(HL)
180A  4F           1018  LD C,A
180B  23           1019  INC HL
180C  22040F       1020  LD (INPTR),HL
180F  E1           1021  POP HL ;REFACE HL
1810  C9           1022  RET ;
                   1023 ;
                   1024 ; SUBRUTINE AUXILIARE
                   1025 ;
                   1026 LDIR
1811  79           1027  LD A,C ;VERIF CA BC=0
1812  B0           1028  OR B
1813  C8           1029  RET Z
1814  7E           1030  LD A,(HL)
1815  12           1031  LD (DE),A
1816  23           1032  INC HL
1817  13           1033  INC DE
1818  0B           1034  DEC BC
1819  C31118       1035  JP LDIR
                   1036 ;
                   1037 LDDR
181C  79           1038  LD A,C ;VERIF CA BC=0
181D  B0           1039  OR B
181E  C8           1040  RET Z
181F  7E           1041  LD A,(HL)
1820  12           1042  LD (DE),A
1821  2B           1043  DEC HL
```

```
1822    1B          1044  DEC DE
1823    0B          1045  DEC BC
1824    C31C18      1046  JP LDDR
                    1047 ;
                    1048 HL_DE  ;HL=HL-DE
1827    D5          1049  PUSH DE
1828    7B          1050  LD A,E
1829    2F          1051  CPL
182A    5F          1052  LD E,A
182B    7A          1053  LD A,D
182C    2F          1054  CPL
182D    57          1055  LD D,A
182E    13          1056  INC DE ;ASTFEL DE=-DE
182F    19          1057  ADD HL,DE
1830    D1          1058  POP DE
1831    C9          1059  RET
                    1060 ;
                    1061 ;
                    1062 CPDR ;COMPARE DECREMENT REPREAT
1832    BE          1063  CP (HL)
1833    37          1064  SCF ;SET CY PT "TRUE"
1834    C8          1065  RET Z
1835    2B          1066  DEC HL
1836    0B          1067  DEC BC
1837    D5          1068  PUSH DE
1838    5F          1069  LD E,A ;SALV. A IN E
1839    79          1070  LD A,C
183A    B0          1071  OR B ;VER BC=0
183B    7B          1072  LD A,E
183C    D1          1073  POP DE
183D    C23218      1074  JP NZ,CPDR ;CONTINUA DACA BC # 0
1840    37          1075  SCF
1841    3F          1076  CCF ;CY=0 ADICA "FALSE"
1842    C9          1077  RET
                    1078 ;
                    1079 ;
                    1080 CPIR ;COMPARE INCREMENT REPEAT
1843    BE          1081  CP (HL)
1844    37          1082  SCF
1845    C8          1083  RET Z ;RET DACA S-A GASIT CARACTERUL
1846    23          1084  INC HL
1847    0B          1085  DEC BC
1848    D5          1086  PUSH DE
1849    5F          1087  LD E,A ;SALV A IN E
184A    79          1088  LD A,C
184B    B0          1089  OR B ;VERIF BC=0
184C    7B          1090  LD A,E
184D    D1          1091  POP DE
184E    C24318      1092  JP NZ,CPIR
1851    37          1093  SCF
1852    3F          1094  CCF ;CY=0 ADICA "FALSE"
1853    C9          1095  RET
                    1096 ;
                    1097 ;*************************************************
                    1098 ; FUNCTIE   :CHEXZ
                    1099 ; INPUT     : BC
                    1100 ; OUTPUT    ; BC
                    1101 ; DISTR     : A,F,S
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                    1102 ; CONVERSIE HEXA ZECIMAL
                    1103 ;
                    1104 ; INPUT SI OUTPUT = BC
                    1105 ;
                    1106 CHEXZ
1854  E5            1107  PUSH HL
1855  D5            1108  PUSH DE
                    1109  ;
1856  210000        1110  LD HL,0 ;INITIALIZEAZA ZONA DE LUCRU
1859  79            1111  LD A,C
185A  E60F          1112  AND 0FH ;IZOL PRIMA CIFRA
185C  CD8418        1113  CALL CHEXZ1
                    1114  ;
185F  79            1115  LD A,C
1860  E6F0          1116  AND 0F0H ;IZOL A 2-A CIFRA
1862  0F            1117  RRCA
1863  0F            1118  RRCA
1864  0F            1119  RRCA
1865  0F            1120  RRCA
1866  C610          1121  ADD A,10H
1868  CD8418        1122  CALL CHEXZ1
                    1123  ;
186B  78            1124  LD A,B
186C  E60F          1125  AND 0FH
186E  C620          1126  ADD A,20H
1870  CD8418        1127  CALL CHEXZ1
                    1128  ;
1873  78            1129  LD A,B
1874  E6F0          1130  AND 0F0H
1876  0F            1131  RRCA
1877  0F            1132  RRCA
1878  0F            1133  RRCA
1879  0F            1134  RRCA
187A  C630          1135  ADD A,30H
187C  CD8418        1136  CALL CHEXZ1
187F  E5            1137  PUSH HL
1880  C1            1138  POP BC ;REZ IN BC
                    1139  ;
1881  D1            1140  POP DE
1882  E1            1141  POP HL
1883  C9            1142  RET
                    1143 ;
                    1144 CHEXZ1
1884  E5            1145  PUSH HL
1885  1600          1146  LD D,0
1887  5F            1147  LD E,A
1888  219A18        1148  LD HL,TABCHZ
188B  19            1149  ADD HL,DE
188C  19            1150  ADD HL,DE ;SE ADUNA DE 2 ORI CAL CIFREI
188D  5E            1151  LD E,(HL) ;SE ADUCE CIFRA DIN TABEL
188E  23            1152  INC HL
188F  56            1153  LD D,(HL)
1890  E1            1154  POP HL
                    1155  ;
                    1156  ;
                    1157 ADDZ
1891  7B            1158  LD A,E
1892  85            1159  ADD A,L
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```
1893  27          1160  DAA ;CORECTIE ZECIMALA
1894  6F          1161  LD L,A ;DEPUNE OCTETUL INF.AL REZULT LA HL
1895  7A          1162  LD A,D
1896  8C          1163  ADC A,H
1897  27          1164  DAA
1898  67          1165  LD H,A
1899  C9          1166  RET
                  1167 ;
                  1168 ;
                  1169 ;
                  1170 TABCHZ ;TABEL CONVERSIE HEXA-ZECIMAL
                  1171 ;
189A  0000        1172  DEFW 0H
189C  0100        1173  DEFW 1H
189E  0200        1174  DEFW 2H
18A0  0300        1175  DEFW 3H
18A2  0400        1176  DEFW 4H
18A4  0500        1177  DEFW 5H
18A6  0600        1178  DEFW 6H
18A8  0700        1179  DEFW 7H
18AA  0800        1180  DEFW 8H
18AC  0900        1181  DEFW 9H
18AE  1000        1182  DEFW 10H
18B0  1100        1183  DEFW 11H
18B2  1200        1184  DEFW 12H
18B4  1300        1185  DEFW 13H
18B6  1400        1186  DEFW 14H
18B8  1500        1187  DEFW 15H
                  1188 ;
18BA  0000        1189  DEFW 0H
18BC  1600        1190  DEFW 16H
18BE  3200        1191  DEFW 32H
18C0  4800        1192  DEFW 48H
18C2  6400        1193  DEFW 64H
18C4  8000        1194  DEFW 80H
18C6  9600        1195  DEFW 96H
18C8  1201        1196  DEFW 112H
18CA  2801        1197  DEFW 128H
18CC  4401        1198  DEFW 144H
18CE  6001        1199  DEFW 160H
18D0  7601        1200  DEFW 176H
18D2  9201        1201  DEFW 192H
18D4  0802        1202  DEFW 208H
18D6  2402        1203  DEFW 224H
18D8  4002        1204  DEFW 240H
                  1205 ;
18DA  0000        1206  DEFW 0H
18DC  5602        1207  DEFW 256H
18DE  1205        1208  DEFW 512H
18E0  6807        1209  DEFW 768H
18E2  2410        1210  DEFW 1024H
18E4  8012        1211  DEFW 1280H
18E6  3615        1212  DEFW 1536H
18E8  9217        1213  DEFW 1792H
18EA  4820        1214  DEFW 2048H
18EC  0423        1215  DEFW 2304H
18EE  6025        1216  DEFW 2560H
18F0  1628        1217  DEFW 2816H
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18F2    7230        1218  DEFW 3072H
18F4    2833        1219  DEFW 3328H
18F6    8435        1220  DEFW 3584H
18F8    4038        1221  DEFW 3840H
                    1222 ;
18FA    0000        1223  DEFW 0
18FC    9640        1224  DEFW 4096H
18FE    9281        1225  DEFW 8192H
1900    0000        1226  DEFW 0
1902    0000        1227  DEFW 0
1904    0000        1228  DEFW 0
1906    0000        1229  DEFW 0
1908    0000        1230  DEFW 0
190A    0000        1231  DEFW 0
190C    0000        1232  DEFW 0
190E    0000        1233  DEFW 0
1910    0000        1234  DEFW 0
1912    0000        1235  DEFW 0
1914    0000        1236  DEFW 0
1916    0000        1237  DEFW 0
1918    0000        1239  DEFW 0
                    1239 ;**********************************************
                    1240 ; FUNCTION   :CZHEX
                    1241 ; INPUT      : BC
                    1242 ; OUTPUT     : BC
                    1243 ; DESTR      : A,F,S
                    1244 ; DESCR      : FACE CONVERSIA NUMARULUI BCD 4 CIFRE
                    1245 ;      DIN BC IN HEXA
                    1246  ;CONBERSIE ZECIMAL,HEXA
                    1247 ;
                    1248 ; INPUT SI OUTPUT = BC
                    1249 ;
                    1250 CZHEX
191A    E5          1251  PUSH HL
191B    D5          1252  PUSH DE
                    1253  ;
191C    210000      1254  LD HL,0 ;INITIALIZEAZA ZONA DE LUCRU
191F    79          1255  LD A,C
1920    E60F        1256  AND 0FH ;IZOL PRIMA CIFRA
1922    CD4A19      1257  CALL CZHEX1
                    1258  ;
1925    79          1259  LD A,C
1926    E6F0        1260  AND 0F0H ;IZOL A 2-A CIFRA
1928    0F          1261  RRCA
1929    0F          1262  RRCA
192A    0F          1263  RRCA
192B    0F          1264  RRCA
192C    C60A        1265  ADD A,10
192E    CD4A19      1266  CALL CZHEX1
                    1267  ;
1931    78          1268  LD A,B
1932    E60F        1269  AND 0FH
1934    C614        1270  ADD A,20
1936    CD4A19      1271  CALL CZHEX1
                    1272  ;
1939    78          1273  LD A,B
193A    E6F0        1274  AND 0F0H
193C    0F          1275  RRCA
```

```
193D    0F          1276  RRCA
193E    0F          1277  RRCA
193F    0F          1278  RRCA
1940    C61E        1279  ADD A,30
1942    CD4A19      1280  CALL CZHEX1
1945    E5          1281  PUSH HL
1946    C1          1282  POP BC ;REZ IN BC
                    1283  ;
1947    D1          1284  POP DE
1948    E1          1285  POP HL
1949    C9          1286  RET
                    1287 ;
                    1288 CZHEX1
194A    E5          1289  PUSH HL
194B    1600        1290  LD D,0
194D    5F          1291  LD E,A
194E    215919      1292  LD HL,TABCZH
1951    19          1293  ADD HL,DE
1952    19          1294  ADD HL,DE ;SE ADUNA DE 2 ORI CAL CIFREI
1953    5E          1295  LD E,(HL) ;SE ADUCE CIFRA DIN TABEL
1954    23          1296  INC HL
1955    56          1297  LD D,(HL)
1956    E1          1298  POP HL
1957    19          1299  ADD HL,DE ;ADUNA VAL CIFREI LA REZ PARTIAL
1958    C9          1300  RET
                    1301  ;
                    1302  ;
                    1303 TABCZH ;TABEL CONVERSIE ZECIMAL - HEXA
                    1304 ;
1959    0000        1305  DEFW 0
195B    0100        1306  DEFW 1
195D    0200        1307  DEFW 2
195F    0300        1308  DEFW 3
1961    0400        1309  DEFW 4
1963    0500        1310  DEFW 5
1965    0600        1311  DEFW 6
1967    0700        1312  DEFW 7
1969    0800        1313  DEFW 8
196B    0900        1314  DEFW 9
                    1315 ;
196D    0000        1316  DEFW 0
196F    0A00        1317  DEFW 10
1971    1400        1318  DEFW 20
1973    1E00        1319  DEFW 30
1975    2800        1320  DEFW 40
1977    3200        1321  DEFW 50
1979    3C00        1322  DEFW 60
197B    4600        1323  DEFW 70
197D    5000        1324  DEFW 80
197F    5A00        1325  DEFW 90
                    1326 ;
1981    0000        1327  DEFW 0
1983    6400        1328  DEFW 100
1985    C800        1329  DEFW 200
1987    2C01        1330  DEFW 300
1989    9001        1331  DEFW 400
198B    F401        1332  DEFW 500
198D    5802        1333  DEFW 600
```

```
198F    BC02        1334  DEFW 700
1991    2003        1335  DEFW 800
1993    8403        1336  DEFW 900
                    1337 ;
1995    0000        1338  DEFW 0000
1997    E803        1339  DEFW 1000
1999    D007        1340  DEFW 2000
199B    B80B        1341  DEFW 3000
199D    A00F        1342  DEFW 4000
199F    8813        1343  DEFW 5000
19A1    7017        1344  DEFW 6000
19A3    581B        1345  DEFW 7000
19A5    401F        1346  DEFW 8000
19A7    2823        1347  DEFW 9000
                    1348 ;*****************************************************
                    1349 ;
                    1350 ; FUNCTIE: CNVBN
                    1351 ; INTRARI: C =CARAC ASCII HEXA
                    1352 ; IESIRI : A =0 - F HEXA
                    1353 ; CALL    : N
                    1354 ; DISTRUGE: A,F,F'S
                    1355 ; DESCRIERE:
                    1356 ;           CNVBN CONVERTESTE CODUL ASCII AL
                    1357 ;             UNEI CIFRE HEXA IN VALOAREA
                    1358 ;             BINARA CORESPUNZATOARE.NU SE VERI-
                    1359 ;             FICA DACA INTRAREA ESTS CARACTER
                    1360 ;             ASCII HEXA
                    1361 ;
                    1362 ;
                    1363 ;
                    1364 CNVBN            ;CONVERT BINARY (CONVRSIE IN BINAR)
                    1365 ;
                    1366 ;
                    1367 ;
19A9    79          1368          LD A,C
19AA    D630        1369          SUB '0'       ;SCADE CODUL ASCII '0'
19AC    FE0A        1370          CP 10         ;REZ <10 ?
19AE    F8          1371          RET M         ;
19AF    D607        1372          SUB 7         ;DACA NU SCADE 7
19B1    C9          1373          RET           ;SE INTOARCE CU REZULTATUL
                    1374 ;
                    1375 ;
                    1376 ;
                    1377 ;*****************************************************
                    1378 ;
                    1379 ; FUNCTIE: CROUT
                    1380 ; INTRARI: N
                    1381 ; IESIRI : N
                    1382 ; CALL    : ECHO
                    1383 ; DISTRUGE: A,B,C,F,F'S
                    1384 ; DESCRIERE:
                    1385 ;           CROUT TRANSMITE UN CR LA CONSOLA
                    1386 ;             (SI UN LINE FEED )
                    1387 ;
                    1388 CROUT          ;"CR" OUT ;(RIND NOU;CR+LF)
                    1389 ;
                    1390 ;
                    1391 ;
```

```
19B2    0E0D        1392            LD C,ASCICR
19B4    CD961C      1393            CALL ECHO
19B7    C9          1394            RET
                    1395 ;
                    1396 ;
                    1397 ;*****************************************
                    1398 ; FUNCTION : ERROR
                    1399 ; DESCRIPTION :
                    1400 ;  ACEASTA PROCEDURA TIPARESTE MESAJUL 'ERROR'
                    1401 ;  DUPA CARE FACE SALT LA ADRESA CONTINUTA LS
                    1402 ;  LA LOCATIA ERRTN (ERROR RETURN) ,FIIND ASTFEL
                    1403 ;  ACCESIBILA ORICARUI PROGRAM CARE INITIALIZEAZA
                    1404 ;  IN PREALABIL ACEASTA LOCATIE
                    1405 LINDERR
                    1406 EERR
                    1407 ERROR
19BB    21C419      1408  LD HL,ERMES
19BE    06FF        1409  LD B,0FFH
19C0    CD951A      1410  CALL PUTMSG
19C3    2A8A0F      1411  LD HL,(ERRTN) ;ADUCE ADRESA DE RETURN IN CAZ DE
19C6    E9          1412  JP (HL)       ;SI FACE SALT ACOLO
                    1413 ERMES
19C7    4552524F    1414  DEFM 'ERROR'
19CC    0D          1415  DEFB ASCICR
                    1416 ;
                    1417 ;*****************************************
                    1418 ;
                    1419 ; FUNCTIE  ; FRET
                    1420 ; INTRARI  ; N
                    1421 ; IESIRI   ; CARRY = 0
                    1422 ; DISTRUGE : CARRY
                    1423 ; APELEAZA ; N
                    1424 ; DESCRIERE: ORICE SUBRUTINA CARE TREBUIE SA INDICE
                    1425 ;           LOGICUL "FALS" FACE SALT LA FRET
                    1426 ;           CARE POZITIONEAZA CY=0 SI APOI FACE RE
                    1427 ;
19CD    37          1428 FRET   SCF       ;POZ.CY=1
19CE    3F          1429        CCF       ;CY=0
19CF    C9          1430        RET
                    1431 ;
                    1432 ;*****************************************
                    1433 ;
                    1434 ; FUNCTIE  : GETHX
                    1435 ; INTRARI  : N
                    1436 ; IESIRI   : BC=NR INTREG DE 16 BITS
                    1437 ;           D =CARACTER CARE A TERMINAT NUMARUL
                    1438 ;           CARRY-1 DACA PRIMUL CARAC.=\DELIMITATO
                    1439 ;                -0 DACA PRIMUL CARAC.= DELIMITATO
                    1440 ; APELEAZA : FETCHR,VALDL ,VALDG,CNVBN,ERROR
                    1441 ; DISTRUGE : A,B,C,D,E,F,S
                    1442 ; DESCRIERE: GERHX ACCEPTA UN NUMAR DE 4 CIFRE HEXA
                    1443 ;            DIN CARACTERELE CE SE INTRODUC DE LA
                    1444 ;            CONSOLA.SE RETIN ULTIMELE 4 CIFRE.
                    1445 ;            NUMARUL ESTE CONSIDERAT TERMINAT CIND
                    1446 ;            SE INTILNESTE UN DELIMITATOR VALID.
                    1447 ;            CARACTERE NONHEXA SINT INTERPRETATE
                    1448 ;            CA EROARE SI SE TRANSFERA CONTROLUL
                    1449 ;            MONITORULUI.
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                    1450 ;                DACA PPRIMUL CARACTER ESTE UN DELIMI-
                    1451 ;               TATOR (NU SE INTRODUCE UN NUMAR )
                    1452 ;               CY=0 (FALS) IAR CONTINUTUL REGISTRULUI
                    1453 ;               BC ESTE NEDEFINIT.
                    1454 ;
                    1455 GETHX
19CD    E5          1456          PUSH HL
19CE    210000      1457          LD HL,0
19D1    5C          1458          LD E,H
19D2    CD0518      1459 GHX05    CALL FETCHR    ;ADUCE CARACT.
19D5    CD021B      1460          CALL VALDL     ;  DELIMITATOR ?
19D8    D2E719      1461          JP NC,GHX10    ; NU.POATE E CIFRA?
19DB    51          1462          LD D,C         ; DA.TOTUL E GATA
19DC    E5          1463          PUSH HL
19DD    C1          1464          POP BC         ;REZ IN BC
19DE    E1          1465          POP HL
19DF    7B          1466          LD A,E         ;ADUCE CFR (INDIC.EXISTENTA CIFRA)
19E0    B7          1467          OR A
19E1    C2B91A      1468          JP NZ,SRET     ;S-A GASIT UN NUMAR
19E4    CACA19      1469          JP Z,FRET      ;NU S-A GASIT
19E7    CDE71A      1470 GHX10    CALL VALDG     ;ESTE CIFRA?
19EA    D2B819      1471          JP NC,ERROR
19ED    CDA919      1472          CALL CNVBN     ;CIFRA.FACE CONVERSIA
19F0    1EFF        1473          LD E,0FFH      ;PUNE CFR DIF DE ZERO
19F2    29          1474          ADD HL,HL
19F3    29          1475          ADD HL,HL
19F4    29          1476          ADD HL,HL
19F5    29          1477          ADD HL,HL
19F6    0600        1478          LD B,0         ;PUNE PE ZERO OCTETUL CMS
19F8    4F          1479          LD C,A         ;VAL BINARA IN C
19F9    09          1480          ADD HL,BC      ;ADUNA LA REZ PARTIAL
19FA    C3D219      1481          JP GHX05       ;ADUCE URM.CARAC
                    1482 ;
                    1483 ;
                    1484 ;*************************************
                    1485 ;
                    1486 ; FUNCTIE   : GETNM
                    1487 ; INTRARI   : C - CITE N-RE TREBUIE ADUSE DE LA
                    1488 ;                   CONSOLA.
                    1489 ; IESIRI    : VIRFUL STIVEI - NUMERELE IN ORDI-
                    1490 ;               NEA INVERSA A INTRODUCERII LOR.
                    1491 ;               (ULTIMUL E IN VIRFUL STIVEI)
                    1492 ; APELEAZA  : GETHX,HILO,ERROR
                    1493 ; DISTRUGE  : A,B,C,D,E,H,L,F,S
                    1494 ; DESCRIERE: GETNM GASESTE IN CARACTERELE INTRODUSE
                    1495 ;               DE LA CONSOLA NUMARUL SPECIFICAT DE
                    1496 ;               NUMERE HEXA,INTRE 1 SI TREI NUMERE.
                    1497 ;              DACA SE CER 2 SAU MAI MULTE NUMERE
                    1498 ;                 ATUNCI PRIMU TREBUIE SA FIE MAI MIC SAU
                    1499 ;                 EGAL CU AL DOILEA;IN CAZ CONTRAR CELE 2
                    1500 ;                 NUMERE VOR FI FUSE EGALE.
                    1501 ;              ULTIMUL NUMAR TREBUIE SA FIE TERMINAT CU
                    1502 ;               UN CR.IN CAZ CONTRAR SE VA INDICA EROARE.
                    1503 ;
                    1504 GETNM
19FD    2E03        1505          LD L,3       ;MAX. 3 N-RE
19FF    79          1506          LD A,C       ;NUMARUL REAL IN A
1A00    E603        1507          AND 3        ;FORTEAZA LA MAX 3
```

```
1A02    C8          1508          RET Z       ;DACA E 0 NU MAI FACE NIMIC
1A03    67          1509          LD H,A      ;NR REAL IN H
1A04    CDCD19      1510 GNM05    CALL GETHX  ;ADUCE NR DE LA INTRARE
1A07    D2B819      1511          JP NC,ERROR;
1A0A    C5          1512          PUSH BC     ;SALV.N-RUL IN STIVA
1A0B    2D          1513          DEC L
1A0C    25          1514          DEC H       ;EXISTA 2 CONTOARE
1A0D    CA191A      1515          JP Z,GNM10  ;SALT DACA NU MAI SINT N-RE
1A10    7A          1516          LD A,D      ;ADUCE TERMINATOR
1A11    FE0D        1517          CP ASCICR   ;DACA E CR SINT FREA PUTINE N-RE
1A13    CAB819      1518          JP Z,ERROR
1A16    C3041A      1519          JP GNM05    ;MAI ADUCE N-RE
1A19    7A          1520 GNM10    LD A,D      ;VERIF ULTIMUL TERMINATOR
1A1A    FE0D        1521          CP ASCICR
1A1C    C2B819      1522          JP NZ,ERROR
1A1F    01FFFF      1523          LD BC,0FFFFH ;IN HL N-RUL MAXIM
1A22    7D          1524          LD A,L
1A23    B7          1525          OR A
1A24    CA2C1A      1526          JP Z,GNM20  ;L=0,AU FOST INTROD 3 NRE
1A27    C5          1527 GNM15    PUSH BC     ;UMPLE ARGUMENTELE RAMASE
1A28    2D          1528          DEC L       ;CU FFFF
1A29    C2271A      1529          JP NZ,GNM15
1A2C    C1          1530 GNM20    POP BC      ;SCOATE ARGUMENTELE
1A2D    D1          1531          POP DE      ;  DIN STIVA
1A2E    E1          1532          POP HL
1A2F    CD421A      1533          CALL HILO   ;PRIMUL >=AL 2-LEA ?
1A32    D2371A      1534          JP NC,GNM25 ;NU ,NERGE MAI DEPARTE
1A35    54          1535          LD D,H      ;DA AL 2-LEA VA FI =PRIMUL
1A36    5D          1536          LD E,L
1A37    E3          1537 GNM25    EX (SP),HL  ;PUNE PRIMUL NR IN STIVA
1A38    D5          1538          PUSH DE     ;      AL 2-LEA
1A39    C5          1539          PUSH BC     ;      AL 3-LEA
1A3A    E5          1540          PUSH HL     ;  SI PC
1A3B    3D          1541 GNM30    DEC A       ;DECREMENTEAZA CE A RAMAS
1A3C    F8          1542          RET M
1A3D    E1          1543          POP HL      ;ADUCE ADR.DE REVENIRE
1A3E    E3          1544          EX (SP),HL  ;INLOC ULTIMUL NR
1A3F    C33B1A      1545          JP GNM30    ;CU ADR.DE REV.ST REIA
                    1546 ;
                    1547 ;
                    1548 ;
                    1549 ;*****************************************
                    1550 ;
                    1551 ; FUNCTIE   : HILO
                    1552 ; INTRARI   : DE -NR DE 16 BITS
                    1553 ;             HL -NR DE 16 BITS
                    1554 ; IESIRI    : CARRY = 0 DACA HL<DE (FALS)
                    1555 ;                   =1  DACA HL>=DE (ADEVARAT)
                    1556 ; APELEAZA : N
                    1557 ; DESTRUGE : F,S
                    1558 ; DESCRIERE: HILO COMPARA CELE 2 N-RE INTREGI,FARA
                    1559 ;             SEMN DIN DE SI HL SI POZITIONEAZA CARR
                    1560 ;             FUNCTIE DE REZULTAT.
                    1561 ;
                    1562 HILO
1A42    C5          1563          PUSH BC
1A43    47          1564          LD B,A      ;SALV.A
1A44    E5          1565          PUSH HL
```

```
1A45  7A        1566          LD A,D
1A46  B3        1567          OR E     ;VERIF DE=0
1A47  CA631A    1568          JP Z,HILO5 ;DA,TREABA E TERMINATA
1A4A  23        1569          INC HL
1A4B  7C        1570          LD A,H
1A4C  B5        1571          OR L       ;VERIF HL=0
1A4D  CA631A    1572          JP Z,HILO5 ;DA,ATUNCI A AVUT FFFF
1A50  E1        1573          POP HL
1A51  D5        1574          PUSH DE
1A52  3EFF      1575          LD A,0FFH
1A54  AA        1576          XOR D
1A55  57        1577          LD D,A
1A56  3EFF      1578          LD A,0FFH
1A58  AB        1579          XOR E
1A59  5F        1580          LD E,A
1A5A  13        1581          INC DE ;S-A OBTINUT COMPL DE 2 AL DE
1A5B  7D        1582          LD A,L
1A5C  83        1583          ADD A,E
1A5D  7C        1584          LD A,H  ;SE ADUNA HL SI (-)DE
1A5E  8A        1585          ADC A,D ;AC. OPER. POZITIONEAZA CY PT IESIRE
1A5F  D1        1586          POP DE
1A60  78        1587          LD A,B
1A61  C1        1588          POP BC  ;REFACE REGISTRELE
1A62  C9        1589          RET
                1590 HILO5
1A63  E1        1591          POP HL
1A64  78        1592          LD A,B
1A65  C1        1593          POP BC ;REFACE REGISTRELE
1A66  C3B91A    1594          JP SRET  ;POZ. CY PT IESIRE
                1595 ;
                1596 ;
                1597 ;*****************************************
                1598 ;
                1599 ; FUNCTIE   : NMOUT
                1600 ; INTRARI   : A = NR INTREG DE 8 BITS
                1601 ; IESIRI    : N
                1602 ; APELEAZA  : ECHO,PRVAL
                1603 ; DISTRUGE  : A,B,C,F,S
                1604 ; DESCRIERE: NMOUT CONVERTESTE CONTINUTUL ACUMULATORULUI
                1605 ;              IN CODUL A 2 CIFRE HEXA PE CARE LE
                1606 ;              TRANSMITE LA CONSOLA.
                1607 ;
                1608 NMOUT
1A69  E5        1609          PUSH HL
1A6A  F5        1610          PUSH AF
1A6B  0F        1611          RRCA
1A6C  0F        1612          RRCA
1A6D  0F        1613          RRCA
1A6E  0F        1614          RRCA        ;TETRADA CMS PE POZ 0-3
1A6F  E60F      1615          AND HCHAR   ;MASCHEAZA BITII 4-7
                1616 HCHAR EQU 0FH
1A71  4F        1617          LD C,A
1A72  CD841A    1618          CALL PRVAL ;CONVERSIE ASCII
1A75  CD961C    1619          CALL ECHO  ;AFISARE
1A78  F1        1620          POP AF     ;REFACE ARG.
1A79  E60F      1621          AND HCHAR  ;MASCHEAZA BITII 4-7
1A7B  4F        1622          LD C,A
1A7C  CD841A    1623          CALL PRVAL
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```
1A7F    CD961C      1624            CALL ECHO
1A82    E1          1625            POP HL
1A83    C9          1626            RET
                    1627 ;
                    1628 ;
                    1629 ;
                    1630 ;*********************************************
                    1631 ;
                    1632 ; FUNCTIE   : PRVAL
                    1633 ; INTRARI   : C - NUMAR DE LA 00 LA 0F
                    1634 ; IESIRI    : C - CODUL ASCII CORESPUNZATOR.
                    1635 ; APELEAZA  : N
                    1636 ; DISTRUGE  : B,C,H,L,F,S
                    1637 ; DESCRIERE: PRVAL CONVERTESTE NUMARUL DIN C
                    1638 ;               IN CODUL ASCII CORESPUNZATOR CIFREI
                    1639 ;               HEXA RESPECTIVE.NU SE FACE NICI O
                    1640 ;               VERIFICARE ASUPRA VALIDITATII
                    1641 ;               INTRARII ( 00 <= C <= 0F )
                    1642 ;
                    1643 PRVAL
1A84    F5          1644            PUSH AF ;SALVARE AF
1A85    79          1645            LD A,C  ;ARGUMENT IN A
1A86    FE0A        1646            CP 0AH  ;VERIF DACA E LITERA SAU CIFRA
1A88    F2901A      1647            JP P,LETR
1A8B    F630        1648            OR 30H ;E CIFRA SI SE TRANSFORMA IN ASCII
1A8D    C3921A      1649            JP PRV05
1A90    C637        1650 LETR       ADD A,37H ;E LITERA SI SE TRANSF IN ASCII
1A92    4F          1651 PRV05      LD C,A    ;COD ASCII IN C
1A93    F1          1652            POP AF
1A94    C9          1653            RET
                    1654 ;
                    1655 ;
                    1656 ;
                    1657 PUTMSG  ;SUBRUTINA DE TIPARIRE MESAJE :
                    1658 ;*************************************
                    1659 ;    INTRARI :HL=ADRESA INCEPUT MESAJ
                    1660 ;             B =NR MAX DE CARACTERE DE TRANSMIS
                    1661 ;    DISTRUGE:A,F,B,C,H,L
                    1662 ;    CALL     : ECHO
                    1663 ;    DESCR.:SE TRANSMIT LA CONSOLA NUMARUL DAT DE C
                    1664 ;             SAU PINA LA UN ASCICR (DACA B>NR DE C
                    1665 ;
1A95    4E          1666        LD C,(HL) ;ADUCE CARACTER IN C
1A96    C5          1667        PUSH BC   ;SALVEAZA BC
1A97    CD961C      1668        CALL ECHO ;TRANSMITE CARACTERUL LA CONSOLA
1A9A    C1          1669        POP BC    ;REFACE BC
1A9B    23          1670        INC HL    ;HL POINTER PE URM.CARAC.
1A9C    05          1671        DEC B     ;DECR.CONTOR CARACTERE
1A9D    C8          1672        RET Z     ;RETURN DACA CONTORUL E NUL
1A9E    79          1673        LD A,C    ;
1A9F    FE0D        1674        CP ASCICR ;ULTIMUL CARACTER TRANSMIS A FOST (
1AA1    C2951A      1675        JP NZ,PUTMSG ;REIA DE LA INCEPUT DACA NU
1AA4    C9          1676        RET       ;TREABA E TERMINATA
                    1677 ;
                    1678 ;
                    1679 ;
                    1680 ;
                    1681 ;
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```
                    1682 ;*****************************************
                    1683 ;
                    1684 ; FUNCTIE   : PUTNM
                    1685 ; INTRARI   : E - NUMAR DE LA 00 LA OFF
                    1686 ;             HL=ADRESA DESTINATIE
                    1687 ; IESIRI    : (HL),(HL+1) - CODURI ASCII CORESP.
                    1688 ;             HL:=HL+2
                    1689 ; APELEAZA  : N
                    1690 ; DISTRUGE  : A,B,C,H,L,F,S
                    1691 ; DESCRIERE :
                    1692 ;   SUBRUTINA ARE CA INTRARE NUMARUL DIN E PE CARE IL
                    1693 ;    TRANSFORMA IN 2 CARACTERE ASCII CORESP.,PE CARE LE
                    1694 ;    DEPUNE LA LOCATIILE INDICATE DE HL,HL+1;HL ESTE INCRE-
                    1695 ;    MENTAT CU 2,FIIND ASTFEL PREGATIT PENTRU URMATOAREA
                    1696 ;    APELARE.
                    1697 ;
                    1698 ;
                    1699 PUTNM
1AA5  7B            1700  LD A,E     ;ADUCE ARGUMENTUL IN A
1AA6  0F            1701  RRCA       ;SE INVERSEAZA TETRADELE
1AA7  0F            1702  RRCA
1AA8  0F            1703  RRCA
1AA9  0F            1704  RRCA
1AAA  CDAE1A        1705  CALL PUTNM1 ;DEPUNE TETRADA SUF.
1AAD  7B            1706  LD A,E     ;READUCE ARG.IN A
                    1707 PUTNM1
1AAE  E60F          1708  AND HCHAR ;MASCHEAZA BITII 4-7
1AB0  4F            1709  LD C,A     ;REG.INTRAREA PT PRVAL
1AB1  E5            1710  PUSH HL    ;PRVAL DISTRUGE HL
1AB2  CD841A        1711  CALL PRVAL;CONVERTESTE IN ASCII
1AB5  E1            1712  POP HL     ;REFACE HL
1AB6  71            1713  LD (HL),C ;DEPUNE REZULT.LA DESTINATIE
1AB7  23            1714  INC HL     ;INCREM.ADR.DESTINATIE
1AB8  C9            1715  RET        ;GATA
                    1716 ;
                    1717 ;
                    1718 ;*****************************************
                    1719 ;
                    1720 ; FUNCTIE   : SRET
                    1721 ; INTRARI   : N
                    1722 ; IESIRI    : CARRY = 1
                    1723 ; APELEAZA  : N
                    1724 ; DISTRUGE  : CARRY
                    1725 ; DESCRIERE: ACELE SUBRUTINE CARE TREBUIE SA EXECUTE
                    1726 ;             RETURN AVIND LOGICUL "TRUE" FAC SALT
                    1727 ;             LA SRET ( SUCCESSFUL RETURN ) ,CARE FACE
                    1728 ;             CY = 1.
                    1729 ;
                    1730 ;
                    1731 SRET      ;SUCCESS RETURN (REVENIRE CU SUCCES)
1AB9  37            1732          SCF       ;CY=1
1ABA  C9            1733          RET
                    1734 ;
                    1735 ;*****************************************
                    1736 ;
                    1737 ; FUNCTIE   : STHFO
                    1738 ; INTRARI   : DE = ADRESA OCTETULUI IN CARE PE POZ
                    1739 ;                 0-3 SE VA DEPUNE 0
```

```
                    1740 ; IESIRI    : N
                    1741 ; APELEAZA  : SHTLF
                    1742 ; DISTRUGE  : A,B,C,H,L,F,S
                    1743 ; DESCRIERE: SHTF0 VERIFICA DACA FLAG-UL DIN TEMP
                    1744 ;            INDICA "LOWER".DACA ESTE ASA ATUNCI
                    1745 ;            LA ADRESA INDICATA DE DE VA POZITIONA
                    1746 ;            BITII 0-3 PE 0.DACA TEMP NU ESTE
                    1747 ;            " LOWER" NE SE INTREPRINDE NIMIC.
                    1748 ;
                    1749 STHF0
1ABB  3AC61A        1750          LD A,(TEMP)
1ABE  B7            1751          OR A
1ABF  C0            1752          RET NZ
1AC0  0E00          1753          LD C,0
1AC2  CDC81A        1754          CALL STHLF  ;INSCRIE 0 LA ADRESA DE
1AC5  C9            1755          RET
1AC6                1756 TEMP DEFS 2
                    1757 ;
                    1758 ;
                    1759 ;*****************************************
                    1760 ;
                    1761 ; FUNCTIE   : STHLF
                    1762 ; INTRARI   : C - NR DE 4 BITI CE SA VA DEPUNE
                    1763 ;                 PE JUMATATE DE OCTET.
                    1764 ;              DE = ADRESA OCTETULUI.
                    1765 ; IESIRI N
                    1766 ; APELEAZA  : N
                    1767 ; DISTRUGE  : A,B,C,H,L,F,S
                    1768 ; DESCRIERE: STHLF DEPUNE NUMARUL DE 4 BITS DIN C
                    1769 ;             IN JUMATATE DIN OCTETUL ADRESAT PRIN DE.
                    1770 ;            FLAG-UL DIN TEMP (UPPER SAU LOWER) STABI-
                    1771 ;            LESTE CARE JUMATAATE A OCTETULUI VA FI MO-
                    1772 ;            DIFICATA.
                    1773 ;
                    1774 ;
                    1775 STHLF
1AC8  D5            1776          PUSH DE
1AC9  E1            1777          POP HL
1ACA  79            1778          LD A,C        ;ADUCE TETRADA IN A
1ACB  E60F          1779          AND 0FH       ;MASCHEAZA BITII 4-7
1ACD  4F            1780          LD C,A        ;INCARCA INAPOI
1ACE  3AC61A        1781          LD A,(TEMP)   ;ADUCE INDICATORUL UPPER/LOWER
1AD1  B7            1782          OR A          ;ESTE UPPER?
1AD2  C2DB1A        1783          JP NZ,STH05   ;DACA DA FACE SALTUL
1AD5  7E            1784          LD A,(HL)     ;DACA NU,INSCRIE
1AD6  E6F0          1785          AND 0F0H      ;MASCHEAZA 0-3
1AD8  B1            1786          OR C
1AD9  77            1787          LD (HL),A     ;DEPUNE INAPOI
1ADA  C9            1788          RET
1ADB  7E            1789 STH05    LD A,(HL)     ;DACA E UPPER,ADUCE OCTETUL
1ADC  E60F          1790          AND 0FH       ;MASC. 4-7
1ADE  47            1791          LD B,A        ;SALV IN B
1ADF  79            1792          LD A,C        ;ADUCE VALOAREA
1AE0  0F            1793          RRCA
1AE1  0F            1794          RRCA
1AE2  0F            1795          RRCA
1AE3  0F            1796          RRCA     ;ALINIAZA PE POZ 4-7
1AE4  B0            1797          OR B
```

```
1AE5  77        1798          LD (HL),A  ;DEPUNE INAPOI NOUA VAL.
1AE6  C9        1799          RET
              1800 ;
              1801 ;
              1802 ;*****************************************
              1803 ;
              1804 ; FUNCTIE   : VALDG    (VALID DIGIT)
              1805 ; INTRARI   : C - CARACTER ASCII
              1806 ; IESIRI    : CARRY = 1 DACA ESTE CIFRA HEXA
              1807 ;                   = 0 DACA NU.
              1808 ; APELEAZA : N
              1809 ; DISTRUGE :: A,F,S
              1810 ; DESCRIERE: VALDG SE INTOARCE CU "TRUE" DACA
              1811 ;              ARGUMENTUL ESTE O CIFRA HEXA SI
              1812 ;              CU "FALSE" DACA NU.
              1813 ;
              1814 VALDG        ; VALID DIGIT ?
1AE7  79        1815          LD A,C
1AE8  FE30      1816          CP '0'     ;COD ASCII > '0'
1AEA  FACA19    1817          JP M,FRET  ;CY=0 SI RET DACA NU
1AED  FE39      1818          CP '9'     ;COD ASCII < '9'
1AEF  FAB91A    1819          JP M,SRET  ; E BINE DACA DA
1AF2  CAB91A    1820          JP Z,SRET  ;   SAU EGAL
1AF5  FE41      1821          CP 'A'     ;COD ASCII > 'A'
1AF7  FACA19    1822          JP M,FRET  ; CY=0 SI RET DACA NU
1AFA  FE47      1823          CP 'G'     ;COD ASCII <= 'F'
1AFC  F2CA19    1824          JP P,FRET  ; INSUCCES DACA NU
1AFF  C3B91A    1825          JP SRET    ;  DECI E CIFRA HEXA
              1826 ;
              1827 ;
              1828 ;*****************************************
              1829 ;
              1830 ; FUNCTIE   : VALDG    (VALID DIGIT)
              1831 ; INTRARI   : C - CARACTER ASCII
              1832 ; IESIRI    : CARRY = 1 DACA ESTE CIFRA HEXA
              1833 ;                   = 0 DACA NU.
              1834 ; APELEAZA : N
              1835 ; DISTRUGE :: A,F,S
              1836 ; DESCRIERE: VALDG SE INTOARCE CU "TRUE" DACA
              1837 ;              ARGUMENTUL ESTE O CIFRA HEXA SI
              1838 ;              CU "FALSE" DACA NU.
              1839 ;
              1840 VALDL    ; VALID DELIMITER (DELIMITATOR VALID)
1B02  79        1841          LD A,C     ;ADU DELIM.
1B03  FE2E      1842         CP '.' ;SI PUNCT ESTE DELIM VALID
1B05  CAB91A    1843         JP Z,SRET
1B08  FE2C      1844          CP ',' ;  ESTE VIRGULA ?
1B0A  CAB91A    1845          JP Z,SRET
1B0D  FE0D      1846          CP ASCICR ;  ESTE "CR" ?
1B0F  CAB91A    1847          JP Z,SRET
1B12  FE20      1848          CP ' '     ;ESTE BLANC ?
1B14  CAB91A    1849          JP Z,SRET
1B17  C3CA19    1850          JP FRET    ;DECI NU E DELIMITATOR
              1851 ;
              1852 ;*****************************************
              1853 ;PRLINN ;PRINT CURRENT LINE WITH NUMBER
              1854 ;*****************************************
              1855 ;
```

```
                    1856 PRLINN
1B1A    2A000F      1857  LD HL,(LINCNT)
1B1D    E5          1858  PUSH HL
1B1E    C1          1859  POP BC
1B1F    CD5418      1860  CALL CHEXZ ;CONVERSIE HEXA-ZEC
1B22    C5          1861  PUSH BC
1B23    E1          1862  POP HL
1B24    7C          1863  LD A,H
1B25    CD691A      1864  CALL NMOUT
1B28    7D          1865  LD A,L
1B29    CD691A      1866  CALL NMOUT
1B2C    0E20        1867  LD C,' '
1B2E    CD961C      1868  CALL ECHO
                    1869 ;
                    1870 ;
                    1871 ;*****************************************
                    1872 ; PRLIN = PRINT CURRENT LINE
                    1873 ;*****************************************
                    1874 ; TIPARESTE LINIA CURENTA SI SE INTOARCE
                    1875 ; AVIND IN HL ADRESA URMATOAREI LINII
                    1876 ;
                    1877 PRLIN
                    1878  ;SE AFLA ADRESA INCEPUTULUI DE LINIE
                    1879  ;DACA NR.LIN=0 SE TIPARESTE CR
                    1880  ;DACA NR LIN=1 ADRESA DE INCEPUT ESTE ESPACL
                    1881  ;
1B31    2A000F      1882  LD HL,(LINCNT) ;ACUCE CONTORUL
1B34    7C          1883  LD A,H
1B35    B5          1884  OR L
1B36    210002      1885  LD HL,ESPACL ;PREG.ADRESA PRIMEI LINII IN HL
1B39    CAB219      1886  JP Z,CROUT
                    1887  ;
1B3C    2A000F      1888  LD HL,(LINCNT)
1B3F    2B          1889  DEC HL ;SE VERIF DACA NU ESTE 1
1B40    7D          1890  LD A,L
1B41    B4          1891  OR H
                    1892  ; INAINTE DE A TESTA REZULT SE FACE HL=ESPACL
1B42    210002      1893  LD HL,ESPACL
                    1894  ;
1B45    CA561B      1895  JP Z,PRLIN1
                    1896  ;CAUTA ADRESA DE INCEPUT
1B48    2AFC0E      1897  LD HL,(EIPTR)
1B4B    2B          1898  DEC HL
1B4C    2B          1899  DEC HL
1B4D    3E0D        1900  LD A,ASCICR
1B4F    01FF00      1901  LD BC,255
1B52    CD3218      1902  CALL CPDR ;CAUTA
1B55    23          1903  INC HL ;AJUSTEAZA HL POINTER DUPA CR
                    1904  ;
                    1905 PRLIN1
1B56    06FF        1906  LD B,0FFH
1B58    CD951A      1907  CALL PUTMSG
1B5B    C9          1908  RET
                    1909 ;
                    1910 ;*****************************************
                    1911 ; NEXTL ;NEXT LINE
                    1912 ;   SUBRUTINA CARE MUTA EIPTR LINLINCNT
                    1913 ;   PE LINIA URMATOARE
```

```
                    1914 ;   DACA SE AJUNGE LA EOF SE DA MESAJ SI SE REVINE
                    1915 ;   LD EGETCM
                    1916 NEXTL ;SE TRECE LA LINIA URMATOARE
                    1917  ;SE VERIF CA NU SINTEM PE ULTIMA LINIE
1B5C  2AFC0E        1918  LD HL,(EIPTR)
1B5F  3EFF          1919  LD A,0FFH ; SE COMPARA CU MARCA DE EOF
1B61  BE            1920  CP (HL)
1B62  C2701B        1921  JP NZ,NEXTL2
                    1922  ;
                    1923 NEXTL1
1B65  21861B        1924  LD HL,MEOF
1B68  06FF          1925  LD B,0FFH
1B6A  CD951A        1926  CALL PUTMSG
1B6D  C3F913        1927  JP EGETCM
                    1928  ;
                    1929 NEXTL2
1B70  2A000F        1930  LD HL,(LINCNT)
1B73  23            1931  INC HL ;INCR CONTORUL LINII
1B74  22000F        1932  LD (LINCNT),HL
1B77  2AFC0E        1933  LD HL,(EIPTR) ;
1B7A  3E0D          1934  LD A,ASCICR ;SE CAUTA ADRESA LINIEI URMATOARE
1B7C  06FF          1935  LD B,0FFH
1B7E  CD4318        1936  CALL CPIR ;
1B81  23            1937  INC HL ;AJUST HL DUPA CR
1B82  22FC0E        1938  LD (EIPTR),HL
1B85  C9            1939  RET
                    1940  ;
                    1941 MEOF
1B86  454F46        1942  DEFM 'EOF'
1B89  0D            1943  DEFB ASCICR
                    1944 ;
                    1945 ;*********************************************
                    1946 ;UPLIN  -- UP ONE LINE SUBROUTINE
                    1947 ;*********************************************
                    1948 UPLIN
                    1949  ;SE VERIF CA LINCNT=\0
1B8A  2A000F        1950  LD HL,(LINCNT)
1B8D  7D            1951  LD A,L
1B8E  B4            1952  OR H
1B8F  C29D1B        1953  JP NZ,UPLIN2
                    1954 ;
                    1955 UPLIN1
1B92  21C11B        1956  LD HL,MTOF
1B95  06FF          1957  LD B,0FFH
1B97  CD951A        1958  CALL PUTMSG
1B9A  C3F913        1959  JP EGETCM
                    1960 ;
                    1961 UPLIN2
                    1962  ;SE DECREM CONTOR LINII
1B9D  2B            1963  DEC HL
1B9E  22000F        1964  LD (LINCNT),HL
                    1965  ;SE VERIF CA NU E ZERO
1BA1  7D            1966  LD A,L
1BA2  B4            1967  OR H
1BA3  C2AF1B        1968  JP NZ,UPLIN3
                    1969  ;
1BA6  210002        1970  LD HL,ESPACL ;SE PUNE EIPTR PE TOF
1BA9  22FC0E        1971  LD (EIPTR),HL
```

```
1BAC    C3921B      1972  JP UPLIN1
                    1973  ;
                    1974 UPLIN3
1BAF    2AFC0E      1975  LD HL,(EIPTR)
1BB2    3E0D        1976  LD A,ASCICR ;CAUTA UN CR DECREMENTIND ADRESA
1BB4    01FF00      1977  LD BC,0FFH
1BB7    2B          1978  DEC HL
1BB8    2B          1979  DEC HL
1BB9    CD3218      1980  CALL CPDR
1BBC    23          1981  INC HL ;AJUST.POINTERUL DUPA CR
1BBD    22FC0E      1982  LD (EIPTR),HL
1BC0    C9          1983  RET
                    1984 ;
                    1985 MTOP
1BC1    544F50      1986  DEFM 'TOP'
1BC4    0D          1987  DEFB ASCICR
                    1988 ;*************************************************
                    1989 ; CMPM ;COMPARE MEM
                    1990 ;*************************************************
                    1991 ; INPUTS :HL=ZONA 1
                    1992 ;          DE=ZONA 2
                    1993 ;           C=NR DE CARACTERE (OCTETI)
                    1994 ; OUTPUTS: CY=0 PT FALSE (NEIDENTIC)
                    1995 ;          CY=1 PT TRUE  (IDENTICE)
                    1996 ; DISTR  :A,F
                    1997 ; CALLS  : N
                    1998 ;
                    1999 CMPM
1BC5    C5          2000  PUSH BC
1BC6    D5          2001  PUSH DE
1BC7    E5          2002  PUSH HL
1BC8    CDCF1B      2003  CALL CMPM1
1BCB    E1          2004  POP HL
1BCC    D1          2005  POP DE
1BCD    C1          2006  POP BC
1BCE    C9          2007  RET
                    2008 ;
                    2009 CMPM1
1BCF    1A          2010  LD A,(DE)
1BD0    BE          2011  CP (HL)
1BD1    C2CA19      2012  JP NZ,FRET ;FAALSE DACA NU SINT ID.
1BD4    0D          2013  DEC C
1BD5    23          2014  INC HL
1BD6    13          2015  INC DE
1BD7    C2CF1B      2016  JP NZ,CMPM1
1BDA    C3B91A      2017  JP SRET ;SUCCES DACA C=0
                    2018 ;*************************************************
                    2019 ; FINCTION : MOVTO
                    2020 ; DESCTIPTION :
                    2021 ;
                    2022 ;
                    2023 ; MOVE TEXT DECREMENTINO
                    2024 ; ESTE O SUBRUTINA CARE FACE LOC PT LINIA DE INTRODUS
                    2025 ;
                    2026 ;ETAPE :
                    2027 ; -SE VERIFICA DACA MAI ESTE SUFICIENT LOC
                    2028 ; -SE CALCULEAZA ADRESELE
                    2029 ; SE EXECUTA MUTAREA
```

```
 LOC   OBJ CODE    STMT SOURCE STATEMENT                                  ASM 1.0

                   2030 ;
                   2031 MOVTD
1BDD   0600        2032  LD B,0
1BDF   3A060F      2033  LD A,(INPBF) ;NR DE OCTETI AI LINIEI DE INTRODUS
1BE2   4F          2034  LD C,A ;
1BE3   2AFE0E      2035  LD HL,(EFPTR)
1BE6   09          2036  ADD HL,BC ;HL=NOUL POINTER EOF
1BE7   E5          2037  PUSH HL
1BE8   21FC0E      2038  LD HL,ESPACH
1BEB   EB          2039  EX DE,HL ;
                   2040  ; DE=ESPACL
1BEC   E1          2041  POP HL ;HL=NOUL EOF POINTER
1BED   CD421A      2042  CALL HILO
1BF0   DA0E1C      2043  JP C,SPERR ;DACA HL)=DE SALT LA SPACE ERR
1BF3   E5          2044  PUSH HL ;SALV ADR DESTIN
1BF4   2AFC0E      2045  LD HL,(EIPTR)
1BF7   EB          2046  EX DE,HL ;INPTR IN DE
1BF8   2AFE0E      2047  LD HL,(EFPTR) ;ADR.EOF IN HL
1BFB   CD2718      2048  CALL HL_DE ;HL=HL-DE
1BFE   23          2049  INC HL ;HL=NR DE OCTETI DE MUTAT
1BFF   E5          2050  PUSH HL ; EL TRECE IN BC
1C00   C1          2051  POP BC
1C01   2AFE0E      2052  LD HL,(EFPTR) ;EFPTR TRECE IN DE
1C04   EB          2053  EX DE,HL ;      FIIND ADRESA SURSA
1C05   E1          2054  POP HL ;IN AC. MOMENT:
                   2055    ;HL=NOUL EFPTR (ADR DESTIN)
                   2056    ;DE=VECHIUL EFPTR (ADR.SURSA)
                   2057    ;BC=NR DE OCTETI DE MUTAT
1C06   22FE0E      2058  LD (EFPTR),HL ;NOTEAZA NOUL EFPTR
1C09   EB          2059  EX DE,HL
1C0A   CD1C18      2060  CALL LDDR
1C0D   C9          2061  RET
                   2062 ;
                   2063 ;
                   2064 SPERR ;SPACE ERROR ;SE AJUNGE AICI DACA NU MAI
                   2065       ;ESTE SUFICIENT SPATIU PENTRU NOUA LINIE
1C0E   21191C      2066  LD HL,MSPERR
1C11   0606        2067  LD B,MSPERL
1C13   CD951A      2068  CALL PUTMSG
1C16   C3B819      2069  JP ERROR
1C19   53504143    2070 MSPERR DEFM 'SPACE '
                   2071 MSPERL EQU $-MSPERR
                   2072 ;
                   2073 ;*********************************************
                   2074 ; FUNCTION : MOVLIN
                   2075 ; DESCRIPTION :
                   2076 ; MOVE LINE IN THE EDITOR AREA
                   2077 ;  MUTA O LINIE DIN BUFFERUL DE INTRARE (INPBF+1)
                   2078 ; IN ZONA DE EDIT INCEPIND DE LA EIPTR
                   2079 ;  INAINTE DE APELAREA AC.SUBRUTINE ESTE NEC
                   2080 ; APELAREA SUBRUTINE MOVTD PENTRU A FACE LOC
                   2081 ; NOII LINII.
                   2082 MOVLIN ;EXECUTA MUTAREA UNEI LINII IN SPATIUL DE EDIT.
1C1F   2AFC0E      2083  LD HL,(EIPTR)
1C22   EB          2084  EX DE,HL ;ADR. DESTIN IN HL
1C23   21060F      2085  LD HL,INPBF
1C26   4E          2086  LD C,(HL)
1C27   0600        2087  LD B,0 ;BC=NR DE OCTETI
```

```
1C29  23        2088  INC HL ;HL POINTER PE LINIE
1C2A  CD1118    2089  CALL LDIR
1C2D  EB        2090  EX DE,HL ;NOUA VALOARE A EIPTR IN HL
1C2E  C9        2091  RET
                2092 ;
```

```
 LOC   OBJ CODE   STMT SOURCE STATEMENT                                ASM 1.0

                  2093 *HEADING ELIND=LINE DELETE ROUTINE
                  2094 ;
                  2095 ;
                  2096 ;
                  2097 ;
                  2098 ELIND
1C2F   2A000F     2099  LD HL,(LINCNT) ; SE VERIF DACA NU ESTE ZERO
1C32   7D         2100  LD A,L
1C33   B4         2101  OR H
1C34   CAB819     2102  JP Z,LINDER ;EROARE DACA SINTEM PE TOF
                  2103  ;
1C37   2AFC0E     2104  LD HL,(EIPTR) ;SE ADUCE OCTETUL DE LA ADR.INPUT
1C3A   7E         2105  LD A,(HL)
1C3B   F5         2106  PUSH AF
                  2107  ;
1C3C   2A000F     2108  LD HL,(LINCNT) ; SE VERIF DACA NU ESTE 1
1C3F   2B         2109  DEC HL
1C40   7D         2110  LD A,L
1C41   B4         2111  OR H
                  2112  ;
1C42   210002     2113  LD HL,ESPACL ;DACA A FOST 1 ADR DESTIN ESTE
                  2114  ;                  ESPACL
1C45   CA561C     2115  JP Z,ELIND2
1C48   3E0D       2116  LD A,ASCICR
1C4A   01FF00     2117  LD BC,0FFH
1C4D   2AFC0E     2118  LD HL,(EIPTR)
1C50   2B         2119  DEC HL
1C51   2B         2120  DEC HL
1C52   CD3218     2121  CALL CPDR ;SE CAUTA UN ASCICR
1C55   23         2122  INC HL ;HL=ADR DE INCEPUT A LINIEI DIN FATA
                  2123        ; POINTERULUI (DESTINATIE)
                  2124 ELIND2
1C56   E5         2125  PUSH HL ;SALV.ADR.DESTIN
1C57   2AFC0E     2126  LD HL,(EIPTR);ADUCE ADRESA SURSA
1C5A   EB         2127  EX DE,HL ;SI CALCULEAZA NR DE OCTETI DE MUTAT.
1C5B   2AFE0E     2128  LD HL,(EFPTR)
1C5E   CD2718     2129  CALL HL_DE
1C61   23         2130  INC HL ;AJUSTEAZA REZULTATUL SCADERII
1C62   E5         2131  PUSH HL ;SI IL MUTA
1C63   C1         2132  POP BC ; IN BC
1C64   D1         2133  POP DE ;ADR. DESTIN IN DE
1C65   D5         2134  PUSH DE ; SI SE SALVEAZA DIN NOU
1C66   2AFC0E     2135  LD HL,(EIPTR) ;HL=ADR.SURSA
1C69   CD1118     2136  CALL LDIR ;EXECUTA MUTAREA
1C6C   EB         2137  EX DE,HL;
1C6D   2B         2138  DEC HL ;CORECTEAZA HL PT A FI POINER EOF
1C6E   22FE0E     2139  LD (EFPTR),HL ;NOTEAZA NOUL EOF
                  2140  ;
1C71   E1         2141  POP HL
1C72   F1         2142  POP AF ;ADUCE OCTETUL DE LA FOSTUL EIPTR
1C73   E5         2143  PUSH HL ;SALVEAZA DIN NOU ADR. DESTIN.
                  2144  ;
1C74   2A000F     2145  LD HL,(LINCNT) ;CONTORUL DE LINII IN HL
1C77   FEFF       2146  CP 0FFH ;COMPARA OCTETUL CU MARCA DE EOF
1C79   C2881C     2147  JP NZ,ELIND3 ;SARE DACA NU A FOST EOF
                  2148  ;
1C7C   2B         2149  DEC HL ;DECREMENTEAZA CONTORUL
                  2150  ;
```

```
1C7D  22000F      2151  LD (LINCNT),HL
                  2152  ;
                  2153  ;;NOUL INPUT POINTER=EOF POINTER
1C80  2AFE0E      2154  LD HL,(EFPTR)
1C83  22FC0E      2155  LD (EIPTR),HL
1C86  E1          2156  POP HL ;BALACE STACKPOINTER
1C87  C9          2157  RET
                  2158 ELIND3
1C88  E1          2159  POP HL
1C89  01FF00      2160  LD BC,0FFH ;CAUTA UN CR
1C8C  3E0D        2161  LD A,ASCICR
1C8E  CD4318      2162  CALL CPIR
1C91  23          2163  INC HL
1C92  22FC0E      2164  LD (EIPTR),HL ;NOOTEAZA NOUL INPUT POINTER
1C95  C9          2165  RET
                  2166 ;********** END OF FILE "AUX"
```

```
 LOC   OBJ CODE   STMT SOURCE STATEMENT                                ASM 1.0

                  2167 *HEADING SUBRUTINE INTERFATA OPERATOR
                  2168 ;*************************************
                  2169 ; ECHO
                  2170 ;
                  2171 ECHO
1C96   C5         2172  PUSH BC
1C97   3A890F     2173  LD A,(TTYFLG)
1C9A   E602       2174  AND 02H
1C9C   C4A91C     2175  CALL NZ,ECHOP
1C9F   3A890F     2176  LD A,(TTYFLG)
1CA2   E601       2177  AND 01H
1CA4   C40980     2178  CALL NZ,ECHOS ;DACA FLAGUL ARE BITO=1
                  2179                ;SE TIP LA TTY
1CA7   C1         2180  POP BC
1CA8   C9         2181  RET
                  2182 ;
                  2183 ;*************************************************
                  2184 ;
                  2185 ; FUNCTIE    : ECHOP
                  2186 ; INTRARI    : C =CARACTER DE TRANSMIS
                  2187 ; IESIRI     : N
                  2188 ; DISTRUGE   : A,B,F,S
                  2189 ; APELEAZA   : COP,DELAY,
                  2190 ; DESCRIERE : ESTE INDENTICA CU ECHO DAR IESIREA EST
                  2191 ;              PE INTERFATA DE DISPLAY PARALELA
                  2192 ;
                  2193 ECHOP
1CA9   41         2194  LD B,C ;SALVEAZA ARGUMENTUL IN B
1CAA   3E1B       2195  LD A,ESC ;DACA ESTE ESC.SE VA AFISA $
1CAC   B8         2196  CP B
1CAD   C2B21C     2197  JP NZ,ECHP05
1CB0   0E24       2198  LD C,'$'
                  2199 ECHP05
1CB2   CDFC1C     2200  CALL COP ;AFISEAZA ARGUMENTUL
1CB5   3E0D       2201  LD A,ASCICR ;A FOST ASCICR ?
1CB7   B8         2202  CP B         ;DACA DA,AFISEAZA SI LF
1CB8   C2C81C     2203  JP NZ,ECHP10
1CBB   0E0A       2204  LD C,ASCILF
1CBD   CDFC1C     2205  CALL COP
1CC0   D5         2206  PUSH DE      ;SALV.DE APOI FACE O INTIRZ
1CC1   11401F     2207  LD DE,8000    ;
1CC4   CD271D     2208  CALL DELAY
1CC7   D1         2209  POP DE       ;REFACE DE
                  2210 ECHP10
1CC8   48         2211  LD C,B       ;REFACE ARGUMENTUL
1CC9   C9         2212  RET          ;GATA
                  2213 ;
                  2214 ;
                  2215 ;
                  2216 ;
                  2217 ASCICR EQU 0DH
                  2218 ASCILF EQU 0AH
                  2219 CSR1   EQU 98H
                  2220 PORTB1 EQU CSR1+2
                  2221 ;*************************************
                  2222 ;TTYIN
                  2223 ;*************************************
                  2224 ; ESTE O SUBRUTINA ECHIV CU CI DAR CARE NU
```

```
                    2225 ; DISTRUGE NIMIC IN AFARA DE A F SI C(OUTPUT)
                    2226 TTYIN
1CCA    CDD11C      2227  CALL CI
1CCD    E67F        2228  AND 7FH
1CCF    4F          2229  LD C,A
1CD0    C9          2230  RET
                    2231 ;*****************************************************
                    2232 ;
                    2233 ; FUNCTIE: CI
                    2234 ; INTRARI: N
                    2235 ; IESIRI : A - CARACTER DE LA TTY
                    2236 ; CALL   : DELAY
                    2237 ; DISTRUGE: A,F,F'S
                    2238 ; DESCRIERE:
                    2239 ;           CI ASTEAPTA UN CARACTER DE LA TTY,
                    2240 ;            APOI SE INTOARCE IN PROGRAMUL APE-
                    2241 ;            LANT AVIND CARACTERUL IN A (INCLUSIV
                    2242 ;            BITUL DE PARITATE )
                    2243 ;
                    2244 CI               ;CONSOLE INPUT (INTRARE CONSOLA)
                    2245 ;                 ------------------------------
                    2246 ;
                    2247 ;
1CD1    F3          2248            DI
1CD2    D5          2249            PUSH DE    ;SALVEAZA DE
1CD3    20          2250 CI05       DEFB RIM     ;ADUCE PRIMUL BIT
1CD4    17          2251            RLA          ;   IL PUNE IN CY
1CD5    DAD31C      2252            JP C,CI05    ;SARE DACA NU E BIT START
1CD8    11D700      2253            LD DE,WAIT   ;ASTEAPTA MIJLOCUL DE BIT
1CDB    CD271D      2254            CALL DELAY
1CDE    C5          2255            PUSH BC
1CDF    010800      2256            LD BC,8H     ;TREBUIE ADUSI 8 BITI
1CE2    11AE01      2257 CI10       LD DE,IBTIM ;ASTEAPTA BITUL URMATOR
1CE5    CD271D      2258            CALL DELAY
1CE8    20          2259            DEFB RIM     ;ADUCE BITUL DE INTRARE
1CE9    17          2260            RLA          ;  SALVEAZA-L IN CY
1CEA    78          2261            LD A,B       ;ADUCE REZ.PARTIAL
1CEB    1F          2262            RRA          ;INTRODUCE NOUL BIT
1CEC    47          2263            LD B,A
1CED    0D          2264            DEC C        ;UN BIT MAI PUTIN DE ADUS
1CEE    C2E21C      2265            JP NZ,CI10   ; DACA MAI SINT FACE SALTUL
1CF1    11AE01      2266            LD DE,IBTIM ; ASTEAPTA BITII DE STOP
1CF4    CD271D      2267            CALL DELAY
1CF7    78          2268            LD A,B       ;TRANSFERA TOT CUVINTUL
1CF8    C1          2269            POP BC
1CF9    D1          2270            POP DE
1CFA    FB          2271            EI
1CFB    C9          2272            RET
                    2273 ;
                    2274 ;
                    2275 ;
                    2276 ;
                    2277 ;*****************************************************
                    2278 ;
                    2279 ; FUNCTIE     :COP
                    2280 ; INTRARI     :C =CARAC DE AFISAT
                    2281 ; IESIRI      :N
                    2282 ; DISTRUGE    :A,C
```

```
 LOC   OBJ CODE    STMT SOURCE STATEMENT                                  ASM 1.0

                   2283 ; APELEAZA    :N
                   2284 ; DESCRIERE   :
                   2285 ;    CARACTERULUI DIN REG.C I SE STABILESTE PARITATEA
                   2286 ;    APOI ESTE NEGAT SI TRANSMIS LA PORTUL PARALEL.
                   2287 ;      DACA PORTUL PARALEL NU RASPUNDE,SE COMUTA IN
                   2288 ;    MODUL OUT TTY.
                   2289 ;
                   2290 ;
                   2291 ;
                   2292 COP
1CFC   C5          2293  PUSH BC ;SALVEAZA ARGUMENTUL
1CFD   0100FA      2294  LD BC,64000  ;SE STABILESTE NR.DE BUCLARI
1D00   DB98        2295  IN A,(CSR1) ;SE TESTEAZA STAREA PORT.
1D02   E608        2296  AND 08H
1D04   FE08        2297  CP 08H
1D06   CA1B1D      2298  JP Z,COP10 ;SALT DACA PORTUL E LIBER
1D09   0B          2299  DEC BC      ;DECREM CONTOR
1D0A   78          2300  LD A,B
1D0B   B1          2301  OR C        ;A AJUNS LA 0 ?
1D0C   C2001D      2302  JP NZ,COP+4 ;REIA BUCLA LACA NU
1D0F   C1          2303  POP BC      ;PORTUL NU RASPUNDE
1D10   3A890F      2304  LD A,(TTYFLG) ;SE COMUTA IN MODUL TTY
1D13   E6FD        2305  AND .NOT.02H   ; SE PUNE PE 0 BITUL DE PARALEL
1D15   F601        2306  OR       01H   ; SE PUNE PE 1 BITUL DE TTY
1D17   32890F      2307  LD (TTYFLG),A
1D1A   C9          2308  RET             ;GATA
                   2309 ;
                   2310 COP10
1D1B   C1          2311  POP BC ;REFACE BC
1D1C   79          2312  LD A,C
1D1D   A7          2313  AND A  ;STABILESTE PARIT.
1D1E   E2231D      2314  JP PO,$+5
1D21   EE80        2315  XOR 80H ;INVERSEAZA PARITATEA DACA ERA IMPARA
1D23   2F          2316  CPL     ;INVERSEAZA OCTETUL
1D24   D39A        2317  OUT (PORTB1),A ;TRANSMITE OCTETUL
1D26   C9          2318  RET            ;GATA
                   2319 ;
                   2320 ;
                   2321 ;
                   2322 ;*********************************************
                   2323 ;
                   2324 ; FUNCTIE: DELAY
                   2325 ; INTRARI: DE=NUMAR DE BUCLARI (16 BITS)
                   2326 ; IESIRI : N
                   2327 ; CALL   : N
                   2328 ; DISTRUGE: A,D,E,F,S
                   2329 ; DESCRIERE: DELAY INTRODUCE O INTIRZIERE EGALA CU N*
                   2330 ;
                   2331 DELAY
1D27   1B          2332          DEC DE
1D28   7A          2333          LD A,D
1D29   B3          2334          OR E
1D2A   C2271D      2335          JP NZ,DELAY
1D2D   C9          2336          RET
                   2337 ;
                   2338 ;
                   2339 ;*********************************************
                   2340 ;
```

```
                    2341 ; FUNCTIE   : GETCH
                    2342 ; INTRARI   : N
                    2343 ; IESIRI    : C=CAARACTER RECEPTIONAT
                    2344 ; DISTRUGE  : A,C,F,S
                    2345 ; APELEAZA  : CI,ECHOLF
                    2346 ; DESCRIERE: GETCH SE REINTOARCE LA PROGRAMUL
                    2347 ;             APELANT AVIND IN C CARACTERUL RE-
                    2348 ;             CEPTIONAT DE LA CONSOLA.IN CAZ CA
                    2349 ;             S-A  RECEPTIONAT UN CR SE TRANSMITE
                    2350 ;             LA CONSOLA SI UN LF.
                    2351 ;
1D2E   CDD11C       2352 GETCH   CALL CI     ;   ANULEAZA PARITATEA CARACT.
1D31   E67F         2353         AND PRTYO   ;     SI MUTA CARACT. RECEPTIONAT IN C
1D33   4F           2354         LD C,A
1D34   CD961C       2355  CALL ECHO ;ECHO
1D37   79           2356  LD A,C ;REFACE CARAC SI IN A
1D38   C9           2357  RET     ;GATA
                    2358 ;
                    2359 ;
                    2360 ; CONSTATNTE
                    2361 ESC     EQU 1BH
                    2362 PRTYO   EQU 7FH
                    2363 WAIT    EQU 215
                    2364 IBTIM   EQU 2*WAIT
                    2365 OBTIM   EQU 2*WAIT
                    2366 TIM4    EQU 2*WAIT
                    2367 STOPB   EQU 40H
                    2368 STRT    EQU 0C0H
                    2369 SSTRT   EQU 80H
                    2370 ;********************************** END OF FILE "REAL"
```

```
                    2371 *HEADING EDITOR COMMANDS
                    2372 ;
                    2373 ;*********************************************
                    2374 ; ETCMD=EDITOR TOP COMMAND
                    2375 ;*********************************************
                    2376 ;
                    2377 ETCMD
1D39    210002      2378  LD HL,ESPACL
1D3C    22FC0E      2379  LD (EIPTR),HL ;;INP PTR PE INCEPUTUL ZONEI
1D3F    210000      2380  LD HL,0 ; CONTOR LINII=0
1D42    22000F      2381  LD (LINCNT),HL
1D45    C9          2382  RET ;GATA .SE INTOARCE LA EGETCM
                    2383 ;
                    2384 ;
                    2385 ;*********************************************
                    2386 ; ENCMD = EDITOR NEXT COMMAND
                    2387 ;*********************************************
                    2388 ENCMD
1D46    CDEA17      2389  CALL NEXTCH
1D49    CDCD19      2390  CALL GETHX ;ADUCE NUMARUL
1D4C    DA521D      2391  JP C,$+6 ;SKIP URM INSTR DACA EXISTA NR.
1D4F    010100      2392  LD BC,1 ;DACA NU EXISTA EL ESTE 1
1D52    CD1A19      2393  CALL CZHEX ;CONVERSIE IN HEXA
                    2394 ENCML
1D55    C5          2395  PUSH BC ;SALVEAZA BC=CONTOR
1D56    CD5C1B      2396  CALL NEXTL ;TRECE LA URM LINIE
1D59    C1          2397  POP BC ;READUCE CONTOR
1D5A    0B          2398  DEC BC ;DECR. CONTOR SI VERIF DACA E 0
1D5B    79          2399  LD A,C
1D5C    B0          2400  OR B
1D5D    C2551D      2401  JP NZ,ENCML
                    2402  ;
1D60    CD1A1B      2403  CALL PRLINN ;TIPARESTE LINIA CU NUMAR
                    2404  ;VERIF DIN NOU  CA NU SINTEM PE EOF
1D63    3EFF        2405  LD A,0FFH
1D65    BE          2406  CP (HL)
1D66    CA6A1D      2407  JP Z,ENCMD1
1D69    C9          2408   RET ; GATA.SE INTOARCE LA EGETCM
                    2409 ENCMD1
1D6A    21861B      2410  LD HL,MEOF
1D6D    06FF        2411  LD B,0FFH
1D6F    CD951A      2412  CALL PUTMSG
1D72    C9          2413   RET ; GATA.SE INTOARCE LA EGETCM
                    2414 ;
                    2415 ;*********************************************
                    2416 ; EUCMD =EDITOR UP COMMAND
                    2417 ;*********************************************
                    2418 ;
                    2419 EUCMD
1D73    CDEA17      2420  CALL NEXTCH
1D76    CDCD19      2421  CALL GETHX ;ADUCE NUMARUL
1D79    DA7F1D      2422  JP C,$+6 ;SKIP URM INSTR DACA EXISTA NR.
1D7C    010100      2423  LD BC,1 ;DACA NU EXISTA EL ESTE 1
1D7F    CD1A19      2424  CALL CZHEX ;CONVERSIE IN HEXA
                    2425 EUCML
1D82    C5          2426  PUSH BC ;SALVEAZA BC=CONTOR
1D83    CD8A1B      2427  CALL UPLIN ; MUTA POINTERII CU O LINIE IN SUS
1D86    C1          2428  POP BC ;READUCE CONTOR
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1D87    0B          2429  DEC BC ;DECR. CONTOR SI VERIF DACA E 0
1D88    79          2430  LD A,C
1D89    B0          2431  OR B
1D8A    C2821D      2432  JP NZ,EUCML
1D8D    CD1A1B      2433  CALL PRLINN
1D90    C9          2434   RET ; GATA.SE INTOARCE LA EGETCM
                    2435 ;
                    2436 ;
                    2437 ;*****************************************
                    2438 ; PRCMD = PRINT COMMAND
                    2439 ;*****************************************
                    2440 ;
                    2441 PRCMD
                    2442  ;INTII SE VERIF CA NU E CMANDA PUT
1D91    2A040F      2443  LD HL,(INPTR)
1D94    23          2444  INC HL
1D95    3E55        2445  LD A,'U'
1D97    BE          2446  CP (HL)
1D98    CA981F      2447  JP Z,PUTCMD
                    2448  ;
1D9B    CDEA17      2449  CALL NEXTCH ;ADUCE URMATORUL CARACTER DE COMANDA
1D9E    FE4E        2450  CP 'N' ;COMPARA CU N PT NO NUMBER
1DA0    CAC71D      2451  JP Z,PRCMDN
                    2452  ;
1DA3    CDCD19      2453  CALL GETHX ;ADUCE URMATORUL NUMAR
1DA6    DAAC1D      2454  JP C,$+6 ;SARE INSTRUCTIA URM.DACA S-A GASIT NUMAR
1DA9    010100      2455  LD BC,1 ;SE FACE BC=1 DACA NU EXISTA NUMAR
1DAC    CD1A19      2456  CALL CZHEX ;CONVERTESTE IN HEXA NR ZEC.INTRODUS
1DAF    C5          2457  PUSH BC ;SE TRECE NR IN HL
1DB0    E1          2458  POP HL
1DB1    22020F      2459  LD (ETEMP),HL ;SE DEPUNE LA ETEMP
                    2460 ;
                    2461 PRCMD1
1DB4    CD1A1B      2462  CALL PRLINN
1DB7    2A020F      2463  LD HL,(ETEMP) ;ADUCE CONTORUL DE BUCLA
1DBA    2B          2464  DEC HL
1DBB    22020F      2465  LD (ETEMP),HL
1DBE    7D          2466  LD A,L
1DBF    B4          2467  OR H
1DC0    C8          2468  RET Z ;EGETCM ;SALT DACA S-AU TIPARIT TOATE LINIILE
1DC1    CD5C1B      2469  CALL NEXTL ;MUTA POINTERII PE URM LINIE
1DC4    C3B41D      2470  JP PRCMD1 ;
                    2471  ;
                    2472 PRCMDN
1DC7    CDEA17      2473  CALL NEXTCH ;ADUCE URM.CARACTER SEMNIFICATIV
                    2474  ;
1DCA    CDCD19      2475  CALL GETHX ;ADUCE URMATORUL NUMAR
1DCD    DAD31D      2476  JP C,$+6 ;SARE INSTRUCTIA URM.DACA S-A GASIT NUMAR
1DD0    010100      2477  LD BC,1 ;SE FACE BC=1 DACA NU EXISTA NUMAR
1DD3    CD1A19      2478  CALL CZHEX ;CONVERTESTE IN HEXA NR ZEC.INTRODUS
1DD6    C5          2479  PUSH BC ;SE TRECE NR IN HL
1DD7    E1          2480  POP HL
1DD8    22020F      2481  LD (ETEMP),HL ;SE DEPUNE LA ETEMP
                    2482 ;
                    2483 PRCMD2
1DDB    CD311B      2484  CALL PRLIN
1DDE    2A020F      2485  LD HL,(ETEMP) ;ADUCE CONTORUL DE BUCLA
1DE1    2B          2486  DEC HL
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 LOC   OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

1DE2   22020F      2487  LD (ETEMP),HL
1DE5   7D          2488  LD A,L
1DE6   B4          2489  OR H
1DE7   C8          2490  RET Z ;EGETCM ;SALT DACA S-AU TIPARIT TOATE LINIILE
1DE8   CD5C1B      2491  CALL NEXTL ;MUTA POINTERII PE URM LINIE
1DEB   C3DB1D      2492  JP PRCMD2
                   2493  ;
                   2494 ;*************************************************
                   2495 ; GLCMD = GET LINE COMMAND
                   2496 ;*************************************************
                   2497 ;
                   2498 GLCMD
1DEE   CDEA17      2499  CALL NEXTCH ;CAUTA URM.CARAC SEMNIF.AL C-ZII
1DF1   CDCD19      2500  CALL GETHX  ;ADUCE NR
1DF4   D2F91F      2501  JP NC,GECMD ;DACA NU S-A INTRODUS NICI UN NUMAR
                   2502                ;ESTE C-DA GET REZ.
1DF7   CD1A19      2503  CALL CZHEX ;TRANSFORMA IN HEXA
1DFA   C5          2504  PUSH BC
1DFB   E1          2505  POP HL ;TRECE NR IN HL
1DFC   22020F      2506  LD (ETEMP),HL ;SE TRECE LA ETEMP
                   2507  ;SE MUTA POINTERII PE TOP
1DFF   210002      2508  LD HL,ESPACL
1E02   22FC0E      2509  LD (EIPTR),HL
1E05   210000      2510  LD HL,0
1E08   22000F      2511  LD (LINCNT),HL
                   2512 ;
                   2513 GLCMD1
1E0B   CD5C1B      2514  CALL NEXTL ;SE MUTA POINTERII PE LINIA URM.
                   2515  ;SE COMPARA LINCNT CU NUMARUL CERUT
1E0E   2A020F      2516  LD HL,(ETEMP)
1E11   EB          2517  EX DE,HL
1E12   2A000F      2518  LD HL,(LINCNT)
1E15   CD421A      2519  CALL HILO
1E18   D20B1E      2520  JP NC,GLCMD1 ;SALT DACA NU SINT INCA EGALE
                   2521 ;
1E1B   CD1A1B      2522  CALL PRLINN ;TIPARESTE LINIA CU NUMARUL EI
1E1E   C9          2523   RET ; GATA.SE INTOARCE LA EGETCM
                   2524 ;*************************************************
                   2525 ; DELCMD = DELETE COMMAND
                   2526 ;*************************************************
                   2527 DELCMD
                   2528  ;SE VERIFICA FAPTUL CA S-A INTRODUS DELETE
1E1F   2A040F      2529  LD HL,(INPTR)
1E22   23          2530  INC HL ;ADUCE AL 2-LE CARAC AL COMENZII
1E23   7E          2531  LD A,(HL)
1E24   FE45        2532  CP 'E' ;SE VERIF CA ESTE 'E'
1E26   C2B819      2533  JP NZ,ERROR
1E29   23          2534  INC HL ;
1E2A   7E          2535  LD A,(HL)
1E2B   FE4C        2536  CP 'L' ;VERIF CA AL 3-LEA ESTE 'L'
1E2D   C2B819      2537  JP NZ,ERROR
                   2538 ;
                   2539  ;SE ADUCE NR DE LINII DE STERS
1E30   CDEA17      2540  CALL NEXTCH
1E33   CDCD19      2541  CALL GETHX
1E36   DA3C1E      2542  JP C,$+6 ;DACA NU S-A INTRD. UN NR
                   2543              ;SE PRESUPUNE A FI 1
1E39   010100      2544  LD BC,1
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1E3C   CD1A19      2545  CALL CZHEX ;SE TRANSFORMA IN HEXA
                   2546  ; SE VERIF CA E DIF.DE ZERO
1E3F   79          2547  LD A,C
1E40   B0          2548  OR B
1E41   CAB819      2549  JP Z,ERROR
                   2550 ;
                   2551 DLCM10
1E44   C5          2552  PUSH BC ;SE SALVEAZA NUMARUL DE LINII DE STERS
1E45   CD2F1C      2553  CALL ELIND ;SE STERGE LINIA CURENTA
1E48   C1          2554  POP BC ;SE READUCE NUMARUL
1E49   0B          2555  DEC BC
1E4A   79          2556  LD A,C
1E4B   B0          2557  OR B
1E4C   C8          2558  RET Z ;EGETCM ;SE IESE DIN BUCLA DACA CONTORUL =0
                   2559  ;SE VERIF CA IN URMA STERGERII LINIEI NU S-A
                   2560  ;AJUNS PE EOF
1E4D   2AFC0E      2561  LD HL,(EIPTR)
1E50   7E          2562  LD A,(HL)
1E51   FEFF        2563  CP 0FFH
1E53   CA591E      2564  JP Z,DLCM20 ;EROARE DACA DA
1E56   C3441E      2565  JP DLCM10 ;SE REIA BUCLA
                   2566 ;
                   2567 DLCM20 ;EROARE : S-A AJUNS LA EOF
1E59   21861B      2568  LD HL,MEOF ;TIPARESTE MESAJ EOF
1E5C   06FF        2569  LD B,255
1E5E   CD951A      2570  CALL PUTMSG
1E61   C3B819      2571  JP ERROR
                   2572 ;
                   2573 ;*********************************************
                   2574 ; INCMD =INPUT & INSERT COMMAND
                   2575 ;*********************************************
                   2576 ; ACEASTA COMANDA INTRODUCE LINII DE LA TASTA-
                   2577 ; TURA IN SPATIUL DE EDITARE DUPA LINIA CURENTA
                   2578 ;    LA INTRAREA IN REGIMUL DE INPUT SE TRANSMITE
                   2579 ;MESAJUL 'INPUT'.IESIREA NORMALA DIN AC REGIM
                   2580 ;ESTE PRIN INTRODUCEREA UNEI LINII GOALE (CR IMEDIAT
                   2581 ;DUPA PROMPTER.LA IESIREA DIN REGIMUL DE INPUT SE DA
                   2582 ;MESAJUL 'EDITOR'
                   2583 ;    LINIA ESTE INTRODUSA IN SPATIUL DE EDITARE
                   2584 ;NUMAI DUPA CE A FOST INCHEIATA PRINTR-UN CR,PINA
                   2585 ;PINA ATUNCI FIIND POSIBILE ACELEASI CORECTUR CA SI
                   2586 ;IN CZUL INTRODUCERII UNEI COMENZI.
                   2587 ;    IESIREA ANORMALA ESTE ATUNCI CIND IN SPATIUL
                   2588 ;DE EDITARE NU MAI ESTE LOC PENTRU INTRODUCEREA LINIEI
                   2589 ;TASTATE LA CLAVIATURA.IN ACEST CAS SE DA MESAJUL
                   2590 ; 'SPACE ERROR'
                   2591 INCMD ;COMANDA DE INPUT& INSERT
1E64   21901E      2592  LD HL,INMSG
1E67   06FF        2593  LD B,0FFH
1E69   CD951A      2594  CALL PUTMSG
                   2595 ;
                   2596 ;
                   2597 INPUT2
1E6C   CD7214      2598  CALL GET
1E6F   FE0D        2599  CP ASCICR
1E71   CA871E      2600  JP Z,INPUTQ ;REVINA DACA ESTE O LINIE GOALA
1E74   CDDD1B      2601  CALL MOVTD
1E77   CD1F1C      2602  CALL MOVLIN ;MUTA LINIA
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 LOC   OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

1E7A   22FC0E      2603  LD (EIPTR),HL ;NOTEAZA NOUL EIPTR.
1E7D   2A000F      2604  LD HL,(LINCNT) ;INC CONTOR LINII
1E80   23          2605  INC HL
1E81   22000F      2606  LD (LINCNT),HL
1E84   C36C1E      2607  JP INPUT2
                   2608 ;
                   2609 INPUTQ ;IESIRE DIN REGIMUL DE INPUT
1E87   21961E      2610  LD HL,INPQMS
1E8A   06FF        2611  LD B,255 ;TIPARESTE MESAJUL
1E8C   CD951A      2612  CALL PUTMSG ; EDITOR
1E8F   C9          2613   RET ; GATA.SE INTOARCE LA EGETCM
                   2614 ; MESAJ INPUT
                   2615 INMSG
1E90   494E5055    2616  DEFM 'INPUT'
1E95   0D          2617  DEFB ASCICR
                   2618 ; MESAJ PARASIRE REGIM INPUT
1E96   45444954    2619 INPQMS DEFM 'EDITOR'
1E9C   0D          2620  DEFB ASCICR
                   2621 ;*************************************************
                   2622 ; CCMD =CORRECTION COMMAND
                   2623 ;*************************************************
                   2624 CCMD
                   2625 ;SE AFLA ADRESA DE INCEPUT A LINIEI CURENTE
                   2626 ; DACA SINTEM PE TOF => ERROR
1E9D   2A000F      2627  LD HL,(LINCNT)
1EA0   7D          2628  LD A,L
1EA1   B4          2629  OR H
1EA2   CAB819      2630  JP Z,ERROR
                   2631  ;DACA LINCNT=1 INCEPUTUL LINIEI ESTE ESPACL.
1EA5   2B          2632  DEC HL
1EA6   7D          2633  LD A,L
1EA7   B4          2634  OR H
1EA8   210002      2635  LD HL,ESPACL
1EAB   CABC1E      2636  JP Z,CCMD10
                   2637  ;
1EAE   2AFC0E      2638  LD HL,(EIPTR)
1EB1   01FF00      2639  LD BC,0FFH
1EB4   3E0D        2640  LD A,ASCICR
1EB6   2B          2641  DEC HL
1EB7   2B          2642  DEC HL
1EB8   CD3218      2643  CALL CPDR ;CAUTA UN CR
1EBB   23          2644  INC HL ;AJUST HL DUPA CR
                   2645  ;HL=ADR INCEPUTULUI LINIEI CURENTE
                   2646 CCMD10
1EBC   EB          2647  EX DE,HL
1EBD   21070F      2648  LD HL,INPBF+1
1EC0   0600        2649  LD B,0 ;CONTOR DE CARACTERE PE ZERO
                   2650 ;
                   2651 CCMD30
1EC2   CDCA1C      2652  CALL TTYIN ;ADUCE IN C UN CARAC DE LA TTY
1EC5   3E5E        2653  LD A,'^' ;SE VA COMPARA CU "^"
1EC7   B9          2654  CP C
1EC8   CAD01E      2655  JP Z,CCMD40
                   2656  ;
1ECB   C5          2657  PUSH BC
1ECC   CD961C      2658  CALL ECHO
1ECF   C1          2659  POP BC
                   2660  ;
```

```
 LOC   OBJ CODE   STMT SOURCE STATEMENT                                ASM 1.0

                  2661 CCMD40
1ED0   79         2662  LD A,C ;CARACTERUL PRIMIT TRECE IN A
1ED1   FE5E       2663  CP '^' ;ESTE ^
1ED3   CAF61E     2664  JP Z,CCMD50
1ED6   FE08       2665  CP 08H ;ESTE BACKSPACE ?
1ED8   CAE01E     2666  JP Z,$+8
1EDB   FE7F       2667  CP 7FH ; SE COMPARA CU RUBOUT
1EDD   C2FE1E     2668  JP NZ,CCMD60
                  2669  ;PRELUCRARE PT BACKSPACE SI RUBOUT :
                  2670  ;
1EE0   04         2671  INC B ;B=0 ?
1EE1   05         2672  DEC B
1EE2   CAC21E     2673  JP Z,CCMD30 ;SALT DACA S-A AJUNS LA IINCEPUTUL
                  2674    ;LINIEI
1EE5   05         2675  DEC B
1EE6   2B         2676  DEC HL
                  2677  ;DACA A FOST RUBOUT SE TIPARESTE CARACTERUL
                  2678  ; ANULAT
1EE7   3E7F       2679  LD A,7FH ;RUBOUT
1EE9   B9         2680  CP C
1EEA   C2F31E     2681  JP NZ,$+9 ;SARE URM.4 INSTRUCTII DACA NU
                  2682  ;
1EED   4E         2683  LD C,(HL) ;ADUCE ULTIMUL CARACTER
1EEE   C5         2684  PUSH BC
1EEF   CD961C     2685  CALL ECHO
1EF2   C1         2686  POP BC
                  2687  ;
1EF3   C3C21E     2688  JP CCMD30 ;ASTEAPTA UN NOU CARACTER
                  2689 ;
                  2690 CCMD50
                  2691 ;
1EF6   1A         2692  LD A,(DE) ;ADU CARACTERUL CURENT DIN LINIE
1EF7   4F         2693  LD C,A
1EF8   C5         2694  PUSH BC
1EF9   CD961C     2695  CALL ECHO ;TIPARESTE-L
1EFC   C1         2696  POP BC
1EFD   13         2697  INC DE ;MUTA POINTERUL PE URM CARAC
                  2698 ;
                  2699 CCMD60
                  2700 ; IN C SE AFLA ACUM CARACTERUL DE MUTAT IN BUF.
1EFE   71         2701  LD (HL),C
1EFF   23         2702  INC HL
1F00   04         2703  INC B
1F01   78         2704  LD A,B
1F02   FE7F       2705  CP 127 ;S-A AJUNS LA 127 CARACTERE
1F04   CA101F     2706  JP Z,CCMD70
1F07   3E0D       2707  LD A,ASCICR ;CARACTERUL A FOST CR ?
1F09   B9         2708  CP C
1F0A   C2C21E     2709  JP NZ,CCMD30 ;REIA CICLUL DACA NU
1F0D   C3181F     2710  JP CCMD80 ;SALTLA CCMD80
                  2711 ;
                  2712 CCMD70 ; CAZUL INTRD MM 127 CARAC
                  2713 ;
1F10   2B         2714  DEC HL ;
1F11   360D       2715  LD (HL),ASCICR ;PUNE SFIRSITUL DE LINIE
1F13   C5         2716  PUSH BC
1F14   CDB219     2717  CALL CROUT ;TIPARESTE UN RIND NOU
1F17   C1         2718  POP BC
```

```
 LOC   OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

                   2719  ;
                   2720 CCMD80
1F18   78          2721  LD A,B ;PUNE CONTORUL LA LOCUL LUI
1F19   32060F      2722  LD (INPBF),A
1F1C   2AFC0E      2723  LD HL,(EIPTR)
1F1F   7E          2724  LD A,(HL)
1F20   32020F      2725  LD (ETEMP),A
                   2726  ;
1F23   CD2F1C      2727  CALL ELIND ;STERGE LINIA DE INLOCUIT
                   2728 ;
                   2729 ; IN CAZUL IN CARE SE CORECTEAZA LINIA 1
                   2730 ; MUTAREA POINTERILOR IN SUS NU SE POATE FACE
                   2731 ; CU SUBRUTINA UPLIN
                   2732 ;
1F26   2A000F      2733  LD HL,(LINCNT)
1F29   2B          2734  DEC HL
1F2A   7D          2735  LD A,L
1F2B   B4          2736  OR H
1F2C   C23B1F      2737  JP NZ,CCMD85
1F2F   22000F      2738  LD (LINCNT),HL ;NUMARATORUL DE LINII = 0
1F32   210002      2739  LD HL,ESPACL
1F35   22FC0E      2740  LD (EIPTR),HL ;POINTER PE TOP
1F38   C3471F      2741  JP CCMD90 ;CONTINUA
                   2742 CCMD85
                   2743  ;IN CAZUL PARTICULAR IN CARE S-A CORECTAT
                   2744  ;ULTIMA LINIE,S-A AJUNS PE EOF IN URMA
                   2745  ;STERGERII
1F3B   21020F      2746  LD HL,ETEMP  ;DACA SINTEM PE EOF
1F3E   7E          2747  LD A,(HL)  ;NU SE MUTA POINTERII IN SUS
1F3F   FEFF        2748  CP 0FFH
1F41   CA471F      2749  JP Z,CCMD90
                   2750  ;
1F44   CD8A1B      2751  CALL UPLIN ;SE MUTA IN SUS POINTERII
                   2752 ;
                   2753 CCMD90
1F47   CDDD1B      2754  CALL MOVTD ;FACE LOC PENTRU LINIA IN CURS
                   2755  ;
1F4A   CD1F1C      2756  CALL MOVLIN ;MUTA LINIA
                   2757  ;
1F4D   CD5C1B      2758  CALL NEXTL ;SE MUTA POINTERII IN JOS
1F50   CD1A1B      2759  CALL PRLINN ;TIPARESTE LINIA IN NOUA FORMA
                   2760 ;
1F53   C9          2761   RET ; GATA.SE INTOARCE LA EGETCM
                   2762 ;
                   2763 ;
                   2764 ;*****************************************
                   2765 ; FCMD =FIND LABEL COMMAND
                   2766 ;*****************************************
                   2767 ; GASESTE LINIA CARE INCEPE CU ETICHETA INDICATA
                   2768 ;
                   2769 FCMD
                   2770  ;SE ADUCE DE=POINTER PE ETICHETA
                   2771  ;          C=NR DE CARACTERE DIN ETICHETA
                   2772  ;
1F54   CDEA17      2773  CALL NEXTCH
1F57   FE2F        2774  CP '/' ;CARACTERUL ESTE SLASH ?
1F59   C2B819      2775  JP NZ,ERROR
1F5C   2A040F      2776  LD HL,(INPTR) ;HL POINTER PE SLASH
```

```
1F5F    23          2777  INC HL ;POINTER PE INCEPUTUL ETICHETEI
1F60    7E          2778  LD A,(HL)
1F61    FE0D        2779  CP ASCICR ; ESTE CR ?
1F63    CAB819      2780  JP Z,ERROR
                    2781  ;DACA SE AJUNGE AICI COMANDA E CORECTA
                    2782  ;
1F66    E5          2783  PUSH HL
1F67    D1          2784  POP DE ;DE=POINTER PE ETIC.
                    2785  ;SE CAUTA NR.DE CARACTERE
1F68    0E00        2786  LD C,0
                    2787 FCMD10
1F6A    23          2788  INC HL
1F6B    0C          2789  INC C
1F6C    7E          2790  LD A,(HL) ;ESTE CR
1F6D    FE0D        2791  CP ASCICR
1F6F    CA7A1F      2792  JP Z,FCMD20
1F72    FE2F        2793  CP '/' ;ESTE SLASH ?
1F74    CA7A1F      2794  JP Z,FCMD20
1F77    C36A1F      2795  JP FCMD10 ;ARE MAI MULTE CARACTERE
                    2796 ;
                    2797 FCMD20
1F7A    D5          2798  PUSH DE
1F7B    C5          2799  PUSH BC
1F7C    2AFC0E      2800  LD HL,(EIPTR) ;HL=ED INPUT POINTER
1F7F    CDC51B      2801  CALL CMPM ;;COMPARA ZONE DE MEMORIE
1F82    C1          2802  POP BC
1F83    D1          2803  POP DE
1F84    DA911F      2804  JP C,FCMD30 ;CY=1 => S-A GASIT ETIC.
1F87    D5          2805  PUSH DE
1F88    C5          2806  PUSH BC
1F89    CD5C1B      2807  CALL NEXTL ;SE TRECE LA LINIA URM.
1F8C    C1          2808  POP BC
1F8D    D1          2809  POP DE
1F8E    C37A1F      2810  JP FCMD20 ;CAUTA DIN NOU
                    2811 ;
                    2812 FCMD30 ;S-A GASIT ETICHETA ;ESTE PE LINIA URM.
1F91    CD5C1B      2813  CALL NEXTL
1F94    CD1A1B      2814  CALL PRLINN ;TIPARESTE LINIA
1F97    C9          2815   RET ; GATA.SE INTOARCE LA EGETCM
                    2816 ;
                    2817 ;*****************************************
                    2818 ; PUTCMD ;PUT NUMBER OF LINES
                    2819 ;*****************************************
                    2820 ;
                    2821 PUTCMD
1F98    CDEA17      2822  CALL NEXTCH
1F9B    CDCD19      2823  CALL GETHX ;SE ADUCE NR DE LINII
1F9E    DAA41F      2824  JP C,$+6 ;SKIP LINIA URM.DACA NU E.NUMAR
1FA1    010100      2825  LD BC,1 ;
1FA4    CD1A19      2826  CALL CZHEX ;SE TRANSFORMA DIN ZECIMAL-HEXA
                    2827 ;
                    2828  ;SE VERIF. CA NR=\ 0
1FA7    79          2829  LD A,C
1FA8    B0          2830  OR B
1FA9    CAB819      2831  JP Z,ERROR ;EROARE
                    2832  ;
1FAC    C5          2833  PUSH BC ;SALVEAZA NUMARUL
                    2834  ; SE VERIF. CA NU SINTEM PE LINIA 0 (ERR)
```

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 LOC   OBJ CODE   STMT SOURCE STATEMENT                                ASM 1.0

1FAD   2A000F     2835  LD HL,(LINCNT)
1FB0   7D         2836  LD A,L
1FB1   B4         2837  OR H
1FB2   CAB819     2838  JP Z,ERROR
                  2839  ;SE AFLA ADRESA LINIEI CURENTE
                  2840  ; DACA SINTEM PE LINIA 1 ADR=ESPACL
1FB5   2B         2841  DEC HL
1FB6   7D         2842  LD A,L
1FB7   B4         2843  OR H
1FB8   210002     2844  LD HL,ESPACL
1FBB   CACC1F     2845  JP Z,PTCM1
                  2846  ;
1FBE   2AFC0E     2847  LD HL,(EIPTR)
1FC1   2B         2848  DEC HL
1FC2   2B         2849  DEC HL
1FC3   01FF00     2850  LD BC,255
1FC6   3E0D       2851  LD A,ASCICR
1FC8   CD3218     2852  CALL CPDR
1FCB   23         2853  INC HL
                  2854  ;
                  2855 PTCM1
1FCC   C1         2856  POP BC ;NR DE LINII IN BC
1FCD   E5         2857  PUSH HL ;SALV. ADRESA SURSA
1FCE   C5         2858  PUSH BC ;SALV.NR DE LINII
                  2859 PTCM20
1FCF   0B         2860  DEC BC
1FD0   79         2861  LD A,C
1FD1   B0         2862  OR B
1FD2   CADD1F     2863  JP Z,PTCM30
1FD5   C5         2864  PUSH BC ;SALV BC=CONTOR
1FD6   CD5C1B     2865  CALL NEXTL ;MUTA POINTERII CU O LINIE IN JOS
1FD9   C1         2866  POP BC
1FDA   C3CF1F     2867  JP PTCM20 ;REIA BUCLA
                  2868 ;
                  2869 PTCM30
                  2870  ;
1FDD   E1         2871  POP HL ;SE READUCE NR DE LINII (IN HL)
1FDE   228A20     2872  LD (RLINB),HL ;DEPUNE LA LOCATIA CARE INDICA
                  2873                  ;NR DE LINII DIN SPATIUL DE REZ.
                  2874  ; SE CALCULEAZA NR DE OCTETI DE MUTAT
1FE1   2AFC0E     2875  LD HL,(EIPTR)
1FE4   D1         2876  POP DE ;SE READUCE SI SE SALVEAZA ADR.INCEPUT SURSA
1FE5   D5         2877  PUSH DE
1FE6   CD2718     2878  CALL HL_DE ;HL=(EIPTR)-ADR INCEP SURSA
1FE9   228C20     2879  LD (RBYTNB),HL;DEPUNE LA REZ.BYTES NUMBER
1FEC   E5         2880  PUSH HL
1FED   C1         2881  POP BC ;TRECE IN BC
1FEE   E1         2882  POP HL ;ADR INCEPUT SURSA IN HL
1FEF   110022     2883  LD DE,RSPACL ;ADR.DESTINATIE
1FF2   CD1118     2884  CALL LDIR ;EXEC.MUTAREA
1FF5   CD1A1B     2885  CALL PRLINN ;TIPARESTE LINIA CURENTA
1FF8   C9         2886   RET ; GATA.SE INTOARCE LA EGETCM
                  2887 ;
                  2888 ;*****************************************
                  2889 ; GECMD = 'GET' COMMAND
                  2890 ;
                  2891 ; ADUCE LINIILE SALVATE IN ZONA DE REZERVA
                  2892 ; PRIN COMANDA PUT
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                    2893 ;*****************************************
                    2894 GECMD
                    2895 ; SE VERIFICA VALIDITATEA COMENZII (E SI T)
1FF9    21070F      2896  LD HL,INPBF+1 ;HL POINTER PE BUFFERUL DE COMENZI
1FFC    23          2897  INC HL ;SE ADUCE URM.CARAC. DIN C-DA
1FFD    7E          2898  LD A,(HL)
1FFE    FE45        2899  CP 'E'
2000    C2B819      2900  JP NZ,ERROR
2003    23          2901  INC HL
2004    7E          2902  LD A,(HL)
2005    FE54        2903  CP 'T'
2007    C2B819      2904  JP NZ,ERROR
                    2905 ;
                    2906  ;SE VERIFICA DACA NR DE LINII DE ADUS NU E CUMVA
                    2907  ; ZERO
200A    2A8A20      2908  LD HL,(RLINB)
200D    7D          2909  LD A,L
200E    B4          2910  OR H
200F    CAB819      2911  JP Z,ERROR
                    2912  ;
                    2913  ; SE VERIFICA DACA EXISTA SUFICIENT SPATIU
                    2914  ; PENTRU A ADUCE LINIILE
                    2915  ;
2012    2A8C20      2916  LD HL,(RBYTNB) ;NR DE OCTETI DE ADUS TREBE
2015    EB          2917  EX DE,HL       ; IN DE
2016    2AFE0E      2918  LD HL,(EFPTR)  ;EOF POINTER IN HL
2019    19          2919  ADD HL,DE ;SE CALC NOUL EOF SI SE COMPARA
201A    11FC0E      2920  LD DE,ESPACH ; CU ESPACH
201D    CD421A      2921  CALL HILO
2020    DA0E1C      2922  JP C,SPERR ;DACA HL)=DE ERR SPATIU
                    2923  ;
                    2924  ;SE PREGATESC REGISTRELE PENTRU MUTAREA ZONEI
                    2925  ;
2023    EB          2926  EX DE,HL ;DE=NOUL EOF POINTER
2024    D5          2927  PUSH DE ;SE SALV IN STIVA
                    2928  ;IN CONTINUARE SE CALC NR DE OCTETI DE MUTAT
                    2929  ;PT A FACE LOC LINIILOR ADUSE
                    2930  ; BC=(EFPTR)-(EIPTR)+1
                    2931  ;
2025    2AFC0E      2932  LD HL,(EIPTR)
2028    EB          2933  EX DE,HL
2029    2AFE0E      2934  LD HL,(EFPTR) ;SE FACE HL=(EFPTR)-(EIPTR)
202C    CD2718      2935  CALL HL_DE
202F    23          2936  INC HL ;HL=NR DE OCTETI
2030    D1          2937  POP DE ;DE=NOUL EOF (DESTINATIE)
                    2938 ;
2031    E5          2939  PUSH HL
2032    C1          2940  POP BC ;BC=NR DE OCTETI DE MUTAT
2033    2AFE0E      2941  LD HL,(EFPTR) ;HL=EFPTR (VECHI)
2036    E5          2942  PUSH HL
2037    D5          2943  PUSH DE
2038    C5          2944  PUSH BC
2039    CD1C18      2945  CALL LDDR ;SE EXECUTA MUTAREA
                    2946            ;PRIN CARE SE FACE LOC
203C    C1          2947  POP BC
                    2948  ;SE FACE BC=(RBYTNB),NR DE OCTETI DE ADUS
                    2949  ;SE SE SALV DIN NOU IN STIVA
203D    2A8C20      2950  LD HL,(RBYTNB)
```

```
2040    E5          2951  PUSH HL
2041    C1          2952  POP BC
2042    C5          2953  PUSH BC
                    2954 ;
2043    2AFC0E      2955  LD HL,(EIPTR) ;ADR DE DESTIN IN DE
2046    EB          2956  EX DE,HL
2047    210022      2957  LD HL,RSPACL ;ADR SURSA IN HL
204A    CD1118      2958  CALL LDIR ;MUTA LINIILE IN SPATIUL DE EDITARE
                    2959  ;
204D    C1          2960  POP BC
204E    D1          2961  POP DE
204F    E1          2962  POP HL
                    2963  ;
                    2964  ;SE CORECTEAZA POINTERII
2050    EB          2965  EX DE,HL ;HL=NOUL EOF POINTER
2051    22FE0E      2966  LD (EFPTR),HL
2054    2AFC0E      2967  LD HL,(EIPTR) ;HL=VECHIUL INPUT POINTER
2057    09          2968  ADD HL,BC ;SE ADUNA CU NR DE OCTETI INTRODUSI
2058    22FC0E      2969  LD (EIPTR),HL
                    2970  ;
205B    2A000F      2971  LD HL,(LINCNT) ;CONTORUL DE LINII IN
205E    EB          2972  EX DE,HL ;       REG DE
205F    2A8A20      2973  LD HL,(RLIN8) ;NUMARUL DE LINII INTRD. IN HL
2062    19          2974  ADD HL,DE
2063    22000F      2975  LD (LINCNT),HL
                    2976  ;
                    2977 ; TIPARESTE LINIA CURENTA
2066    CD1A1B      2978  CALL PRLINN
2069    C9          2979    RET ; GATA.SE INTOARCE LA EGETCM
                    2980 ;**********************************************
                    2981 ; QUIT COMMAND QCMD
                    2982 ;**********************************************
                    2983 ;
                    2984 QCMD
206A    E1          2985  POP HL ;ECHILIBREAZA STIVA
206B    2A8C0F      2986  LD HL,(EDRTN) ;ADUCE ADRESA DE REVENIRE
206E    E9          2987  JP (HL) ;PARASESTE EDITORUL
                    2988 ;********************************** END OF FILE "EDCMD"
```

```
                    2989 *H INTERRUPT STATUS ROUTINES
                    2990 ;*********************************************
                    2991 ;ACESTE GRUP DE SUBRUTINE FIXEAZA CARE INTRERUPERI
                    2992 ; SINT ACCEPTATE SI ADRESELE SUBRUTINELOR DE
                    2993 ; SERVICIU RESPECTIVE
                    2994 ;   DESI FAC PARTE INTEGRANTA DIN INTERPRETER
                    2995 ; ELE SE INCARCA DE PE DISC ODATA CU MICRODOS
                    2996 ; DEOARECE SE FACE APEL DIN MICRODOS LA INTSTO
                    2997 ;
                    2998 ;CERERILE DE INTRERUPERE SINT CABLATE ASTFEL
                    2999 ;  7    6    5    4    3    2    1    0
                    3000 ;  X    X  TEMP  TT   ERH  REL START STOP
                    3001 ;
                    3002 ; ELE SINT PERMISE ASTFEL DE DIF SUBRUTINE :
                    3003 ;=============================================
                    3004 ; NU   NU   NU   NU   NU   NU   NU   NU ;INTSTO
                    3005 ; NU   NU   NU   DA   DA   DA   DA   DA ;INTST1
                    3006 ; NU   NU   DA   DA   DA   NU   NU   DA ;INTST2
                    3007 ; NU   NU   NU   NU   DA   NU   DA   DA ;INTST3
                    3008 ;=============================================
                    3009 ; TEMP   ESTE SEMNALUL
                    3010 ; TT     ESTE SEMNALUL DE TERMINARE TEST
                    3011 ; ERH    ESTE SEMNALUL DE EROARE HARD
                    3012 ; REL    ESTE CORESP CU BUTONUL "REL"UARE
                    3013 ; START  ESTE CORESP CU BUTONUL "START"
                    3014 ; STOP   ESTE CORESP CU RUTONUL "STOP"
                    3015 ;
                    3016 ;*********************************************
                    3017 ; I N T S T O = MODUL 0
                    3018 ;
                    3019 ; NU ESTE ACCEPTATA NICI O INTRERUPERE
                    3020 ;
                    3021 INTSTO
206F  3EFF          3022  LD A,11111111B ;TOTI BITII MASCATI
2071  3201A8        3023  LD (PIC+1),A   ;
2074  C9            3024  RET
                    3025 ;
                    3026 ;*********************************************
                    3027 ; I N T S T 1 =MODUL 1
                    3028 ;
                    3029 ; SINT PERMISE :START,STOP,REL,ERH
                    3030 ; ACEST MOD SE VA FOLOSI CIND SE ASTEAPTA CONENZI
                    3031 ; IN INTERPRETOR
                    3032 ;
                    3033 ;
                    3034 ;
                    3035 INTST1
2073  F3            3036  DI                    ;DISABLE INTERRUPT
2076  3EF0          3037  LD A,.NOT.00001111B ;MASCA
2078  3201A8        3038  LD (PIC+1),A   ;
207B  C9            3039  RET
                    3040 ;
                    3041 ;*********************************************
                    3042 ; I N T S T 2 =MODUL 2
                    3043 ;
                    3044 ; SINT PERMISE :TEMP,TT,ERH,STOP
                    3045 ; ACEST MOD SE VA FOLOSI PE DURATA EXECUTIEI
                    3046 ; TESTULUI
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                    3047 ;
                    3048 INTST2
207C    F3          3049  DI                    ;DISABLE INTERRUPT
207D    3EC6        3050  LD A,.NOT.00111001B ;MASCA
207F    3201A8      3051  LD (PIC+1),A    ;
2082    C9          3052  RET
                    3053 ;
                    3054 ;
                    3055 ;*****************************************************
                    3056 ; I N T S T 3 =MODUL 3
                    3057 ;
                    3058 ; SINT PERMISE :ERH,START,STOP
                    3059 ;
                    3060 ; ACEST MOD ESTE RECOMANDABIL ORICIND NU SE
                    3061 ; ASTEAPTA NICI TERMINAREA UNUI TEST SI NICI
                    3062 ; COMENZI DE LA OPERATOR
                    3063 ;
                    3064 INTST3
2083    F3          3065  DI                    ;DISABLE INTERRUPT
2084    3EF4        3066  LD A,.NOT.00001011B ;MASCA
2086    3201A8      3067  LD (PIC+1),A    ;
2089    C9          3068  RET
                    3069 ;
                    3070 ;************************************** END OF FILE "INTST"
```

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                    3071 *H CONSTANTE MONITOR DEBUGGER
                    3072 ;
                    3073 ; CONFORM ASAMBLARII DIN 81/09/17/H1545
                    3074 ;
                    3075 ;CI      EQU 8003H
                    3076 CO      EQU 8006H
                    3077 ECHOS   EQU 8009H
                    3078 ;ERROR   EQU 800CH
                    3079 ;GETCH   EQU 800FH
                    3080 GETCM   EQU 8012H
                    3081 ;GETHX    EQU 8015H
                    3082 ;GETNM    EQU 8018H
                    3083 ;HILO     EQU 801BH
                    3084 MONREV EQU 801EH
                    3085 MOVE    EQU 8021H
                    3086 ;NMOUT EQU 8024H
                    3087 PNCCH EQU 8027H
                    3088 PNCHX EQU 802AH
                    3089 POUT  EQU 802DH
                    3090 ;PUTMSG EQU 8030H
                    3091 READCH EQU 8033H
                    3092 READHX EQU 8036H
                    3093 RI      EQU 8039H
                    3094 ;WAITMS EQU 803CH
                    3095 INIFDC EQU 803FH
                    3096 SF      EQU 8042H
                    3097 SI      EQU 8045H
                    3098 SR      EQU 8048H
                    3099 SV      EQU 804BH
                    3100 SW      EQU 804EH
                    3101 ;
                    3102 ;
                    3103 ; ADRESE VECTOR FLOPPY
                    3104 ;
                    3105 ADRSS   EQU 7F00H
                    3106 ADREV   EQU 7F04H
                    3107 ERORAM EQU 7F07H
                    3108 BUFF    EQU 7F16H
                    3109 TABCF   EQU 7F96H
                    3110 ACF     EQU 7F97H
                    3111 ASEL    EQU 7F99H
                    3112 APF     EQU 7F9AH
                    3113 ASF     EQU 7F9BH
                    3114 ALF     EQU 7F9CH
                    3115 AAF     EQU 7F9EH
                    3116 AEF     EQU 7FA0H
                    3117 ;
                    3118 PIC     EQU 0A800H ;ADR PIC
                    3119 RIM     EQU 20H ;SIM INSTR RIM
                    3120 SIM     EQU 30H ;SIM INSTR SIM
                    3121 ;************************************** END OF FILE "PUBLIC"
                    3122 ;*****************************************************
                    3123 ; SPATIUL PENTRU ZONA 'SAVE AREA' ESTE IDENTIC
                    3124 ; CU CEL IN CARE SE VA INCARCA INTERPRETORUL
                    3125 ;
20BA    0000        3126 RLINB DEFW 0
20BC    0000        3127 RBYTNB DEFW 0
                    3128 ;
```

```
                    3129 ; SCOPUL CONDITIONARILOR URM ESTE CEL DE A
                    3130 ; LASA UN SPATIU DE CEL PUTIN 256 OCTETI LIBERI
                    3131 ; PINA LA INTERPRETOR
                    3132  COND $.AND.OFFH=0
                    3133  ORG $+256
                    3134  ENDC
                    3135  ;
                    3136  COND $.AND.OFFH.UGT.0 ;
2200                3137  ORG ($.AND.OFF00H)+512
                    3138 ;
                    3139 RSPACL
                    3140 ;
```

```
                    3141 *HH INTERPRETER
                    3142 ;*****************************************
                    3143 ; FME TEST INTERPRETER VER 2.0
                    3144 ;  SEPT 1981 ;MODIF.IUNIE 1982
                    3145 ;*****************************************
                    3146 INSTCK EQU ESTACK
                    3147 INTAB EQU 90E0H
                    3148 ;
                    3149 INSTART
2200    31A090      3150  LD SP,INSTCK ;
2203    CD6F20      3151  CALL INTSTO ;NU SE ACCEPTA INTRERUPERI
2206    21BA2F      3152  LD HL,INTAB1 ;SE MUTA TABELA DE JP LA INTER
2209    11E090      3153  LD DE,INTAB
220C    012000      3154  LD BC,8*4 ;NR DE OCTETI DE MUTAT
220F    CD1118      3155  CALL LDIR ;SE MUTA
                    3156  ;SE INIT SUBRUTINA GETCH ASTFEL INCIT
                    3157  ;SA POATA FI INTERUPTIBILA
2212    21D21C      3158  LD HL,CI+1 ;INSTR DI SE AFLA LA ADR CI
2215    222F1D      3159  LD (GETCH+1),HL ;SE VA FACE ASTFEL
                    3160  ; CA PRIMA INSTR DIN GETCH SA FIE
                    3161  ; CALL CI+1 ,ADICA FARA INSTR DI
2218    3E3E        3162  LD A,')'
221A    32880F      3163  LD (PRMPT),A ;INIT PROMPTER
221D    216622      3164  LD HL,INGCM1 ;INIT ADRESA RET EROARE
2220    228A0F      3165  LD (ERRTN),HL
2223    210022      3166  LD HL,INSTART ;INIT ADRESA DE REV DIN EDITOR
2226    228C0F      3167  LD (EDRTN),HL ;INIT ADRESA REV DIN EDITOR
                    3168 ;
2229    219A22      3169  LD HL,ISGNON ;TIPARESTE SIGNON MESSAGE
222C    06FF        3170  LD B,255
222E    FB          3171  EI
222F    CD951A      3172  CALL PUTMSG
                    3173 ;
                    3174 ; SE COMPLETEAZA TABELA DE ETICHETE
                    3175 LBFILO
                    3176 ;
2232    3E00        3177  LD A,0
2234    326D39      3178  LD (LABNB),A ;0 ETICHETE IN TABELA
2237    210002      3179  LD HL,ESPACL
223A    22FC0E      3180  LD (EIPTR),HL
                    3181 LBFIL1
223D    2AFC0E      3182  LD HL,(EIPTR)
2240    22063B      3183  LD (INTPTR),HL ;INIT INTPTR PE INCEPUT DE LINIE
2243    7E          3184  LD A,(HL) ;ADUCE PRIMUL CARAC AL LINIEI
2244    FEFF        3185  CP 0FFH ;ESTE EOF
2246    CA5A22      3186  JP Z,LBFIL3
2249    FE41        3187  CP 'A' ;0 ETIC INCEPE CU O LITERA
224B    FA5422      3188  JP M,$+9
                    3189  ;ESTE ETIC
224E    CD5D24      3190  CALL PUTLBC ;PUE ETICHETA LA ADRESA ETIC CURENTE
2251    CDBA24      3191  CALL PUTLAB ;PUNE ETIC IN TABEL
2254    CD5C1B      3192  CALL NEXTL ;TRECE LA LINIA URMATOARE
2257    C33D22      3193  JP LBFIL1 ;REIA BUCLA
                    3194 LBFIL3
225A    210002      3195  LD HL,ESPACL ;INIT DIN NOU
225D    22FC0E      3196  LD (EIPTR),HL
2260    22063B      3197  LD (INTPTR),HL
2263    C3C522      3198  JP ININIT ;ESTE OK
```

```
                    3199 ;
                    3200 INGCM1 ;DACA SE AJUNGE AICI TREBUIE INTRODUS
                    3201         ;UN NOU FISIER
2266    F3          3202  DI
2267    31A090      3203  LD SP,INSTCK
226A    CD6F20      3204  CALL INTSTO ; STAREA 0 INTRERUPERI
226D    FB          3205  EI
226E    215C13      3206  LD HL,INTCMD ;SE INPINGE IN STIVA ADR DE RET
                    3207  ;PENTRU ORICE COMANDA DE AICI SE VA REINCARCA
                    3208  ;INTERPRETERUL
2271    E5          3209  PUSH HL       ;PT SUBRUTINELE DE EXEX A CD.
2272    3E3E        3210  LD A,')'
2274    32880F      3211  LD (PRMPT),A ;INIT PROMPTER
2277    216622.     3212  LD HL,INGCM1
227A    228A0F.     3213  LD (ERRTN),HL ;SE PUNE ADR DE RETURN
227D    21B322      3214  LD HL,INGCMM
2280    06FF        3215  LD B,255
2282    CD951A      3216  CALL PUTMSG
2285    CD7214      3217  CALL GET
2288    FE45        3218  CP 'E' ;EDITOR ?
228A    CA8513      3219  JP Z,EDSTART
228D    FE49        3220  CP 'I' ;INPUT FILE ?
228F    CA8012      3221  JP Z,RFCMD ;SALT IN SUBRUTINA CITIRE FISIER
2292    FE51        3222  CP 'Q' ;QUIT ?
2294    CA1312      3223  JP Z,DOSREV  ;SALT IN MICRO DOS
2297    C3B819      3224  JP ERROR
                    3225 ;
229A    54455354    3226 ISGNON DEFM 'TEST INTERPRETER VER 2.0'
22B2    0D          3227        DEFB ASCICR
22B3    4D555354    3228 INGCMM DEFM 'MUST ENTER A FILE'
22C4    0D          3229        DEFB ASCICR
```

```
                    3230 *H INTERPRETER-COMENZI OPERATOR   .
                    3231 ;**************************************
                    3232 ININIT
22C5    F3          3233  DI ;NU PERMITE INTERUPERI
22C6    210E3B      3234  LD HL,ISTCKAREA ;INIT STIVA INTERPRETOR
22C9    220C3B      3235  LD (ISTCKP),HL
22CC    210002      3236  LD HL,ESPACL
22CF    22FC0E      3237  LD (EIPTR),HL ;POINTER LA INCEPUT PROGRAM
22D2    3E00        3238  LD A,0 ;SE ANULEAZA FLAG SSTF
22D4    320A3B      3239  LD (SSTFLG),A
22D7    32403C      3240  LD (REZFLG),A ;SI FLAGUL DE REZULTAT
                    3241 ;
                    3242 INGCM2
22DA    F3          3243  DI
22DB    31A090      3244  LD SP,INSTCK
22DE    21DA22      3245  LD HL,INGCM2
22E1    228A0F      3246  LD (ERRTN),HL ;INIT ADRESA DE REV IN CAZ DE
                    3247                 ;EROARE COMANDA
22E4    E5          3248  PUSH HL ;IMPINGE IN STIVA ADRESADE RETURN
                    3249          ;PT SUBRUTINELE CARE IMPLEMENTEAZA
                    3250          ;COMENZILE
22E5    3E3F        3251  LD A,'?'
22E7    32880F      3252  LD (PRMPT),A  ;INIT PROMPTER
22EA    CD7520      3253  CALL INTST1 ;ACCEPTA INTR.START,STOP,REL,ERH
22ED    FB          3254  EI
22EE    CD7214      3255  CALL GET ;ASTEAPTA O COMANDA
22F1    FE52        3256  CP 'R'
22F3    CA4A23      3257  JP Z,RUNCMD ;COMANDA RUN (EXEC.PRG DE LA INCEPUT)
22F6    FE47        3258  CP 'G'
22F8    CA8623      3259  JP Z,GOCMD  ;CONTINUARE EXECUTIE PROGRAM
22FB    FE53        3260  CP 'S'
22FD    CAFF23      3261  JP Z,SERCMD ;SERIES INPUT OR SINGLE STEP
2300    FE4F        3262  CP 'O' ;COMANDA OUTPUT CONTROLL
2302    CAFF12      3263  JP Z,OUTCMD
2305    FE50        3264  CP 'P' ;PRINT LINE COMMAND ?
2307    CAD223      3265  JP Z,PRLCMD
230A    FE42        3266  CP 'B'   ;BEM DISPLAY CMD ?
230C    CA1924      3267  JP Z,BEMCMD
                    3268 ; IN CAZUL COMENZII "INPUT FILE" PUNCTUL DE REVENIRI
                    3269 ;    ESTE LBFILO PT COMPLETAREA TABELEI DE ETICHETE
                    3270 ; IN CAZUL COMENZII "EDIT",PUNCTUL DE REVENIRE ESTE
                    3271 ;    INTCMD,CU REINCARCAREA INTERPRETERULUI CARE
                    3272 ;    POATE FI DISTRUS DE EDITOR
                    3273 ;
230F    213222      3274  LD HL,LBFILO
2312    E3          3275  EX (SP),HL
2313    FE49        3276  CP 'I' ;INPUT FILE ?
2315    CA8012      3277  JP Z,RFCMD ;SALT LA COMANDA READ FILE
                    3278 ;           DIN MICRODOS
2318    215C13      3279  LD HL,INTCMD
231B    228C0F      3280  LD (EDRTN),HL
231E    E3          3281  EX (SP),HL
231F    FE45        3282  CP 'E' ;COMANDA EDIT
2321    CA8513      3283  JP Z,EDSTART
2324    FE51        3284  CP 'Q' ;COMANDA QUIT ?
2326    CA1312      3285  JP Z,DOSREV ;SALT IN MICRODOS
2329    C38819      3286  JP ERROR
                    3287 ;
```

LOC OBJ CODE STMT SOURCE STATEMENT ASM 1.0

```
                    3288 ;
232C                3289  DEFS 30 ;SPATIU PENTRU ALTE COMENZI
                    3290 ;*****************************************
                    3291 ; RUNCMD = COMANDA DE LANSARE IN EXECUTIE A
                    3292 ; PROGRAMULUI INCEPIND DE LA LINIA 1
                    3293 ;
                    3294 ;
                    3295 RUNCMD
234A    3E01        3296  LD A,01 ;SE FACE RAZ PROCESOR RAPID
234C    3200E0      3297  LD (PCRREG),A
234F    CD602B      3298  CALL WAITFF ;SE ASTEAPTA SA TERMINE DE EXEC
                    3299                ;COMANDA RAZ.
2352    F3          3300  DI
2353    31A090.     3301  LD SP,INSTCK
2356    210E3B.     3302  LD HL,ISTCKAREA ;INIT STIVA INTERPRETOR
2359    220C3B      3303  LD (ISTCKP),HL
235C    210002      3304  LD HL,ESPACL
235F    22FC0E      3305  LD (EIPTR),HL ;POINTER LA INCEPUT PRGRAM
2362    22063B      3306  LD (INTPTR),HL
2365    3E00        3307  LD A,0 ;SE ANULEAZA FLAG SSTP
2367    320A3B      3308  LD (SSTFLG),A
                    3309  ;SE ANULEAZA NAMBUF PUNIND UN CR
236A    3E0D        3310  LD A,ASCICR
236C    32303C      3311  LD (NAMBUF),A
                    3312 ;
                    3313  ;SE UMPLE CU BLANCURI ZONA DE TITBUF
236F    0610        3314  LD B,16 ;LUNGIMEA ZONEI
2371    21153C      3315  LD HL,TITBUF
2374    3E20        3316  LD A,' '
                    3317  ;
2376    77          3318  LD (HL),A
2377    23          3319  INC HL
2378    05          3320  DEC B
2379    C27623      3321  JP NZ,$-3 ;SE BUCLEAZA PINA CIND SE UMPLE
                    3322              ;TOT SPATIUL TITBUF
                    3323 INTO1
237C    3A0A3B      3324  LD A,(SSTFLG) ;SE ADUCE FLAG SINGLE STEP
237F    A7          3325  AND A ;SE POZIT INDIC DA STARE
2380    3E00        3326  LD A,0 ;SE ANULEAZA FLAG
2382    320A3B      3327  LD (SSTFLG),A
2385    C0          3328  RET NZ ;DACA FLAGUL NU A FOST ZERO
                    3329          ;SE ASTEAPTA NOI COMENZI
                    3330 ;*****************************************
                    3331 ; GOCMD = COMANDA DE LANSARE IN EXECUTIE A
                    3332 ;        PROGRAMULUI INCEPIND CU LINIA CURENTA
                    3333 GOCMD
2386    CD8320      3334  CALL INTST3 ;SE ACCEPTA INTR.ERR,START,STOP
2389    FB          3335  EI
238A    2AFC0E      3336  LD HL,(EIPTR) ;ADUCE PRIMUL CARAC DIN LINIE
238D    22063B      3337  LD (INTPTR),HL
2390    7E          3338  LD A,(HL)
2391    FEFF        3339  CP OFFH ;ESTE MARCA EOF ?
2393    CA2824      3340  JP Z,UEOF
2396    FE25        3341  CP '%' ;ESTE SEMN COMENTARIU ?
2398    CABD23      3342  JP Z,INTO2 ;TRECE LA LINIA URM DACA DA
239B    CDD42A      3343  CALL NXTCHI ;ADUCE URM CARAC SEMNIF
239E    FE0D        3344  CP ASCICR
23A0    CABD23      3345  JP Z,INTO2
```

```
23A3  FE25      3346  CP '%' ;ESTE SEMN COMENTARIU ?
23A5  CABD23    3347  JP Z,INT02 ;IN AMBELE CAZURI TRECE LA LINIA URM
23A8  CD2725    3348  CALL INSIDF ;IDENTIFICA INSTRUCTIA
23AB  D24224    3349  JP NC,UINS  ;FALSE =>UN KNOWN INSTRUCTION
                3350 ;
23AE  3A0A3B    3351  LD A,(SSTFLG) ;SE ADUCE FLAG SINGLE STEP
23B1  A7        3352  AND A
23B2  C4EF2A    3353  CALL NZ,PRLI ;SE TIPARESTE LINIA CARE SE VA EXECUT
                3354                ;DACA FLAG-UL SINGLE STEP ESTE PE 1
23B5  2A083B    3355  LD HL,(INSADR) ;ADUCE ADRESA INSTRUCTIEI
23B8  11C923    3356  LD DE,INT03 ;SE EXEC UN CALL CALCULAT
23BB  D5        3357  PUSH DE  ;ADRESA DE RETURN IN STIVA
23BC  E9        3358  JP (HL)
                3359 ;
                3360 ;????????????????
                3361 ;
                3362 INT02
23BD  CD5C1B    3363  CALL NEXTL ;TRECE LA LINIA URMATOARE
23C0  2AFC0E    3364  LD HL,(EIPTR) ;SE PUNE INTPTR PE INCEPUT DE LINIE
23C3  22063B    3365  LD (INTPTR),HL
23C6  C38623    3366  JP GOCMD ;CAUTA O LINIE CONTININD O INSTR.
                3367 INT03
                3368 ; AICI SE REVINE DUPA EXECUTIA INSTRUCTIEI
23C9  2AFC0E    3369  LD HL,(EIPTR) ;SE PUNE INTPTR PE INCEPUT DE LINIE
23CC  22063B    3370  LD (INTPTR),HL
23CF  C37C23    3371  JP INT01
                3372 ;
                3373 ;*********************************************
                3374 ; PRLCMD PRINT CURRENT LINE COMMAND
                3375 ;*********************************************
                3376 ;
                3377 PRLCMD
23D2  CDEA17    3378  CALL NEXTCH ;SE ADUCE URM CARAC SEMNIF
                3379  ; PT A VEDEA DACA NU E COMANDA 'PRINT ALL'
                3380  ; SAU 'PRINT NOTHING'
                3381  ;
23D5  FE0D      3382  CP ASCICR ;DACA NU E ASCICR ESTE PRTCMD
23D7  C2DE23    3383  JP NZ,PRTCMD
23DA  CDEF2A    3384  CALL PRLI ;PRINT LINE INTERPRETER
23DD  C9        3385  RET
                3386 ;
                3387 ;*********************************************
                3388 ; P R T C M D
                3389 ; INFLUENTEAZA FLAGUL PRTFLG
                3390 ; FORMA 'PRINT ALL'
                3391 ;       'PRINT NOTHING'
                3392 ;
                3393 PRTCMD ;CIND SE AJUNGE AICI IN A SE AFLA
                3394        ;CARAC 'A' SAU 'N'
23DE  FE41      3395  CP 'A'
23E0  CAEB23    3396  JP Z,PRTALL
23E3  FE4E      3397  CP 'N'
23E5  CAF123    3398  JP Z,PRTNOT
23E8  C38819    3399  JP ERROR ;EROARE COMANDA
                3400 ;
                3401 PRTALL
23EB  3E01      3402  LD A,1
23ED  320B3B    3403  LD (PRTFLG),A
```

```
 LOC   OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

23F0   C9          3404  RET
                   3405 PRTNOT
23F1   3E00        3406  LD A,0
23F3   320B3B      3407  LD (PRTFLG),A
23F6   C9          3408  RET
                   3409 ;
                   3410 ;*********************************************
                   3411 ; SSTCMD ;COMANDA DE EXECUTIE A UNUI PAS DE
                   3412 ; PROGRAM
                   3413 ;
                   3414 SSTCMD
23F7   3EFF        3415  LD A,0FFH ;SE POZIT FLAG-UL SSTFLG
23F9   320A3B      3416  LD (SSTFLG),A
23FC   C38623.     3417  JP GOCMD ;SE LANSEAZA PROGRAMUL.
                   3418 ;
                   3419 ;*********************************************
                   3420 ; SERCMD =COMANDA PRIN CARE SE INTRODUCE
                   3421 ; SERIA MODULULUI (ORICE 6 CARAC DUPA
                   3422 ; SE 1234A CR
                   3423 ;
                   3424 ;
                   3425 SERCMD
                   3426  ;SE VERIV DACA NU E COMANDA DE SSTP
23FF   2A040F      3427  LD HL,(INPTR) ;SE ADUCE CARAC URM AL C-ZII
2402   23          3428  INC HL
2403   7E          3429  LD A,(HL)
2404   FE45        3430  CP 'E' ;DACA NU ESTE 'E' ESTE SSTP
2406   C2F723      3431  JP NZ,SSTCMD
2409   CDEA17      3432  CALL NEXTCH ;SE PUNE POINTERUL DE INPUT
                   3433  ; PE URM CARAC SEMNIF;
                   3434  ;INCEPIND CU ACESTA SE MUTA 6 CARAC LA SERBUF
                   3435  ;
240C   2A040F      3436  LD HL,(INPTR)
240F   11293C      3437  LD DE,SERBUF
2412   010600      3438  LD BC,6
2415   CD1118      3439  CALL LDIR ;SE MUTA 6 CARAC
2418   C9          3440  RET ;OK.E GATA
                   3441 ;
                   3442 ;
                   3443 ;*********************************************
                   3444 ; B E M C M D
                   3445 ;*********************************************
                   3446 ; TIPARESTE SAU AFISEAZA BOARD ERROR MAP
                   3447 ;
                   3448 BEMCMD
2419   213627      3449  LD HL,BEMMES ;TIPARESTE "BEM.CUM."
241C   06FF        3450  LD B,255
241E   CD951A      3451  CALL PUTMSG
2421   CD5633      3452  CALL AFILEM
2424   CDB219      3453  CALL CROUT
2427   C9          3454  RET ;GATA
                   3455 ;*********************************************
                   3456 UEOF ;TIPARESTE 'UNEXPECTED EOF'
2428   213324      3457  LD HL,UEOFM
242B   06FF        3458  LD B,255
242D   CD951A      3459  CALL PUTMSG
2430   C36622      3460  JP INGCM1
                   3461 UEOFM
```

```
 LOC    OBJ CODE    STMT SOURCE STATEMENT                                  ASM 1.0

2433    554E4558    3462  DEFM 'UNEXPECTED EOF'
2441    0D          3463  DEFB ASCICR
                    3464 UINS ;UNKNOWN INSTRUCTION
2442    CDEF2A      3465  CALL PRLI ;TIPARESTE LINIA CURENTA PE CARE      (
                    3466            ;S-A GASIT EROAREA
2445    215024      3467  LD HL,UINSM
2448    06FF        3468  LD B,255
244A    CD951A      3469  CALL PUTMS0
244D    C36622      3470  JP INOCM1
                    3471 UINSM
2450    554E4B4E    3472  DEFM 'UNKNOWN INS.'
245C    0D          3473  DEFB ASCICR
                    3474 ;********************************************** END OF FILE "INTERP"
```

```
                    3475 *H PUTLBC
                    3476 ;*******************************************
                    3477 ; FUNCTION =PUTLBC
                    3478 ; INPUTS   = (INTPTR) =POINTER PE ETICHETA
                    3479 ; OUTPUT   =
                    3480 ; DESCRIERE: SUBRUTINA PUNE ETICHETA CARE INCEPE
                    3481 ; LA ADRESA DIN (INTPTR) SI ADRESA EI LA LOCATIA
                    3482 ; ETICHETEI CURENTE (LABCR) LABCRA
                    3483 ;
                    3484 PUTLBC
245D    2A063B      3485  LD HL,(INTPTR) ;POINTERUL IN HL
2460    11FE3A      3486  LD DE,LABCR    ;ADRESA DE DESTIN IN DE
2463    0606        3487  LD B,6 ;NR MAX DE CARAC DIN ETIC
                    3488 PTLBC1
2465    7E          3489  LD A,(HL);ADUCE CARACTER
2466    FE20        3490  CP ' ' ;ESTE BLANC
2468    CA7A24      3491  JP Z,PTLBC2
246B    FE0D        3492  CP ASCICR ;ESTE CR ?
246D    CA7A24      3493  JP Z,PTLBC2
                    3494  ;ESTE DECI UN CARAC VALID DE ETIC.
2470    12          3495  LD (DE),A ;MUTA CARACTERUL IN SPATIUL LABCR
2471    23          3496  INC HL
2472    13          3497  INC DE
2473    05          3498  DEC B ; DECREM CONTORUL
2474    C26524      3499  JP NZ,PTLBC1
2477    C38224      3500  JP PTLBC4 ;GATA;PUNE ADRESA LA LABCRA
                    3501  ;
                    3502 PTLBC2 ;SE COMPLETEAZA RESTUL DE CARAC
                    3503        ;(PINA LA 6) CU BLANCURI
247A    3E20        3504  LD A,' '
                    3505 PTLBC3
247C    12          3506  LD (DE),A
247D    13          3507  INC DE
247E    05          3508  DEC B
247F    C27C24      3509  JP NZ,PTLBC3
                    3510  ;URMATOARELE INSTRUCTII COMPLETRAZA ADRESA ETIC
                    3511 PTLBC4
2482    2AFC0E      3512  LD HL,(EIPTR)
2485    22043B      3513  LD (LABCRA),HL
2488    C9          3514  RET
```

```
                    3515 *H LABEL IDEDIFY
                    3516 ;*********************************************
                    3517 ; FUNCTION : LABIDF ;LABEL IDENTIFY
                    3518 ; DESCRIERE
                    3519 ; SUBRUTINA CAUTA ETICHETA DE LA LABCR
                    3520 ; IN TABELA DE ETICHETE
                    3521 ; DACA O GASESTE ATUNCI CY=1 SI LA LABCRA SE
                    3522 ; VA GASI ADRESA ETICHETEI
                    3523 ;  DACA NU O GASESTE CY=0
                    3524 ;
                    3525 LABIDF
2489  3A6D39        3526  LD A,(LABNB) ;NR DE ETIC DIN TABELA IN B
248C  A7            3527  AND A ;DACA ESTE ZERO -) RETURN FALSE
248D  CACA19        3528  JP Z,FRET
2490  47            3529  LD B,A
2491  0E06          3530  LD C,6 ;NR DE CARAC DIN ETIC IN C
2493  11FE3A        3531  LD DE,LABCR ;DE POINTER PE LABCR
2496  216E39        3532  LD HL,LABTAB ;HL=POINTER IN TABEL
                    3533 LABID1
2499  CDC51B        3534  CALL CMPM ;COMPARA ETIC
249C  DAAC24        3535  JP C,LABID2 ;SALT DACA SINT ID.
249F  05            3536  DEC B ;DECREM CONTOR
24A0  CACA19        3537  JP Z,FRET ;RETURN FALSE DACA E 0
                    3538              ; (NU S-A GASIT ETIC)
24A3  D5            3539  PUSH DE
24A4  110800        3540  LD DE 8 ;SE TRECE LA URM POZITIE DIN TABEL
24A7  19            3541  ADD HL,DE
24A8  D1            3542  POP DE
24A9  C39924        3543  JP LABID1
                    3544 LABID2
                    3545  ;S-A GASIT ETICHETA.SE PUNE ADRESA EI
24AC  110600        3546  LD DE,6
24AF  19            3547  ADD HL,DE ;HL=POINTER PE ADRESA
24B0  5E            3548  LD E,(HL)
24B1  23            3549  INC HL
24B2  56            3550  LD D,(HL) ;SE ADUCE ADRESA
24B3  EB            3551  EX DE,HL ;    IN DE
24B4  22043B        3552  LD (LABCRA),HL
24B7  C3B91A        3553  JP SRET
                    3554 ;
```

```
                    3555 *H INTERPRETER,PUTLABEL
                    3556 ;*****************************************
                    3557 ; FUNCTION    : PUTLAB
                    3558 ; DESCRIPTION: PUTLABEL
                    3559 ;  SUBRUTINA PUNE ETICHETA CURENTA (DE LA LABCR)
                    3560 ;  SI ADRESA EI IN TABELA DE ETICHETE ,DACA MAI ESTE
                    3561 ;  LOC.
                    3562 ;  POT APAREA 2 FELLURI DE ERORI:
                    3563 ;   -TABELA DE ETICHETE PLINA
                    3564 ;   -ETICHETA MULTIDEF
                    3565 ;  IN AMBELE CAZURI DE DA MESAJ DE EROARE SI
                    3566 ;  SE REVINE INZONA DE ASTEPATRE COMENZI
                    3567 ;
                    3568 PUTLAB
24BA    CD8924      3569  CALL LABIDF ;CAUTA ETICHETA IN TABELA
24BD    DAE424      3570  JP C,PTLAB2 ;EROARE MULTIDEF DACA S-A GASIT
24C0    3A6D39      3571  LD A,(LABNB) ; ADUCE NR DE ETIC DIN TABELA
24C3    FE32        3572  CP LABTBL ;COMPARA CU LUNG.MAX A TABELEI
24C5    F2F724      3573  JP P,PTLAB3 ;EROARE TABFUL DACA >=
24C8    3C          3574  INC A ;INCR NR DE ETIC
24C9    326D39      3575  LD (LABNB),A
24CC    216639      3576  LD HL,LABTAB-8 ;SE AFLA ADRESA UNDE SE DEPUNE ETIC
24CF    110800      3577  LD DE,8
                    3578 ;
24D2    19          3579  ADD HL,DE
24D3    3D          3580  DEC A
24D4    C2D224      3581  JP NZ,$-2
                    3582  ; IN HL SE AFLA ACUM ADR. DESTIN
24D7    EB          3583  EX DE,HL ;ADR DESTIN TRECE IN DE
24D8    21FE3A      3584  LD HL,LABCR ;ADR SURSA IN HL
24DB    010800      3585  LD BC,8 ;NR DE OCTETI DE TRANSFERAT
24DE    CD1118      3586  CALL LDIR ;MUTA ETIC
24E1    C3B91A      3587  JP SRET
                    3588 PTLAB2 ;EROARE MULTIDEF
24E4    21FE3A      3589  LD HL,LABCR
24E7    0606        3590  LD B,6
24E9    CD951A      3591  CALL PUTMSG
24EC    210A25      3592  LD HL,PTLAB4
24EF    06FF        3593  LD B,255
24F1    CD951A      3594  CALL PUTMSG
24F4    C36622      3595  JP INGCM1
                    3596 PTLAB3
24F7    21FE3A      3597  LD HL,LABCR
24FA    0606        3598  LD B,6
24FC    CD951A      3599  CALL PUTMSG
24FF    211A25      3600  LD HL,PTLAB5
2502    06FF        3601  LD B,255
2504    CD951A      3602  CALL PUTMSG
2507    C36622      3603  JP INGCM1
                    3604 PTLAB4
250A    2D4D554C    3605  DEFM '-MULTIDEF LABEL'
2519    0D          3606  DEFB ASCICR
                    3607 PTLAB5
251A    2D4C4142    3608  DEFM '-LABTAB FULL'
2526    0D          3609  DEFB ASCICR
```

```
 LOC   OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

                   3610 *H INSTRUCTION IDENTIFY ROUTINE
                   3611 ;*************************************************
                   3612 ; FUNCTION  : INSIDF
                   3613 ; DESCRIPTION :
                   3614 ;    IN MOMENTUL APELARII INTPTR ESTE POINTER PE
                   3615 ; PRIMUL CARACTER AL INSTRUCTIEI.
                   3616 ; SUBRUTINA REVINE 'TRUE' CU CY=1 AVIND IN HL
                   3617 ; ADRESA INSTRUCTIEI.DE ASEMENEA ACEASTA ADRESA
                   3618 ; ESTE DEPUSA LA INSADR.
                   3619 ;
                   3620 INSIDF
2527   0621        3621  LD B,INSNB ;NR DE INSTRUCTII DIN TABELA IN B
2529   0E03        3622  LD C,3 ;NR DE CARAC SEMNIF DIN INSTR
252B   115825      3623  LD DE,INSTAB ;ADRESA TABELEI IN DE
252E   2A063B      3624  LD HL,(INTPTR) ;ADRESA CARAC.CURENT IN HL
2531   EB          3625  EX DE,HL ;SCHIMB HL CU DE
                   3626 ;
                   3627 INSID1
2532   CDC51B      3628  CALL CMPM ;COMPARA CELE 2 ZONE
2535   DA4525      3629  JP C,INSID2 ;SALT DACA S-A GASIT INSTRUCTIA
2538   05          3630  DEC B
2539   CACA19      3631  JP Z,FRET ;RETURN 'FALSE' DACA S-A TERMINAT TAB.
253C   D5          3632  PUSH DE
253D   110500      3633  LD DE,3+2 ;HL VA FI POINTER PE URM INSTR DIN TAB.
2540   19          3634  ADD HL,DE
2541   D1          3635  POP DE
2542   C33225      3636  JP INSID1 ;MAI INCEARCA O DATA
                   3637 INSID2 ;S-A GASIT INSTRUCTIA
2545   110300      3638  LD DE,3 ;NR DE CARAC DIN INSTR.
2548   19          3639  ADD HL,DE ;HL=POINTER PE ADRESA INSTRUCTIEI
2549   5E          3640  LD E,(HL)
254A   23          3641  INC HL
254B   56          3642  LD D,(HL) ;DE=ADRESA INSTRUCTIEI
254C   EB          3643  EX DE,HL  ;HL=ADRESA INSTR
254D   22083B      3644  LD (INSADR),HL ;SE DEPUNE LA LOCATIA CORESP
2550   E5          3645  PUSH HL
2551   CDD42A      3646  CALL NXTCHI ;INTPTR POINTER PE URM CARAC SEMNIF
2554   E1          3647  POP HL
2555   C3B91A      3648  JP SRET ;RETURN 'TRUE'
                   3649 ;************************************ END OF FILE "SUBINT"
```

```
 LOC    OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

                    3650 *H INSTRUCTION TABLE
                    3651 ;*****************************************
                    3652 ; INSTAB
                    3653 ; TABELA DE INSTRUCTII ARE URM STRUCTURA :
                    3654 ; 3 OCTETI =NUMELE INSTRUCIEI
                    3655 ; 2 OCTETI ADRESA SUBRUTINEI
                    3656 ; INSNB =NR DE INSTRUCTII DIN TABELA
                    3657 ;
                    3658 INSTAB
2558    44464D      3659  DEFM 'DFM' ;DEFINE MEMORY INSTRUCTION
255B    FD25        3660  DEFW DFMINS
                    3661  ;
255D    544954      3662  DEFM 'TIT'  ;TITLE INSTRUCTION
2560    0326        3663  DEFW TITINS
                    3664  ;
2562    4E414D      3665  DEFM 'NAM' ;NAME INSTRUCTION
2565    7726        3666  DEFW NAMINS
                    3667  ;
2567    505249      3668  DEFM 'PRI' ;PRINT INSTRUCTION
256A    AE26        3669  DEFW  PRIINS
                    3670  ;
256C    505753      3671  DEFM 'PWS' ;POWER SUPPLY INS
256F    8E29        3672  DEFW  PWSINS
                    3673  ;
2571    54494D      3674  DEFM 'TIM' ;TIMING SET INSTRUCTION
2574    DC26        3675  DEFW  TIMINS
                    3676  ;
2576    434F44      3677  DEFM 'COD' ;CODE INSTRUCTION
2579    4E26        3678  DEFW CODINS
                    3679  ;
257B    42454D      3680  DEFM 'BEM' ;BOARD ERROR MAP INSTRUCTION
257E    FB26        3681  DEFW  BEMINS
                    3682  ;
2580    424545      3683  DEFM 'BEE' ;BEEP INSTRUCTION
2583    4127        3684  DEFW  BEEINS
                    3685  ;
2585    43414C      3686  DEFM 'CAL' ; CALL INSTRUCTION
2588    5027        3687  DEFW CALINS
                    3688  ;
258A    524554      3689  DEFM 'RET' ; RETURN INSTRUCTION
258D    7127        3690  DEFW RETINS
                    3691  ;
258F    47544F      3692  DEFM 'GTO' ; GO TO INSTRUCTION
2592    B627        3693  DEFW GTOINS
                    3694  ;
2594    535450      3695  DEFM 'STP' ;STOP INSTRUCTION
2597    E427        3696  DEFW STPINS
                    3697  ;
2599    465050      3698  DEFM 'FPP' ;FAST PROCESSOR PROGRAMM INSTR.
259C    F327        3699  DEFW  FPPINS
                    3700  ;
259E    454E44      3701  DEFM 'END' ;END INSTRUCTION
25A1    1F28        3702  DEFW ENDINS
                    3703  ;
25A3    494E54      3704  DEFM 'INT' ;INTEL CODE INSTRUCTION
25A6    7628        3705  DEFW INTINS
25A8    534554      3706  DEFM 'SET' ;SET MEMORY INSTRUCTION
25AB    8828        3707  DEFW SETINS
```

```
                    3708 ;
25AD    544F50      3709  DEFM 'TOP' ;TOPO INSTRUCTION
25B0    CA28        3710  DEFW TOPINS
                    3711 ;
25B2    574149      3712  DEFM 'WAI' ;WAIT INSTRUCTION
25B5    4029        3713  DEFW WAIINS
                    3714 ;
25B7    465057      3715  DEFM 'FPW' ;FAST PROCESSOR WAIT INSTR.
25BA    EC26        3716  DEFW  FPWINS
                    3717 ;
25BC    494645      3718  DEFM 'IFE' ;IF ERROR INSTRUCTION
25BF    4D29        3719  DEFW IFEINS
                    3720  ;
25C1    49464B      3721  DEFM 'IFK' ;IF KEY INSTRUCTION
25C4    6029        3722  DEFW IFKINS
                    3723  ;
25C6    4F5049      3724  DEFM 'OPI' ;OPERATOR INTERVENTION
25C9    6A2A        3725  DEFW OPIINS
                    3726 ;++++++++++++++
25CB                3727  DEFS 50 ;LASA LOC PT INCA 10 INSTRUCTII
                    3728 ;
                    3729 ;********************************************* END OF FILE "INSTAB"
                    3730 INSNB EQU ($-INSTAB)/5 ;NR DE INSTRUCTII
```

```
                    3731 *H INPLEMENTARE INSTRUCTII
                    3732 ;
                    3733 ;*********************************************
                    3734 ; DFMINS ;DEFINE MEMORY INSTRUCTION
                    3735 ; INSTRUCTIA DEPUNE TOTI OCTETII INDICATI
                    3736 ; IN MEMORIE INCEPIND DE LA ADRESA TABIS
                    3737 ;
                    3738 DFMINS
25FD   211D37       3739  LD HL,TABIS
2600   C39328       3740  JP SETI10 ;IN CONTINUARE ESTE IDENTIC CU INSTR.
                    3741            ;SET
                    3742 ;*********************************************
                    3743 ; TITINS =TITLE OF PROGRAMM INSTRUCTION
                    3744 ;
                    3745 ; ARE CA EFECT COMPLETAREA CELOR 16 OCTETI
                    3746 ; DIN TITBUF CU CEEA CE ESTE INTRE GHILIM.
                    3747 ; DE ASEMENEA SE TIP
                    3748 ; "START OF TITLE ON (SERIE MODUL )"
                    3749 ;
                    3750 TITINS
2603   2A063B       3751  LD HL,(INTPTR) ;SE ADUCE PRIMUL CARAC
2606   7E           3752  LD A,(HL)
2607   FE22         3753  CP '"' ;EROARE DACA NU ESTE "
2609   C26B29       3754  JP NZ,INSERR
260C   23           3755  INC HL ;HL POINTER PE PRIMUL CARAC DIN TITLU
260D   0610         3756  LD B,16 ;SE MUTA MAX 16 CARAC
260F   11153C       3757  LD DE,TITBUF ;DESTINATIA =TITBUF
                    3758 TITI10
2612   7E           3759  LD A,(HL)  ;SE ADUCE CARAC
2613   FE0D         3760  CP ASCICR ;DACA ESTE ASCICR => NU S-AU
                    3761            ;INCHIS GHILIM =>INSERR
2615   CA6B29       3762  JP Z,INSERR
2618   FE22         3763  CP '"' ;VERIF DACA NU S-A TERMIN TITLUL
261A   CA2426       3764  JP Z,TIT120
                    3765  ;ESTE DECI UN CARAC VALID
261D   12           3766  LD (DE),A ;SE MUTA CARAC IN TITBUF
261E   13           3767  INC DE ;SE INCR ADR SURSA SI DESTIN
261F   23           3768  INC HL
2620   05           3769  DEC B ;SE DECREM COMTOR
2621   C21226       3770  JP NZ,TITI10
                    3771 TITI20 ;
                    3772  ;SE FORTEAZA MODUL OUT TTY
2624   3A890F       3773  LD A,(TTYFLG)
2627   F5           3774  PUSH AF   ;SE SALV.MODUL
2628   F601         3775  OR  1 ;SE INTRD.MODUL OUT TTY
262A   32890F       3776  LD (TTYFLG),A
262D   214526       3777  LD HL,STRTM ;SE VA TIPARI START OF
2630   0609         3778  LD B,STRTML ;LUNGIME MESAJ IN B
2632   CD951A       3779  CALL PUTMSG
2635   21153C       3780  LD HL,TITBUF
2638   06FF         3781  LD B,255 ;SE TIP TITLUL SI SERIA
263A   CD951A       3782  CALL PUTMSG
                    3783  ;
263D   F1           3784  POP AF ;SE READUCE VECHIUL MOD
263E   32890F       3785  LD (TTYFLG),A ;SI SE REFACE
2641   CD5C1B       3786  CALL NEXTL ;SE MUTA POINTERII PE LINIA URM
2644   C9           3787  RET
                    3788 ;
```

```
2645  53544152  3789 STRTM DEFM 'START OF '
                3790 STRTML EQU $-STRTM
                3791 ;
                3792 ;
                3793 ;************************************************
                3794 ; CODINS
                3795 ;
                3796 CODINS
264E  CD0A30    3797  CALL INITT ;INIT TESTOR
2651  CDD431    3798  CALL MANK? ;SE CERE CUMVA UN COD DE LA CHEI
2654  CD9530    3799  CALL CODIDF ;IDENTIF CODUL
2657  3E00      3800  LD A,0      ;SE INIT PE 0 FLAGURILE ERRFLG & ANUM
2659  327330    3801  LD (ERRFLG),A ;FLAGUL CONTINE EROAREA IN CODUL CURENT
265C  328D31    3802  LD (ANUM),A ;CONTINE RANGUL ADRESEI TESTATE LA AFP
265F  CD1335    3803  CALL INCCOD ;SE INCARCA CODUL ALES
                3804  ;
2662  CD7C20    3805  CALL INTST2 ;SINT PERMISE ERH,TT,TEMP,STOP
2665  FB        3806  EI
2666  CDD930    3807  CALL CODEXQ ;EXECUTA CODUL
2669  F5        3808  PUSH AF
266A  CD8320    3809  CALL INTST3
266D  F1        3810  POP AF
266E  FB        3811  EI
266F  A7        3812  AND A ;VERIF DACA ESTE EROARE
2670  C46C32    3813  CALL NZ,PRTTER ;TIP EROAREA DDACA EXISTA
2673  CD5C1B    3814  CALL NEXTL
2676  C9        3815  RET ;GATA
                3816 ;
                3817 ;
                3818 ;************************************************
                3819 ; N A M I N S
                3820 ;
                3821 ; FORMA : NAME    "TEXT" ;SE ACCEPTA MAX 16 CAR.
                3822 ;
                3823 ;
                3824 NAMINS
2677  2A063B    3825  LD HL,(INTPTR) ;SE ADUCE PRIMUL CARAC SEMNIF
267A  7E        3826  LD A,(HL)
267B  FE22      3827  CP '"' ;ESTE ERRINS DACA NU E '"'
267D  C26B29    3828  JP NZ,INSERR
2680  23        3829  INC HL ;POINTER PE PRIMUL CARAC DIN TEXT
2681  11303C    3830  LD DE,NAMBUF ;SE VA TRANSFERA LA NAMBUF
2684  060F      3831  LD B,NAMBFL-1  ;NR MAX DE CARAC TRANSFERABILE
                3832 NAMI1
2686  7E        3833  LD A,(HL) ;SE ADUCE UN CARACTER
2687  FE22      3834  CP '"'    ;DACA E SFIRSIT DE NUME SE IESE
2689  CA9826    3835  JP Z,NAMI2
268C  FE0D      3836  CP ASCICR ;DACA E CR INDERR
268E  CA6B29    3837  JP Z,INSERR
                3838  ;ESTE DECI CARAC VALID
2691  12        3839  LD (DE),A ;SE TRANSF IN NAMBUF
2692  13        3840  INC DE ;SE PREG $ADRESELE PT URM TRANSFER
2693  23        3841  INC HL
2694  05        3842  DEC B  ;SE DECREM CONTORUL
2695  C28626    3843  JP NZ,NAMI1 ;DACA S-AU DAT PREA MULTE CARAC
                3844        ;SE IAU DOAR ATITEA CITE AU LOC
                3845 NAMI2
2698  3E0D      3846  LD A,ASCICR
```

```
269A  12        3847  LD (DE),A ;SE PUNE CR LA SFIRSIT DE NUME
269B  21303C    3848  LD HL,NAMBUF ;SE PREG TIPARIREA
269E  06FF      3849  LD B,255
26A0  3A0B3B    3850  LD A,(PRTFLG) ;SE VERIF PRTFLG
26A3  A7        3851  AND A
26A4  CAAA26    3852  JP Z,$+6 ;NU SE TIP DACA ESTE 0
26A7  CD951A    3853  CALL PUTMSG ;TIPARESTE
26AA  CD5C1B    3854  CALL NEXTL ;SE MUTA POINTERII PE LINIA URM
26AD  C9        3855  RET         ;GATA
              3856 ;
              3857 ;
              3858  ;
              3859 ;*********************************************
              3860 ; PRIINS = PRINT INSTRUCTION
              3861 ;         TIPARESTE TOT CE ESTE INTRE GHILIMELE.
              3862 ; DACA EXISTA UN SLASH DUPA ULTIMELE GHILIMELE
              3863 ; SE TIPARESTE SI CARRIAGE RETURN LINEFEED
              3864 ;
              3865 PRIINS
26AE  2A0638    3866  LD HL,(INTPTR) ;HL=POINTER IN TEXT
26B1  7E        3867  LD A,(HL) ;ADUCE CARAC CURENT
26B2  FE22      3868  CP '"' ;SE COMPARA CU GHILIMELE
26B4  C26B29    3869  JP NZ,INSERR ;EROARE PARAM.INSTRUCTIE DACA NU E
              3870                 ; ASA
              3871 PRII01
26B7  23        3872  INC HL ;POINTER PE CARAC URM.
26B8  7E        3873  LD A,(HL) ;ADUCE CARAC
26B9  4F        3874  LD C,A ;MUTA CARAC IN C
26BA  FE22      3875  CP '"' ;ESTE GHILIMELE
26BC  CACA26    3876  JP Z,PRII02
26BF  FE0D      3877  CP ASCICR ;ESTE CR
26C1  CACA26    3878  JP Z,PRII02
26C4  CD961C    3879  CALL ECHO ;TIPARESTE CARAC DACA NU SINT GHILIMELE
26C7  C3B726    3880  JP PRII01
              3881 PRII02
26CA  22063B    3882  LD (INTPTR),HL ;NOTEAZA NOUA VAL A POINTERULUI
26CD  CDD42A    3883  CALL NXTCHI ;ADUCE URM CARAC SEMNIF
26D0  FE2F      3884  CP '/' ;COMPARA CU SLASH
26D2  C2D826    3885  JP NZ,PRII03 ;SARE URM INSTR DACA NU E SLASH
              3886  ; DACA E SLASH SE TIP CRLF
26D5  CDB219    3887  CALL CROUT
              3888 PRII03
26D8  CD5C1B    3889  CALL NEXTL ;MUTA POINTERII PE LINIA URM
26DB  C9        3890  RET
              3891 ;PWSINS RET
              3892 ; ESTE IMPLEM.IN FILE PWSINS
              3893 ;*********************************************
              3894 ; T I M I N S
              3895 ;
              3896 TIMINS
26DC  2A063B    3897  LD HL,(INTPTR)
26DF  E5        3898  PUSH HL
26E0  C1        3899  POP BC
26E1  CD002C    3900  CALL TIMING
26E4  A7        3901  AND A ;REZULT IN A =0
26E5  C26B29    3902  JP NZ,INSERR
26E8  CD5C1B    3903  CALL NEXTL ;POINTERII PE LINIA URM
26EB  C9        3904  RET ;GATA
```

```
                    3905 ;
                    3906 ;
                    3907 ;*************************************************
                    3908 ; F P W I N S
                    3909 ;
                    3910 ; FAST PROCESSOR WAIT
                    3911 ;
                    3912 ; ACEASTA INSTRUCTIE STABILESTE VALOAREA TEMPO-
                    3913 ; RIZARII EFECTUATE DE MICROPROCESOR LA CEREREA
                    3914 ; PROCESORULUI RAPID (PRIN INTRERUPERE ITEMP)
                    3915 ;  VALOAREA TEMPORIZARII RAMINE ACEEASI PINA LA
                    3916 ; EXECUTIA ALTEI INSTR FPW
                    3917 ;
                    3918 ; FORMA : FPW    1000  CR (MS,IN ZECIMAL)
                    3919 ;
                    3920 FPWINS
26EC    CDA42A      3921  CALL GETHXI ;ADUCE NUMARUL
26EF    CD1A19      3922  CALL CZHEX  ;CONVERTESTE IN HEXA
26F2    C5          3923  PUSH BC
26F3    E1          3924  POP HL ;IL DUCE IN HL
26F4    226B39      3925  LD (TIMOUT),HL
26F7    CD5C1B      3926  CALL NEXTL ;TRECE LA LINIA URM
26FA    C9          3927  RET
                    3928  ;GATA
                    3929 ;
                    3930 ;*************************************************
                    3931 ; B E M I N S
                    3932 ;
                    3933 ; FORMA : BEM
                    3934 ;
                    3935 ; DESCRIERE :
                    3936 ; ARE CA EFECT TIPARIREA UNUI BEM CUMULATIV DACA
                    3937 ; CHEIA CLEM ESTE PE PUSA
                    3938 ;  DACA SIST.ESTE IN REG. PRT ALL (PRTFLG=1)
                    3939 ; NU SE TIPARESTE NAMEBUF.
                    3940 ;  DACA SISTE.ESTE PRTOFF SE TIP SI NAMBUF
                    3941 ; DACA SE EXEC TIPARIREA SI SE FACE OUTPUT SI PE
                    3942 ; TELETYPE ATUNCI NU SE OPRESTE EXECUTIA PROGRAMULU
                    3943 ;  DACA SISTEMUL FACE OUTPUT NUMAI PE DISPLAY SE
                    3944 ; OPRESTE EXEC.PROGRAMULUI SI SE ASTEAPTA O C-ID
                    3945 ;  "GO" SAU O INTRERUPERE "REL"
                    3946 ;
                    3947 BEMINS
26FB    CD5C1B      3948  CALL NEXTL ;SE PUN POINTERII PE LINIA URM.
26FE    3A00B0      3949  LD A,(MANKEY) ;SE TESTEAZA CHEILE
2701    E640        3950  AND 40H ;
2703    C8          3951  RET Z ;SE CONTINUA PRG DACA CHEIA CLEM=0
                    3952 ;
2704    213627      3953  LD HL,BEMMES ;ADRESA MESAJ 'CUM.BEM'
2707    060A        3954  LD B,BEMESL
2709    CD951A      3955  CALL PUTMSG  ;SE AFISEAZA 'CUM.BEM'
270C    21303C      3956  LD HL,NAMBUF
270F    06FF        3957  LD B,255 ;SE PREG PT TIP NAMBUF
2711    3A0B3B      3958  LD A,(PRTFLG)
2714    A7          3959  AND A
2715    C4B219      3960  CALL NZ,CROUT ;RIND NOU DACA ESTE PRTALL
2718    3A0B3B      3961  LD A,(PRTFLG)
271B    A7          3962  AND A
```

```
271C    CC951A      3963  CALL Z,PUTMSG ;SE TIP NAMEBUF+CR DACA E PRTOFF
                    3964  ;
271F    CD5633      3965  CALL AFILEM ;SE AFISEAZA BEM
2722    CDB219      3966  CALL CROUT
2725    3E08        3967  LD A,08H ;SE STERGE MEMORIA LEM A FAST PROC.
2727    3200E0      3968  LD (PCRREG),A
272A    CD602B      3969  CALL WAITFP ;SE ASTEAPTA TERMINAREA OPER.
                    3970  ;
272D    3A890F      3971  LD A,(TTYFLG)
2730    E601        3972  AND 01H ;DACA BITUL 0=1 ATUNCI OUT=TTY
2732    C0          3973  RET NZ ; CONTINUA PRG.DACA ESTE OUT TTY
2733    C3CD32      3974  JP PRTPRC ;ESTEAPTA COMENZI SAU INTRERUPERI
                    3975  ; DACA ESTE OUT DISPLAY (ONLY)
                    3976 ;
                    3977 BEMMES ;
2736    43554D2E    3978  DEFM 'CUM.BEM - '
                    3979 BEMESL EQU $-BEMMES ;LUNGIME MESAJ
2740    0D          3980  DEFB ASCICR
                    3981 ;
                    3982 ;*************************************************
                    3983 ; BEEINS =INSTRUCTIA BEEP
                    3984 ;
                    3985 BEEINS
2741    CD5C1B      3986  CALL NEXTL ;MUTA POINTERII PE LINIA URM
2744    0E07        3987  LD C,07 ;CODUL BELL
2746    1E0A        3988  LD E,10 ;SE VA TRANSMITE CODUL BELL DE 10 X
                    3989 BEEI10
2748    CD0980      3990  CALL ECHOS ;SE VA TRANSMITE NUMAI PE CALEA
                    3991              ;SERIE DEOARECE DAF-UP 1001 F
                    3992              ; NU ARE OPTIUNEA BELL
274B    1D          3993  DEC E
274C    C24827      3994  JP NZ,BEEI10
274F    C9          3995  RET
                    3996 ;*************************************************
                    3997 ; CALINS
                    3998 ;
                    3999 ; IPLEMENTAREA INSTRUCTIEI CALL LABEL
                    4000 ;
                    4001 CALINS
2750    CD5D24      4002  CALL PUTLBC ;PUNE ETIC LA ADR.ETIC CURENTE
2753    CD8924      4003  CALL LABIDF ;CAUT-O IN TABELA
2756    D2C627      4004  JP NC,UDLERR
2759    CD5C1B      4005  CALL NEXTL ;PUNE POINTERUL PE LINIA URM.
275C    2AFC0E      4006  LD HL,(EIPTR)
275F    EB          4007  EX DE,HL ;ADRESA LINIEI URM IN DE CEA TRECE
                    4008              ; IN STIVA INTERPRETORULUI
2760    2A0C3B      4009  LD HL,(ISTCKP) ;STACKPOINTERUL IN HL
2763    23          4010  INC HL
2764    73          4011  LD (HL),E
2765    23          4012  INC HL
2766    72          4013  LD (HL),D ;ADRELA LINIEI URM TRECE IN STIVA
2767    220C3B      4014  LD (ISTCKP),HL ;NOTEAZA NOUL STACKPOINTER
276A    2A043B      4015  LD HL,(LABCRA) ;ADRESA SUBRUTINEI TRECE LA
276D    22FC0E      4016  LD (EIPTR),HL  ;EIPTR
2770    C9          4017  RET ;OK.E GATA
                    4018 ;*************************************************
                    4019 ; RETINS
                    4020 ;
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                    4021 ; IMPLEMENTAREA INSTRUCTIEI RETURN .
                    4022 ;
                    4023 RETINS
2771    2A0C3B      4024  LD HL,(ISTCKP) ;SE VERIF DACA NU CUMVA
2774    110E3B      4025  LD DE,ISTCKA   ;STACK POINTERUL E MAI MIC DECIT
                    4026                ;INCEPUTUL ZONEI DE STIVA
2777    EB          4027  EX DE,HL
2778    CD421A      4028  CALL HILO     ;SE FACE COMPARAREA
277B    DA8B27      4029  JP C,STCKER ;DACA HL)=DE EROARE DE STIVA
                    4030  ;
277E    EB          4031  EX DE,HL
277F    56          4032  LD D,(HL)
2780    2B          4033  DEC HL
2781    5E          4034  LD E,(HL)
2782    2B          4035  DEC HL
2783    220C3B      4036  LD (ISTCKP),HL ;SE NOTEAZA NOUL INDIC. STIVA
2786    EB          4037  EX DE,HL ;ADRESA IN HL
2787    22FC0E      4038  LD (EIPTR),HL ;SE NOTEAZA LA EIPTR
278A    C9          4039  RET
                    4040      ;OK .E GATA
                    4041 ;*************************************************
                    4042 ;STCKER = STACK ERROR (TOO MANY RETURNS)
                    4043 ;
                    4044 STCKERR
278B    CDEF2A      4045  CALL PRLI
278E    219927      4046  LD HL,STCERM
2791    06FF        4047  LD B,255
2793    CD951A      4048  CALL PUTMSG ;TIP.MESAJ EROARE
2796    C36622      4049  JP INGCM1 ;SALT LA ZONA GETCOMMAND DU EROARE
                    4050 ;
2799    53544143    4051 STCERM DEFM 'STACK LIMIT,TOO MANY RETURNS'
27B5    0D          4052  DEFB ASCICR
                    4053 ;*************************************************
                    4054 ; GTOINS
                    4055 ;
                    4056 ; IMPLEMENTAREA INSTRUCTIEI GTO LABEL
                    4057 ;
                    4058 GTOINS
27B6    CD5D24      4059  CALL PUTLBC
27B9    CD8924      4060  CALL LABIDF
27BC    D2C627      4061  JP NC,UDLERR
27BF    2A043B      4062  LD HL,(LABCRA) ;ADRESA ETIC IN HL
27C2    22FC0E      4063  LD (EIPTR),HL  ;SE NOTEAZA LA EIPTR
27C5    C9          4064  RET
                    4065 ;
                    4066 ;*************************************************
                    4067 ;UDLERR = UNDEFINED LABEL ERROR
                    4068 ;
                    4069 UDLERR
27C6    CDEF2A      4070  CALL PRLI ;TIPARESTE LINIA CU EROARE
27C9    21D427      4071  LD HL,UDLERM ;TIPARESTE MESAJ
27CC    06FF        4072  LD B,255
27CE    CD951A      4073  CALL PUTMSG
27D1    C36622      4074  JP INGCM1 ;SALT LA ZONA DE COMENZI !
27D4    554E4445    4075 UDLERM DEFM 'UNDEFINED LABEL'
27E3    0D          4076  DEFB ASCICR
                    4077 ;*************************************************
                    4078 ; STPINS
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                    4079 ; INSTRUCTIA STOP ESTE FOLOSITA PENTRU A OPRI PRO-
                    4080 ; GRAMUL INTR-UN ANUMIT PUNCT,DE OBICEI PENTRU DE-
                    4081 ; PANAREA LUI
                    4082 ;
                    4083 STPINS
27E4    CDEF2A      4084  CALL PRLI ;TIPARESTE LINIA PE CARE SE AFLA INSTR.
27E7    CD5C1B      4085  CALL NEXTL ;MUTA POINTERII PE LINIA URM.
27EA    2AFC0E      4086  LD HL,(EIPTR)
27ED    22063B      4087  LD (INTPTR),HL
27F0    C3DA22      4088  JP INGCM2 ;ASTEAPTA NOI COMENZI (DE OBICEI STEP
                    4089 ;      GO SAU RUN
                    4090 ;*********************************************
                    4091 ; FPPINS = FAST PROCESSOR PROGRAMM INSTR.
                    4092 ; SINTAXA
                    4093 ; FPP   CODFL TPADR ;
                    4094 ;  B1 B2 B3 ;
                    4095 ;   B4 B4 B6 ETC
                    4096 ;CODFLG ESTE UN OCTET CARE INDICA FELUL TESTULUI :
                    4097 ;   00 =TEST NORMAL CARE NU TREBUIE SA DEA ERR
                    4098 ;   FF =TEST SPECIAL CARE DA ERR PE UN MODUL RUN
                    4099 ;       (EX TESTAREA (NE)SELECTARII MODULULUI)
                    4100 ;TPADR =ADRESA SUBRUTINEI DE TERMINARE PARTIALA
                    4101 ;      DACA ESTE 0 ,IN CAZ DE TERMINARE PARTIALA SI
                    4102 ;      VA FACE ACCES LA SUBRUTINA NESPECIFICA
                    4103 ;       DECI DACA NU ESTE UN TEST CU TERM. PART
                    4104 ;      SAU DACA ACEASTA NU NEC.TRATARI SPECIFICE
                    4105 ;      SE PUNE 0000
                    4106 ; SPATIUL INTRE OCTETI SI INTRE OCTETI SI ';' SAU
                    4107 ; '%' SA NU FIE MAI MARE DE UN BLANC
                    4108 ;
                    4109 FPPINS
27F3    CDA42A      4110  CALL GETHX1 ;SE ADUCE PRIMUL NR (CODFLG)
27F6    21C535      4111  LD HL,CODTAB+8
27F9    71          4112  LD (HL),C ;SE DEPUNE OCTETUL LD CODFLG
27FA    CDA42A      4113  CALL GETHXI ;SE ADUCE ADRESA TERM PARTIALA
27FD    D26B29      4114  JP NC,INSERR ;EROARE DACA NU S-A DAT ADR.
2800    C5          4115  PUSH BC
2801    E1          4116  POP HL ;TRECE IN HL
2802    22C635      4117  LD (CODTAB+9),HL ;SE PUNE LA CODUL X?
2805    CD982A      4118  CALL FETCHI ;URM CARAC TREBUIE SA FIE ';'
2808    FE3B        4119  CP ';'
280A    C26B29      4120  JP NZ,INSERR
280D    CD5C1B      4121  CALL NEXTL ;SE TRECE LA LINIA URM. PT
                    4122    ;A ADUCE OCTETII DE MICROPROGRAM
2810    2AFC0E      4123  LD HL,(EIPTR)
2813    22063B      4124  LD (INTPTR),HL
2816    CDD42A      4125  CALL NXTCHI
2819    21413C      4126  LD HL,X? ;SE INCARCA IN HL ADRESA MICROCODULUI
281C    C39328      4127  JP SETI10 ;IN CONTINUARE PROCEDURA E IDENTICA CU
                    4128  ;CEA DE LA INSTRUCTIA SET
                    4129 ;*********************************************
                    4130 ; ENDINS =END INSTRUCTION
                    4131 ;
                    4132 ENDINS
                    4133  ;SE FORTEAZA MODUL OUT TTY
281F    3A890F      4134  LD A,(TTYFLG)
2822    F5          4135  PUSH AF  ;SE SALV.MODUL
2823    F601        4136  OR 01H ;SE INTRD.MODUL OUT TTY
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2825    32890F      4137  LD (TTYFLG),A
2828    210E3C      4138  LD HL,ENDM
282B    0622        4139  LD B,ENDML
282D    CD951A      4140  CALL PUTMSG
2830    215728      4141  LD HL,REZM ;MESAJ REZULTAT
2833    0608        4142  LD B,REZML
2835    CD951A      4143  CALL PUTMSG ;TIP 'REZULT: '
2838    06FF        4144  LD B,255
283A    215F28      4145  LD HL,OKM ;ADRESA MESAJ OK
283D    3A403C      4146  LD A,(REZFLG) ;
2840    A7          4147  AND A ;ANALIZ REZULT CUMUL AL TESTELOR
2841    CA4728      4148  JP Z,$+6 ;SARE URM INSTRUCTIE DACA E OK
2844    216C28      4149  LD HL,DEFMS
2847    CD951A      4150  CALL PUTMSG
                    4151  ;
284A    F1          4152  POP AF ;SE READUCE VECHIUL MOD
284B    32890F      4153  LD (TTYFLG),A ;SI SE REFACE
284E    CD312B      4154  CALL PWSRES ;RESET SURSE
2851    CD7520      4155  CALL INTST1 ;INIT SIST INTRERUPERI
                    4156  ;
2854    C3C522      4157  JP ININIT ;SALT LA INCEPUTUL INTERPRETERULUI
                    4158 ;
2857    52455A55    4159 REZM DEFM 'REZULT: '
                    4160 REZML EQU $-REZM
285F    50415353    4161 OKM DEFM 'PASS        '
286B    0D          4162     DEFB ASCICR
286C    4641494C    4163 DEFMS DEFM 'FAIL      '
2875    0D          4164     DEFB ASCICR
                    4165 ;*************************************
                    4166 ;
                    4167 ; INTINS = IMPLEMENTAREA INSTRUCTIEI INTEL CODE
                    4168 ;
                    4169 ; SINTAXA : INT  AAAA
                    4170 ; AAAA=ADRESA SUBRUTINEI IN COD MASINA LA CARE
                    4171 ; SE FACE CALL
                    4172 ;
                    4173 INTINS
2876    CDA42A      4174  CALL GETHXI ;SE ADUCE ADRESA SUBRUTINEI
2879    D26B29      4175  JP NC,INSERR ;EROARE DACA NU E NUMAR
287C    C5          4176  PUSH BC ;SE TRECE IN STIVA
287D    CD5C1B      4177  CALL NEXTL ;POINTERII PE LINIA URM
2880    2AFC0E      4178  LD HL,(E1PTR)
2883    22063B      4179  LD (INTPTR),HL ;
2886    E1          4180  POP HL ;READUCE ADRESA IN HL
                    4181  ;
2887    E9          4182  JP (HL) ;SUBRUTINA SE TERMINA CU RETURN
                    4183  ;DECI SE FACE RETURN DE ACOLO
                    4194 ;*************************************
                    4185 ;
                    4186 ; SETINS =SET MEMORY INSTRUCTION
                    4187 ;
                    4188 ; FORMA : SET DDDD B1 B2 B3 B4 B5 ETC
                    4189 ;
                    4190 SETINS
2888    CDA42A      4191  CALL GETHXI ;ADUCE ADRESA
288B    7A          4192  LD A,D ;TERMINATORUL IN A
288C    FE0D        4193  CP ASCICR ;DACA ESTE CR => NU MAI URMEAZA NUMERE
                    4194 ;           ;DECI ESTE EROARE PARAM INSTRUCTIE
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288E    CA6B29      4195  JP Z,INSERR
2891    C5          4196  PUSH BC
2892    E1          4197  POP HL ;SE TRECE ADRESA IN HL
                    4198 SETI10
2893    CDA42A      4199  CALL GETHXI
2896    D2C628      4200  JP NC,SETI20 ;IESE DIN BUCLA DACA NU EX NR
2899    71          4201  LD (HL),C ;DEPUNE OCTETUL LA ADR.INDIC DE HL
289A    7A          4202  LD A,D ;TERMINATORUL IN A
289B    FE0D        4203  CP ASCICR ;DACA ESTE ASCICR NU MAI URMEAZA
289D    CAC628      4204  JP Z,SETI20 ; NUMERE DECI IESIRE DIN BUCLA
28A0    23          4205  INC HL ;INCREM HL PT URM OCTET
                    4206  ;SE MAI VERIF DACA NU CUMVA URMEAZA UN COMENT.
28A1    E5          4207  PUSH HL
28A2    2A063B      4208  LD HL,(INTPTR)
28A5    7E          4209  LD A,(HL) ;SE ADUCE CARAC URMATOR
28A6    FE25        4210  CP '%' ;SE COMPARA CU %
28A8    E1          4211  POP HL ;SE READUCE HL SI SE IESE DIN
                    4212        ;BUCLA DACA A FOST '%'
28A9    CAC628      4213  JP Z,SETI20
                    4214 ; SE VERIF DACA NU COMVA URMEAZA SEMNUL ';'
                    4215 ; I.E. CONTINUAREA INSTRUCTIEI PE LINIA URM.
28AC    E5          4216  PUSH HL ;SE SALV HL IN STIVA
28AD    2A063B      4217  LD HL,(INTPTR) ;SE ADUCE POINTERUL
28B0    7E          4218  LD A,(HL) ;SE ADUCE URM.OCTET
28B1    FE3B        4219  CP ';' ; SE COMPARA CU ';'
28B3    C2C228      4220  JP NZ,SETI30 ;SALT DACA NU E ';'
28B6    CD5C1B      4221  CALL NEXTL ;ST TRECE LA LINIA URM.
28B9    2AFC0E      4222  LD HL,(EIPTR) ;POZIT INTPTR
28BC    22063B      4223  LD (INTPTR),HL
28BF    CDD42A      4224  CALL NXTCHI ;POINTER PE PRIMUL CARAC NONBLNC
                    4225 SETI30
28C2    E1          4226  POP HL ;REFACE HL
                    4227  ;
28C3    C39328      4228  JP SETI10 ;MAI ADUCE UN NUMAR
                    4229 SETI20 ;CIND SE AJUNGE AICI S-A INCHEIAT EXEC.
28C6    CD5C1B      4230  CALL NEXTL ;SE MUTA POINTERII PE LINIA URM.
28C9    C9          4231  RET ;GATA
                    4232 ;*********************************************
                    4233 ; TOPINS ;INSTRUCTIA TOPO
                    4234 ;
                    4235 ; FORME:
                    4236 ; A. TOPO X OCTETI - DEFINIREA TOPOLOGIEI
                    4237 ;                    MEMORIEI PE X
                    4238 ;    TOPO X N  - ADRESARE DIRECTA PE X
                    4239 ; B. TOPO Y OCTETI - IDEM PE X
                    4240 ;    TOPO Y N  - ADRESARE DIRECTA PE Y
                    4241 ; C. TOPO Z OCTETI -IDEM PE Z
                    4242 ;    TOPO Z N  - ADRESARE DIRECTA PE Z
                    4243 ; D. TOPO SET      - INTRODUCE MODUL DE LUCRU
                    4244 ; E. TOPO RESET    - MODUL DE LUCRU NONTOPO
                    4245 ;                    CU ADRESARE TOPOLOGICA
                    4246 TOPINS
28CA    2A063B      4247  LD HL,(INTPTR) ;ADUCE CARACTERUL
28CD    7E          4248  LD A,(HL)
28CE    F5          4249  PUSH AF ;SALVEAZA CARACTERUL
28CF    CDD42A      4250  CALL NXTCHI ;MUTA POINTERUL PE UTM CARAC SEMNIF
28D2    F1          4251  POP AF ;READUCE CARAC
28D3    FE53        4252  CP 'S' ;ESTE TOPO SET
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28D5    CAF828      4253  JP Z,TOPSET
28D8    FE52        4254  CP 'R'
28DA    CA0429      4255  JP Z,TOPRES
28DD    FE58        4256  CP 'X'
28DF    213B37      4257  LD HL,TOPXBF
28E2    CA0F29      4258  JP Z,TOPX  ;SE PUN OCTETII LA TOPXBF
28E5    FE59        4259  CP 'Y'
28E7    213B38      4260  LD HL,TOPYBF
28EA    CA0F29      4261  JP Z,TOPY ;PUNE OCTETII LA ADR TOPYBF
28ED    213B39      4262  LD HL,TOPZBF
28F0    FE5A        4263  CP 'Z'
28F2    CA2629      4264  JP Z,TOPZ ;PUNE OCTETII LA ADR TOPZBF
28F5    C36B29      4265  JP INSERR ;EROARE DACA NU E S,X,Y,Z
                    4266 TOPSET
28F8    3A3A37      4267  LD A,(PCRFLG) ;ADUCE OCTETUL DE COMANDA
28FB    E6FB        4268  AND .NOT.04H ;PUNE BITUL 2 PE ZERO
28FD    323A37      4269  LD (PCRFLG),A
                    4270 TOPS1
2900    CD5C1B      4271  CALL NEXTL ;GATA TRECE LA LINIA URM SI RET
2903    C9          4272  RET
                    4273 ;
                    4274 TOPRES
2904    3A3A37      4275  LD A,(PCRFLG) ;ADUCE OCTETUL DE COMANDA
2907    F604        4276  OR 04H ; PUNE BITUL 2 PE 1
2909    323A37      4277  LD (PCRFLG),A
290C    C30029      4278  JP TOPS1 ;TRECE LA LINIA URM SI RET
                    4279 ;
                    4280 TOPX
                    4281 TOPY
                    4282  ;CIND SE AJUNGE AICI IN HL SE AFLA ADR UNDE
                    4283  ;TREBUIE INCARCATI OCTETII (256)
                    4284 ; DACA INTPTR ESTE POINTER PE CARAC 'N'
                    4285 ; BUFFERUL X SAU Y TREBUIE INCARCAT CU
                    4286 ; STARILE UNUI NUMARATOR
                    4287 ;  DACA NU ESTE 'N' OCTETII SINT IN CLAR
                    4288 ; SI SE INCARCA FACIND SALT LA SETI10
                    4289 ;
290F    E5          4290  PUSH HL ;SALV ADR DE INCARCARE
2910    2A063B      4291  LD HL,(INTPTR) ;SE ADUCE CARAC
2913    7E          4292  LD A,(HL)
2914    E1          4293  POP HL ;SE REFACE ADR DE INCARCARE
2915    FE4E        4294  CP 'N' ;
2917    C29328      4295  JP NZ,SETI10 ;DACA NU ESTE 'N' SINT OCTETI
291A    3E00        4296  LD A,0 ;SE INCARCA INCEPIND DE LA ADR DIN
                    4297        ;HL :00 01 02 ...FD FE FF (256)
                    4298 TOPX1
291C    77          4299  LD (HL),A ;SE INCARCA UN OCTET
291D    23          4300  INC HL     ;SE INCR ADRESA
291E    3C          4301  INC A      ;SE INC OCTETUL
291F    C21C29      4302  JP NZ,TOPX1 ;SE BUCLEAZA PINA CIND A ESTE
                    4303              ;DIN NOU 0 (256)
2922    CD5C1B      4304  CALL NEXTL ;POINTERII PE LINIA URM
2925    C9          4305  RET   ;GATA
                    4306 ;
                    4307 TOPZ ; IDEM CA PE X,Y,DAR SE INCARCA DOAR 16 OCT.
2926    E5          4308  PUSH HL ;SALV ADR DE INCARCARE
2927    2A063B      4309  LD HL,(INTPTR) ;SE ADUCE CARAC
292A    7E          4310  LD A,(HL)
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292B    E1          4311  POP HL ;SE REFACE ADR DE INCARCARE
292C    FE4E        4312  CP 'N' ;
292E    C29328      4313  JP NZ,SETI10 ;DACA NU ESTE 'N' SINT OCTETI
2931    3E00        4314  LD A,0 ;SE INCARCA INCEPIND DE LA ADR DIN HL
                    4315         ; 00 01 02 ...0E OF (16 OCTETI)
2933    0610        4316  LD B,16 ;CONTOR DE BUCLA
                    4317 TOPZ1
2935    77          4318  LD (HL),A
2936    23          4319  INC HL
2937    3C          4320  INC A
2938    05          4321  DEC B
2939    C23529      4322  JP NZ,TOPZ1 ;UNPLE PINA CIND B=0
293C    CD5C1B      4323  CALL NEXTL ;POINTERII PE LINIA URM.
293F    C9          4324  RET         ;GATA
                    4325 ;**************************************
                    4326 ; WAIINS ; INSTRUCTIA WAIT
                    4327 ;
                    4328 ; FORMA WAIT NUMAR(MS)    CR
                    4329 ;
                    4330 WAIINS
2940    CDA42A      4331  CALL GETHXI ;ADUCE NUMARUL DE MS
2943    CD1A19      4332  CALL CZHEX  ;CONVERSIE IN HEXA
2946    CD4E2B      4333  CALL WAITMS ;ASTEAPTA
2949    CD5C1B      4334  CALL NEXTL  ;MUTA POINTERII PE LINIA URM
294C    C9          4335  RET ;GATA
                    4336 ;
                    4337 ;**********************************************
                    4338 ;
                    4339 ; IFEINS ;INSTRUCTIA IFERROR
                    4340 ;
                    4341 ;FORMA : IFERR LABEL
                    4342 ;
                    4343 ; DESCRIERE : IN CAZUL IN CARE PE TESTUL CARE
                    4344 ; S-A EXECUTAT A APARUT EROARE SI CHEIA BCLERR
                    4345 ; ESTE PE 1 SE FACE SALT LA ETICHETA INDICATA
                    4346 ;
                    4347 IFEINS
294D    3A00B0      4348  LD A,(MANKEY) ;SE TESTEAZA POZ. CHEII
2950    E620        4349  AND 00100000B ;SE IZOL BITUL 5
2952    CA5C1B      4350  JP Z,NEXTL ;DACA CHEIA NU E ACTIONATA
                    4351    ;SE TRECE LA EXECUTIA LINIEI URM
2955    3A7330      4352  LD A,(ERRFLG) ;SE ADUCE FLAGUL DE ERR CURENT
2958    E638        4353  AND 38H ;SE IZOL BITII DE EROARE
295A    CA5C1B      4354  JP Z,NEXTL ;DACA NU E EROARE SE TRECE LA
                    4355    ;EXECUTIA LINIEI URM.
295D    C38627      4356  JP GTOINS ;SALT LA INSTRUCTIE GTO LABEL
                    4357 ;
                    4358 ;
                    4359 ;**********************************************
                    4360 ;
                    4361 ;IFKINS ;IF KEY INSTRUCTION
                    4362 ;
                    4363 ;FORMA : IFKEY LABEL
                    4364 ;DESCRIERE :
                    4365 ; DACA CHEIA REZ ESTE ACTIONATA (PE 1)
                    4366 ; SE FACE SALT LA ETICHETA INDICATA
                    4367 ; IN ACESTE FEL SE POT CONTROLA BUCLE IN PROGRAM
                    4368 ;   LE LA PANOUL DE COMENZI MANUALE
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                    4369 ;
                    4370 IFKINS
2960    3A00B0      4371  LD A,(MANKEY) ;SE TESTEAZA POZITIA CHEII
2963    E602        4372  AND 00000010B ;BITUL 1
2965    CA5C1B      4373  JP Z,NEXTL ;NU BUCLEAZA DACA CHEIA NU E ACTIVA
2968    C3B627      4374  JP GTOINS  ;EXECUTA SALTUL LA ETICHETA INDICATA
                    4375 ;
                    4376 ;
                    4377 ;*****************************************
                    4378 ; INSERR = INSTRUCTION OPERAND ERROR
                    4379 ;
                    4380 INSERR
296B    CDEF2A      4381  CALL PRLI ;TIPARESTE LINIA CU EROARE
296E    217929      4382  LD HL,INSERM
2971    06FF        4383  LD B,255
2973    CD951A      4384  CALL PUTMSG
2976    C36622      4385  JP INGCM1 ;ASTEAPTA COMENZI DE PARASIRE
                    4386              ;INTERPRETER SAU ADUCERE NOU FISIER
2979    494E5354    4387 INSERM DEFM 'INSTR. OPERAND ERROR'
298D    0D          4388  DEFB ASCICR
                    4389 ;++++++++++++++++++++++++++++++++++++++++++++++
                    4390 ;*****************************************
                    4391 ; P W S I N S
                    4392 ;
                    4393 ; INSTRUCTIA PWS DE C-DA A SURSELOR
                    4394 ;
                    4395 ; FORMA : PWS UX=+5.25 ;X=NR SURSEI
                    4396 ; SURSA U1 ESTE NUMAI PT TENS NEGATIVE
                    4397 ;
                    4398 PWSINS
298E    2A063B      4399  LD HL,(INTPTR)
2991    7E          4400  LD A,(HL) ;SE ADUCE CARAC CURENT
2992    FE55        4401  CP 'U'     ;ERR DACA NU ESTE 'U'
2994    C26B29      4402  JP NZ,INSERR
2997    23          4403  INC HL ;SE ADUCE NUMARUL SURSEI
2998    7E          4404  LD A,(HL)
2999    FE31        4405  CP '1' ;TREBUIE SA FIE >=1
299B    FA6B29      4406  JP M,INSERR
299E    FE34        4407  CP '4' ;TREBUIE SA FIE MAI MIC DECIT 3
29A0    F26B29      4408  JP P,INSERR
29A3    E60F        4409  AND 0FH ;SE OBTINE NUMARUL (IN HEXA)
29A5    32632A      4410  LD (CURPWS),A ;SE DEPUNE LA CURPWS
29A8    23          4411  INC HL ;HL TREBUIE SA FIE POINTER PE '='
29A9    7E          4412  LD A,(HL)
29AA    FE3D        4413  CP '='
29AC    C26B29      4414  JP NZ,INSERR
29AF    23          4415  INC HL ;HL TREBUIE SA FIE POINTER PE SEMN
29B0    7E          4416  LD A,(HL)
29B1    FE2B        4417  CP '+'
29B3    CABB29      4418  JP Z,PWSI10
29B6    FE2D        4419  CP '-'
29B8    C26B29      4420  JP NZ,INSERR ;EROARE DACA NU E '+' SAU '-'
                    4421 PWSI10
29BB    23          4422  INC HL ;HL POINTER PE PRIMA CIFRA
29BC    7E          4423  LD A,(HL) ; TREBUIE SA NU FIE END OF LINE
29BD    FE0D        4424  CP ASCICR
29BF    CA6B29      4425  JP Z,INSERR
29C2    22063B      4426  LD (INTPTR),HL ;SE PUNE NOUA VAL A POINTERULUI
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29C5    210000      4427  LD HL,0 ;SE INIT VAL NUMARULUI ASTEPTAT PE 0
                    4428  ;
29C8    CDA42A      4429  CALL GETHXI ;SE ADUCE NUMARUL PINA LA PCT ZEC.
29CB    3E00        4430  LD A,0
29CD    B8          4431  CP B ;EROARE DACA SINT M MULT DE 2 CIFRE
29CE    C26B29      4432  JP NZ,INSERR ;FUNCTUL ZEC.(B=\0)
29D1    61          4433  LD H,C ;OCTETUL CU 2 CIFRE TRECE IN H
29D2    7A          4434  LD A,D ;SE VERIF CA TERMINATORUL A FOST '.'
29D3    FE2E        4435  CP '.' ;DACA NU E '.' NU MAI URMEAZA CIFRE
29D5    C2E529      4436  JP NZ,PWSI20 ;SE SARE PESTE ADUCEREA URM CIFRE
                    4437  ;
29D8    CDA42A      4438  CALL GETHXI ;SE ADUC CIFRELE DE DUPA '.'
29DB    D26B29      4439  JP NC,INSERR ;EROARE DACA NU SINT CIFRE DUPA '.'
29DE    3E00        4440  LD A,0 ;SE FACE VERIF CA S-AU DAT DOAR 2 CIFRE
29E0    B8          4441  CP B
29E1    C26B29      4442  JP NZ,INSERR
29E4    69          4443  LD L,C ;OCTERU CU CIFRELE DE DUPA '.' IN L
                    4444  ;
                    4445 PWSI20
29E5    EB          4446  EX DE,HL ;NUMARUL TRECE IN DE
                    4447  ;SE VA COMPARA CU LIMITELE FIXATE
29E6    3A632A      4448  LD A,(CURPWS) ;ADUCE NUMARUL SURSEI
29E9    87          4449  ADD A,A ; X2 PT A ADUNA LA BAZA ADRESEI
29EA    4F          4450  LD C,A
29EB    0600        4451  LD B,0
29ED    211B37      4452  LD HL,TABI8-2 ;BAZA ADRESEI IN HL
29F0    09          4453  ADD HL,BC     ;HL POINTER PE LIMITA INF A SURSEI
29F1    7A          4454  LD A,D   ;SE COMPARA CIFRELE INTREGI CU LIM.
29F2    BE          4455  CP (HL)
29F3    DA4E2A      4456  JP C,VLIM ;EROARE LIMITA DACA S-A PRG 0 TENS
                    4457            ;MAI MICA DECIT LIMITA INF
29F6    23          4458  INC HL    ;HL POINTER PE LIMITA SUP
29F7    BE          4459  CP (HL)
29F8    D24E2A      4460  JP NC,VLIM ;EROARE LIM DACA S-A PRG. 0 TENS
                    4461            ;M MARE SAU EG. CU LIMITA SUP
                    4462  ;
                    4463  ;SE PUNE VAL TENS IN TABV
29FB    3A632A      4464  LD A,(CURPWS)
29FE    87          4465  ADD A,A ;X2 PT A SE PUTEA ADUNA LA BAZA ADRESEI
29FF    4F          4466  LD C,A
2A00    0600        4467  LD B,0
2A02    21622A      4468  LD HL,TABV-2
2A05    09          4469  ADD HL,BC ;HL=POINTER IN TABV
2A06    72          4470  LD (HL),D
2A07    23          4471  INC HL ;SE MUTA CE 2 OCTETI
2A08    73          4472  LD (HL),E
                    4473  ;
                    4474  ;SE FACE PROGRAMAREA SURSELOR
                    4475  ;
2A09    3A632A      4476  LD A,(CURPWS)
2A0C    FE03        4477  CP 3 ;SURSA NR 3 NECESITA IMPARTIREA CU 2 A
                    4478        ;VAL TENS SCRISE IN PROGRAM
2A0E    C2222A      4479  JP NZ,PWSI30
                    4480  ;
2A11    D5          4481  PUSH DE
2A12    C1          4482  POP BC ;NR IN BC
2A13    CD1A19      4483  CALL CZHEX ;SE TRANSF IN HEXA
                    4484  ;SE DEPLAS LA DR.CU 1 BIT
```

```
2A16    A7          4485  AND A ;CY=0
2A17    78          4486  LD A,B ;MSBYTE IN B
2A18    1F          4487  RRA ;DEPLAS LA DR PRIN CY
2A19    47          4488  LD B,A ;TRECE LA LOC
2A1A    79          4489  LD A,C ;LSBYTE IN A
2A1B    1F          4490  RRA ;DEPLAS LA DR PRIN CY
2A1C    4F          4491  LD C,A ;TRECE LA LOC ;GATA IMPARTIREA
2A1D    CD5418      4492  CALL CHEXZ ;SE TRANSF IN ZECIMAL DIN NOU
                    4493  ;
2A20    C5          4494  PUSH BC ;NUMARUL DIN NOU IN DE
2A21    D1          4495  POP DE
                    4496 ;
                    4497 PWSI30
                    4498 ;PT PERFECTA POTRIVIRE CU CONVERTOARELE
                    4499 ;CARE SINT ORG XXX0 (X=CIFRA SEMNIF)
                    4500 ;SE FACE DEPLAS LA STGA CU 4 POZITII
                    4501 ;
2A22    0604        4502  LD B,4 ;B=CONTOR DE BUCLA
                    4503 PWSI40
2A24    37          4504  SCF
2A25    3F          4505  CCF ;CY=0
2A26    7B          4506  LD A,E
2A27    17          4507  RLA ;ROTIRE LA DR PRIN CARRY
2A28    5F          4508  LD E,A
2A29    7A          4509  LD A,D
2A2A    17          4510  RLA ;ROTIRE LA DR PRIN CARRY
2A2B    57          4511  LD D,A ;S-A TERMINAT O DEPLAS LA STGA
2A2C    05          4512  DEC B
2A2D    C2242A      4513  JP NZ,PWSI40 ;REIA BUCLA DACA B=\0
                    4514  ;
                    4515  ;ACUM IN DE SE AFLA NR AVIND '.' X.XX0
                    4516  ;
2A30    3A632A      4517  LD A,(CURPWS) ;SE ADUCE NUMARUL SURSEI
2A33    87          4518  ADD A,A
2A34    4F          4519  LD C,A
2A35    0600        4520  LD B,0
2A37    2108C0      4521  LD HL,PUIREG-2 ;ADR SURSEI 1
2A3A    09          4522  ADD HL,BC ;HL POINTER PE REGISTRUL SURSEI
                    4523              ; DORITE
2A3B    7A          4524  LD A,D
2A3C    2F          4525  CPL ;SE COMPL PT CA ASA CER CONVERTOARELE
2A3D    77          4526  LD (HL),A
2A3E    7B          4527  LD A,E
2A3F    2F          4528  CPL
2A40    23          4529  INC HL ;POINTER LE LSB
2A41    E6F0        4530  AND 0F0H ;BITII NESEMNIF PE 0
2A43    77          4531  LD (HL),A ;SE DEPUNE SI AC OCTET
                    4532  ;
2A44    011400      4533  LD BC,20 ;SE ASTEPTA 20MS
2A47    CD4E2B      4534  CALL WAITMS
2A4A    CD5C1B      4535  CALL NEXTL ;POINTERII TREC PE LINIA URM
2A4D    C9          4536  RET ;GATA
                    4537 ;
                    4538 VLIM ;SE AJUNGE AICI DACA SE PROG TENS IN AFARA
                    4539      ;LIMITELOR PERMISE
2A4E    21592A      4540  LD HL,VLIMM
2A51    060A        4541  LD B,VLIML
2A53    CD951A      4542  CALL PUTMSG
```

```
2A56  C36B29    4543  JP INSERR ;
                4544 ;
2A59  564F4C54  4545 VLIMM DEFM 'VOLT.LIM. '
                4546 VLIML EQU $-VLIMM
                4547 ;
2A63            4548 CURFWS DEFS 1
2A64            4549 TABV  DEFS 6
                4550  ;CITE 2 OCTETI PT FIECARE TENSIUNE
                4551  ;OCTETUL MSB ESTE INAINTE DE '.'
                4552  ; U1MSB,U1LSB,U2MSB,U2LSB,U3MSB,U3LSB
                4553 ;
                4554 ;*****************************************************
                4555 ; O P I I N S
                4556 ;
                4557 ; ESTE O INSTRUCTIE CARE PUNE PROGRAMUL IN ASTEP-
                4558 ; TARE PINA LA O INTERVENTIE A OPERATORULUI;
                4559 ;  ACEASTA ESTE DATA PRIN "REL"
                4560 ;
                4561 ; SE DEOSEBESTE DE INSTRUCTIA STP
                4562 ; PRIN FAPTUL CA NU SE TIPARESTE LINIA PE CARE S-A
                4563 ; OPRIT PROGRAMUL
                4564 ;
                4565 OPIINS
2A6A  21922A    4566  LD HL,INVIM
2A6D  0606      4567  LD B,INVIML
2A6F  CD951A    4568  CALL PUTMSG
2A72  CD5C1B    4569  CALL NEXTL ;MUTA POINTERII PE LINIA URM.
                4570  ;S-A TPARIT MESAJUL "INVI"
2A75  2AFC0E    4571  LD HL,(EIPTR)
2A78  22063B    4572  LD (INTPTR),HL
2A7B  C3DA22    4573  JP INGCM2 ;ASTEAPTA COMENZI
                4574 ;
2A7E            4575  DEFS 20
2A92  494E5649  4576 INVIM DEFM 'INVI. '
                4577 INVIML EQU $-INVIM
                4578 ;************************************** END OF FILE "SIMINS"
```

```
                    4579 *H SUBRUTINE AUX. INTERPRETER
                    4580 ;*****************************************
                    4581 ;
                    4582 ; FUNCTION   : FETCHI
                    4583 ; INPUTS     : NONE
                    4584 ; OUTPUTS    : A,C=CARACTER ADUS
                    4585 ; DESTROYS   : A,C,F
                    4586 ; CALLS      : N
                    4587 ; DESCRIPTION : FETCHI ADUCE IN C SI A CARACTERUL
                    4588 ;  (OCTETUL) DE LA ADRESA INDICATA DE POINTERUL
                    4589 ;   INTPTR
                    4590 ;  ACEST POINTER ESTE INCREMENTAT CU 1
                    4591 FETCHI
2A98  E5            4592  PUSH HL
2A99  2A063B        4593  LD HL,(INTPTR)
2A9C  7E            4594  LD A,(HL)
2A9D  4F            4595  LD C,A
2A9E  23            4596  INC HL
2A9F  22063B        4597  LD (INTPTR),HL
2AA2  E1            4598  POP HL ;REFACE HL
2AA3  C9            4599  RET ;
                    4600 ;
                    4601 ;*****************************************
                    4602 ;
                    4603 ; FUNCTIE   : GETHXI
                    4604 ; INTRARI   : N
                    4605 ; IESIRI    : BC=NR INTREG DE 16 BITS
                    4606 ;             D =CARACTER CARE A TERMINAT NUMARUL
                    4607 ;             CARRY-1 DACA PRIMUL CARAC.=\DELIMITATOR
                    4608 ;                  -0 DACA PRIMUL CARAC.= DELIMITATOR
                    4609 ; APELEAZA : FETCHI,VALDL,VALDG,CNVBN,INSERR
                    4610 ; DISTRUGE : A,B,C,D,E,F,S
                    4611 ; DESCRIERE: GERHXI ACCEPTA UN NUMAR DE 4 CIFRE HEXA
                    4612 ;              DIN CARACTERELE DIN TEXTUL SURSA INCE-
                    4613 ;              PIND DE LA ADRESA INDICATA DE INTPTR
                    4614 ;              SE RETIN ULTIMELE 4 CIFRE
                    4615 ;              NUMARUL ESTE CONSIDERAT TERMINAT CIND
                    4616 ;              SE INTILNESTE UN DELIMITATOR VALID.
                    4617 ;              CARACTERE NONHEXA SINT INTERPRETATE
                    4618 ;              CA EROARE SI SE TRANSFERA CONTROLUL
                    4619 ;              PROCEDURII ERROR
                    4620 ;               DACA PRIMUL CARACTER ESTE UN DELIMI-
                    4621 ;              TATOR (NU SE INTRODUCE UN NUMAR )
                    4622 ;              CY=0 (FALS) IAR CONTINUTUL REGISTRULUI
                    4623 ;              BC ESTE NEDEFINIT.
                    4624 ;
                    4625 GETHXI
2AA4  E5            4626          PUSH HL
2AA5  210000        4627          LD HL,0
2AA8  5C            4628          LD E,H
2AA9  CD982A        4629 GHXI05    CALL FETCHI    ;ADUCE CARACT.
2AAC  CD021B        4630          CALL VALDL     ;  DELIMITATOR ?
2AAF  D2BE2A        4631          JP NC,GHXI10   ; NU.POATE E CIFRA?
2AB2  51            4632          LD D,C         ; DA.TOTUL E GATA
2AB3  E5            4633          PUSH HL
2AB4  C1            4634          POP BC         ;REZ IN BC
2AB5  E1            4635          POP HL
2AB6  7B            4636          LD A,E         ;ADUCE CFR (INDIC.EXISTENTA CIFI
```

```
2AB7  B7        4637          OR A
2AB8  C2B91A    4638          JP NZ,SRET    ;S-A GASIT UN NUMAR
2ABB  CACA19    4639          JP Z,FRET     ;NU S-A GASIT
2ABE  CDE71A    4640 GHXI10    CALL VALDG    ;ESTE CIFRA?
2AC1  D26B29    4641          JP NC,INSERR
2AC4  CDA919    4642          CALL CNVBN    ;CIFRA.FACE CONVERSIA
2AC7  1EFF      4643          LD E,0FFH     ;PUNE CFR DIF DE ZERO
2AC9  29        4644          ADD HL,HL
2ACA  29        4645          ADD HL,HL
2ACB  29        4646          ADD HL,HL
2ACC  29        4647          ADD HL,HL
2ACD  0600      4648          LD B,0         ;PUNE PE ZERO OCTETUL CMS
2ACF  4F        4649          LD C,A         ;VAL BINARA IN C
2AD0  09        4650          ADD HL,BC      ;ADUNA LA REZ PARTIAL
2AD1  C3A92A    4651          JP GHXI05       ;ADUCE URM.CARAC
                4652 ;
                4653 ;
                4654 ;*************************************************
                4655 ;NXTCHI ;ADUCE PRIMUL CARACTER NONBLANC
                4656 ; DE DUPA PRIMUL BLANC DIN TEXTUL PROGRAMULUI
                4657 ; CORECTEAZA INTPTR.REVINE CU CARACTERUL IN A
                4658 ; SI INTPRT IN HL
                4659 ;
                4660 NXTCHI
2AD4  2A063B    4661  LD HL,(INTPTR)
2AD7  7E        4662  LD A,(HL) ;CAUTA UN BLANC SAU CR
2AD8  FE0D      4663  CP ASCICR
2ADA  CAEB2A    4664  JP Z,NXTCH1 ;RETURN DACA ESTE CR
2ADD  FE20      4665  CP ' '
2ADF  23        4666  INC HL
2AE0  C2D72A    4667  JP NZ,$-9
                4668 ;
2AE3  7E        4669  LD A,(HL) ;CAUTA UN CARAC.NONBLANC
2AE4  FE20      4670  CP ' '
2AE6  23        4671  INC HL
2AE7  CAE32A    4672  JP Z,$-4
                4673  ;
2AEA  2B        4674  DEC HL ;CORECTEAZA HL
                4675 NXTCH1
2AEB  22063B    4676  LD (INTPTR),HL
2AEE  C9        4677  RET
                4678 ;
                4679 ;*************************************************
                4680 ;
                4681 ; FUNCTION   : PRLI (INTERPRETER PRINT LINE )
                4682 ; INPUTS     : NO REGISTER
                4683 ;            : EIPTR INDICA INCEPUTUL LINIEI DE
                4684 ;              DE TIPARIT.
                4685 ; OUTPUTS    :N
                4686 ; DESTROYS   : ALL REGISTERS
                4687 ; CALLS      :CHEXZ,CPIR,ECHO,HILO,NMOUT,PUTMSG
                4688 ; DESCR.     :PRLI DETERMINA NUMARUL LINIEI DE
                4689 ;             TIPARIT,IL TIPARESTE SI APOI TIPARESTE
                4690 ;             LINIA RESP.,INCEPIND DE LA ADRESA
                4691 ;             INDIC. DE EIPTR
                4692 ;
                4693 PRLI
2AEF  110002    4694  LD DE,ESPACL ;SE CAUTA NUMARUL LINIEI
```

```
2AF2  2AFC0E    4695  LD HL,(EIPTR) ;SE VERIF DACA NU SINTEM LA
                4696                ;TOP OF FILE (LINIA 1)
2AF5  EB        4697  EX DE,HL
2AF6  CD421A    4698  CALL HILO
2AF9  010100    4699  LD BC,1 ;SE INCARCA 1 PT ORICE EVENTUALITATE
2AFC  DA162B    4700  JP C,PRLI2 ;SALT DACE HL=>DE
                4701  ;REGISTRUL BC VA FI CONTOR
                4702 PRLI1
2AFF  3E0D      4703  LD A,ASCICR ;SE VA CAUTA UN ASCICR
2B01  C5        4704  PUSH BC
2B02  01FF00    4705  LD BC,255
2B05  CD4318    4706  CALL CPIR
2B08  C1        4707  POP BC
2B09  23        4708  INC HL ;HL POINTER DUPA ASCICR
2B0A  EB        4709  EX DE,HL
2B0B  2AFC0E    4710  LD HL,(EIPTR) ;POINTERUL IN TEXT IN HL
2B0E  EB        4711  EX DE,HL ;HL=ADRESA LA CARE S-A AJUNS
                4712            ;DE=ADRESA POINTERULUI IN TEXT
2B0F  CD421A    4713  CALL HILO
2B12  03        4714  INC BC
2B13  D2FF2A    4715  JP NC,PRLI1
                4716 PRLI2
                4717  ;DACA S-A AJUNS AICI S-A GASIT NUMARUL LINIEI
2B16  CD5418    4718  CALL CHEXZ ;SE TRANSFORMA IN ZECIMAL
2B19  C5        4719  PUSH BC ;NUMARUL TRECE IN HL
2B1A  E1        4720  POP HL
2B1B  7C        4721  LD A,H ;SE TIP OCTETUL CMS
2B1C  CD691A    4722  CALL NMOUT
2B1F  7D        4723  LD A,L ;SE TIP OCTETUL CMPS
2B20  CD691A    4724  CALL NMOUT
2B23  0E20      4725  LD C,' '
2B25  CD961C    4726  CALL ECHO
2B28  2AFC0E    4727  LD HL,(EIPTR) ;TIP.LINIA
2B2B  06FF      4728  LD B,255
2B2D  CD951A    4729  CALL PUTMSG
2B30  C9        4730  RET
                4731 ;
                4732 ;*****************************************
                4733 ; FUNCTION =PWSRES
                4734 ; INPUTS   =N
                4735 ; OUTPUTS  =N
                4736 ; DESTROYS =A,B,C,F,H,L
                4737 ; CALLS    :N
                4738 ; DESCR : ADUCE LA 0 SURSELE PROGRAMABILE
                4739 ;
                4740 PWSRES
2B31  210CC0    4741  LD HL,PU2REG ;SE LASA ULTIMA SURSA DE (--)
2B34  36FF      4742  LD (HL),.NOT.0
2B36  23        4743  INC HL
2B37  36FE      4744  LD (HL),.NOT.01
2B39  23        4745  INC HL
2B3A  36FF      4746  LD (HL),.NOT.0
2B3C  23        4747  INC HL
2B3D  36FE      4748  LD (HL),.NOT.1
2B3F  012800    4749  LD BC,40 ;SE ASTEAPTA 40MS
2B42  CD4E2B    4750  CALL WAITMS
2B45  210AC0    4751  LD HL,PU1REG
2B48  36FF      4752  LD (HL),.NOT.0
```

```
2B4A    23          4753  INC HL
2B4B    36FE        4754  LD (HL),.NOT.01
2B4D    C9          4755  RET
                    4756 ;*********************************************
                    4757 ; FUNCTION  : WAITMS
                    4758 ; INPUTS    : BC
                    4759 ; OUTPUTS   : NONE
                    4760 ; DESTR     : A,B,C,F
                    4761 ; CALLS     : N
                    4762 ; DESCR     : WAITMS ESTE O SUBRUTINA CARE INTRO-
                    4763 ; DUCE O INTIRZIERE DE APROX (BC)*1MILISEC PENTRU O
                    4764 ; FRECVENTA A TACTULUI SISTEMULUI DE 3.072 MHZ
                    4765 ;
                    4766 WAITMS
2B4E    D5          4767  PUSH DE
2B4F    117E00      4768  LD DE,126 ;ACEASTA VALOARE DEP.DE FRCV.TACT.
                    4769  ;
2B52    1B          4770  DEC DE
2B53    7B          4771  LD A,E
2B54    B2          4772  OR D
2B55    C2522B      4773  JP NZ,$-3 ;BUCLEAZA PINA CIND DE=0
                    4774  ;
2B58    0B          4775  DEC BC
2B59    79          4776  LD A,C
2B5A    B0          4777  OR B
2B5B    C24F2B      4778  JP NZ,$-12 ;BUCLEAZA PINA CIND BC=0
                    4779  ;
2B5E    D1          4780  POP DE ;REFACE DE
2B5F    C9          4781  RET
                    4782 ;
                    4783 ;*********************************************
                    4784 ;
                    4785 ; FUNCTION :WAITFP
                    4786 ; INPUTS   :N
                    4787 ; OUTPUTS  :N
                    4788 ; DESTROYS :
                    4789 ; CALLS    :N
                    4790 ; DESCRIPTION : ACEASTA SUBRUTINA ASTEAPTA UN
                    4791 ;  TIMP LIMITAT CA PROCESORUL RAPID SA TERMINE DE
                    4792 ;  DE EXECUTAT O COMANDA. TERMINAREA COMENZII ESTE
                    4793 ;  IDENTIFICATA PRIN BITUL 2 PE 1 IN PCCREG
                    4794 ;
                    4795 WAITFP
2B60    110000      4796  LD DE,0 ;SE INIT NUMARATORUL
                    4797 WTFP01
                    4798  ;
2B63    3A01E0      4799  LD A,(PCRREG+1) ;SE TESTEAZA BITUL 2
2B66    E604        4800  AND 04H ;SE IZOL.BITUL 2
2B68    CA792B      4801  JP Z,WTFP02 ;MAI ASTEAPTA DACA BITUL NU ESTE 1
2B6B    3A00E0      4802  LD A,(PCRREG) ;CITESTE DIN NOU STAREA
2B6E    E604        4803  AND 04H ;IZOLEAZA BITUL 2
2B70    CA632B      4804  JP Z,WTFP01
2B73    3E00        4805  LD A,0  ;DACA AMBELE CITIRI AU FOST 1
2B75    3200E0      4806  LD (PCRREG),A ;OPRESTE PROCESORUL RAPID
2B78    C9          4807  RET
                    4808 WTFP02
2B79    1B          4809  DEC DE
2B7A    7B          4810  LD A,E ;VERIF DACA DE=0
```

```
2B7B    B2          4811  OR D
2B7C    C2632B      4812  JP NZ,WTFP01 ;BUCLEAZA PINA CIND E 0
                    4813  ;
2B7F    218D2B      4814  LD HL,WTFPM ;ADRESA MESAJ 'PROC. NOT READY'
2B82    06FF        4815  LD B,255
2B84    CD951A      4816  CALL PUTMSG
2B87    CDEF2A      4817  CALL PRLI ;TIPARESTE SI LINIA PE CARE S-A OPRIT
2B8A    C3DA22      4818  JP INGCM2 ;ASTEAPTA COMENZI
                    4819  ;
                    4820 WTFPM
2B8D    46415354    4821  DEFM 'FAST PROCESSOR NOT READY'
2BA5    0D          4822  DEFB ASCICR
                    4823  ;
                    4824 ;****************************************** END OF FILE 'AUX1
                    4825 ;******************************************
                    4826 ; A T A B I T
                    4827 ;
                    4828 ; TABELA CU NUMELE SEMNALELOR SI PARAMETRII
                    4829 ;
                    4830 ; STRUCTURA :
                    4831 ; CARACTER ASCII = 1 OCTET
                    4832 ; ADR REG (L)
                    4833 ; ADR REG (H)  (ADRESELE REGISTRELOR BAZEI DE TIMP
                    4834 ; NR PARAMETRI DIN FRAZA =1 OCTET
                    4835 ; TIPUL SUBRUTINEI DE CALCUL (1,2,3)
                    4836 ;
                    4837 ATABIT
2BA6    44          4838  DEFB 'D'
2BA7    10D0        4839  DEFW   TDREG
2BA9    01          4840  DEFB 1
2BAA    01          4841  DEFB 1
2BAB    54          4842  DEFB   'T'
2BAC    20D0        4843  DEFW   TTREG
2BAE    01          4844  DEFB 1
2BAF    01          4845  DEFB 1
2BB0    52          4846  DEFB   'R'
2BB1    30D0        4847  DEFW   TRREG
2BB3    01          4848  DEFB   1
2BB4    02          4849  DEFB   2
2BB5    4D          4850  DEFB   'M'
2BB6    00D2        4851  DEFW   TMREG
2BB8    01          4852  DEFB   1
2BB9    02          4853  DEFB   2
2BBA    4F          4854  DEFB   'O'
2BBB    10D2        4855  DEFW   TOREG
2BBD    01          4856  DEFB   1
2BBE    03          4857  DEFB   3
2BBF    49          4858  DEFB   'I'
2BC0    20D2        4859  DEFW   TIREG
2BC2    03          4860  DEFB   3
2BC3    03          4861  DEFB   3
2BC4    41          4862  DEFB   'A'
2BC5    30D2        4863  DEFW   TAREG
2BC7    03          4864  DEFB   3
2BC8    03          4865  DEFB   3
2BC9    45          4866  DEFB   'E'
2BCA    40D2        4867  DEFW   TEREG
2BCC    03          4868  DEFB   3
```

```
2BCD    03          4869  DEFB   3
2BCE    53          4870  DEFB   'S'
2BCF    10D3        4871  DEFW   TSREG
2BD1    03          4872  DEFB   3
2BD2    03          4873  DEFB   3
2BD3    57          4874  DEFB   'W'
2BD4    00D1        4875  DEFW   TWREG
2BD6    05          4876  DEFB   5
2BD7    03          4877  DEFB   3
2BD8    43          4878  DEFB   'C'
2BD9    10D1        4879  DEFW   TCREG
2BDB    03          4880  DEFB   3
2BDC    03          4881  DEFB   3
2BDD    42          4882  DEFB   'B'
2BDE    00D3        4883  DEFW   TBREG
2BE0    03          4884  DEFB   3
2BE1    03          4885  DEFB   3
2BE2    47          4886  DEFB   'G'
2BE3    20D1        4887  DEFW   TGREG
2BE5    03          4888  DEFB   3
2BE6    03          4889  DEFB   3
                    4890 ATBITL EQU ($-ATABIT)/5
                    4891 ; NR DE INTRARI IN TABELA ATABIT
2BE7    48          4892  DEFB  'H'
2BE8                4893 APAR        DEFS   4
2BEC                4894 AZMAN        DEFS   8
2BF4                4895 APS         DEFS   4
2BF8                4896 ATABET       DEFS   8
                    4897 ;*************************************
                    4898 ; T I M I N G
                    4899 ;
                    4900 ; SUBRUTINA PT PROGRAMAREA TIMPILOR
                    4901 ; ALINA BOBOC
                    4902 ;
                    4903 ; INPUTS =BC=POINTER PE PRIMUL CARACTER DE
                    4904 ;          ANALIZAT (T)
                    4905 ; OUTPUTS : A =0 CORECT
                    4906 ;            A= 22H ER SINTAXA
                    4907 ;            A= 21H ER SEMANTICA
                    4908 ;
                    4909 TIMING
                    4910 ;
2C00    03          4911   INC   BC
2C01    1E00        4912   LD    E,0
2C03    0A          4913   LD    A,(BC)
2C04    21A62B      4914   LD    HL,ATABIT
2C07    BE          4915 REV          CP    (HL)
2C08    CA802C      4916   JP    Z,IDCAR
2C0B    23          4917   INC   HL
2C0C    23          4918   INC   HL
2C0D    23          4919   INC   HL
2C0E    23          4920   INC   HL
2C0F    23          4921   INC   HL
2C10    1C          4922   INC   E
2C11    57          4923   LD    D,A
2C12    7B          4924   LD    A,E
2C13    FE0D        4925   CP    ATBITL
2C15    7A          4926   LD    A,D
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2C16    C2072C      4927  JP   NZ,REV
2C19    FE48        4928  CP   'H'
2C1B    CA212C      4929  JP   Z,HEXA
2C1E    3E22        4930  LD   A,22H
2C20    C9          4931  RET
2C21    03          4932 HEXA        INC  BC
2C22    0A          4933  LD   A,(BC)
2C23    FE3D        4934  CP   '='
2C25    C2212C      4935  JP   NZ,HEXA
2C28    2130D0      4936  LD   HL,TRREG
2C2B    22F42B      4937  LD   (APS),HL
2C2E    03          4938  INC  BC
2C2F    1E00        4939  LD   E,0
2C31    D5          4940  PUSH DE
2C32    1600        4941  LD   D,0
2C34    D5          4942  PUSH DE
2C35    03          4943  INC  BC
2C36    03          4944  INC  BC
2C37    CD542C      4945  CALL MAR
2C3A    CDC82D      4946  CALL MEMT
2C3D    0B          4947  DEC  BC
2C3E    0B          4948  DEC  BC
2C3F    0B          4949  DEC  BC
2C40    CD542C      4950  CALL MAR
2C43    CDC82D      4951  CALL MEMT
2C46    03          4952  INC  BC
2C47    03          4953  INC  BC
2C48    03          4954  INC  BC
2C49    CD122F      4955  CALL CSF
2C4C    DA3C2D      4956  JP   C,TSF
2C4F    3E22        4957  LD   A,22H
2C51    C30F2F      4958  JP   ERNC
2C54    0A          4959 MAR         LD   A,(BC)
2C55    CD642C      4960  CALL CASC
2C58    17          4961  RLA
2C59    17          4962  RLA
2C5A    17          4963  RLA
2C5B    17          4964  RLA
2C5C    03          4965  INC  BC
2C5D    5F          4966  LD   E,A
2C5E    0A          4967  LD   A,(BC)
2C5F    CD642C      4968  CALL CASC
2C62    83          4969  ADD  A,E
2C63    C9          4970  RET
2C64    57          4971 CASC        LD   D,A
2C65    E6F0        4972  AND  0F0H
2C67    FE40        4973  CP   40H
2C69    CA7A2C      4974  JP   Z,AD
2C6C    FE30        4975  CP   30H
2C6E    CA762C      4976  JP   Z,CT
2C71    3E22        4977  LD   A,22H
2C73    C30E2F      4978  JP   ERVAL
2C76    7A          4979 CT          LD   A,D
2C77    E60F        4980  AND  0FH
2C79    C9          4981  RET
2C7A    7A          4982 AD          LD   A,D
2C7B    E60F        4983  AND  0FH
2C7D    C609        4984  ADD  A,9
```

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2C7F    C9          4985  RET
2C80    23          4986 IDCAR      INC   HL
2C81    7E          4987  LD    A,(HL)
2C82    32F42B      4988  LD    (APS),A
2C85    23          4989  INC   HL
2C86    7E          4990  LD    A,(HL)
2C87    32F52B      4991  LD    (APS+1),A
2C8A    23          4992  INC   HL
2C8B    7E          4993  LD    A,(HL)
2C8C    32F62B      4994  LD    (APS+2),A
2C8F    23          4995  INC   HL
2C90    7E          4996  LD    A,(HL)
2C91    32F72B      4997  LD    (APS+3),A
2C94    1E00        4998  LD    E,0
2C96    03          4999 CIC      INC   BC
2C97    0A          5000  LD    A,(BC)
2C98    1C          5001  INC   E
2C99    FE3D        5002  CP    '='
2C9B    CAA82C      5003  JP    Z,EGAL
2C9E    57          5004  LD    D,A
2C9F    7B          5005  LD    A,E
2CA0    FE09        5006  CP    9
2CA2    C2962C      5007  JP    NZ,CIC
2CA5    3E02        5008  LD    A,2
2CA7    C9          5009  RET
2CA8    1E00        5010 EGAL       LD    E,0
2CAA    D5          5011  PUSH  DE
2CAB    3AF62B      5012  LD    A,(APS+2)
2CAE    57          5013  LD    D,A
2CAF    D5          5014  PUSH  DE
2CB0    03          5015 ALTC       INC   BC
2CB1    03          5016  INC   BC
2CB2    0A          5017  LD    A,(BC)
2CB3    FE2C        5018  CP    ','
2CB5    CA8C2D      5019  JP    Z,SEMN
2CB8    CD122F      5020  CALL  CSF
2CBB    DA8C2D      5021  JP    C,SEMN
2CBE    D1          5022  POP   DE
2CBF    7B          5023  LD    A,E
2CC0    FE00        5024  CP    0
2CC2    D5          5025  PUSH  DE
2CC3    CA722E      5026  JP    Z,VAL
2CC6    0B          5027  DEC   BC
2CC7    C5          5028  PUSH  BC
2CC8    D1          5029  POP   DE
2CC9    CD622D      5030  CALL  TAS
2CCC    CD622D      5031  CALL  TAS
2CCF    CD622D      5032  CALL  TAS
2CD2    CD622D      5033  CALL  TAS
2CD5    D5          5034  PUSH  DE
2CD6    C1          5035  POP   BC
2CD7    3AE82B      5036  LD    A,(APAR)
2CDA    CD812D      5037  CALL  SU
2CDD    C2172D      5038  JP    NZ,MMIC
2CE0    0A          5039  LD    A,(BC)
2CE1    32E82B      5040  LD    (APAR),A
2CE4    03          5041  INC   BC
2CE5    3AE92B      5042  LD    A,(APAR+1)
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2CE8    CD812D      5043  CALL SU
2CEB    C21C2D      5044  JP   NZ,SMIC
2CEE    0A          5045  LD   A,(BC)
2CEF    32E92B      5046  LD   (APAR+1),A
2CF2    03          5047  INC  BC
2CF3    3AEA2B      5048  LD   A,(APAR+2)
2CF6    CD812D      5049  CALL SU
2CF9    C2212D      5050  JP   NZ,IMIC
2CFC    0A          5051  LD   A,(BC)
2CFD    32EA2B      5052  LD   (APAR+2),A
2D00    03          5053  INC  BC
2D01    3AEB2B      5054  LD   A,(APAR+3)
2D04    CD812D      5055  CALL SU
2D07    C20F2D      5056  JP   NZ,CA
2D0A    3E01        5057  LD   A,1
2D0C    C30F2F      5058  JP   ERNC
2D0F    0A          5059 CA          LD   A,(BC)
2D10    32EB2B      5060  LD   (APAR+3),A
2D13    03          5061  INC  BC
2D14    C32B2D      5062  JP   CONT
2D17    0A          5063 MMIC        LD   A,(BC)
2D18    32E82B      5064  LD   (APAR),A
2D1B    03          5065  INC  BC
2D1C    0A          5066 SMIC        LD   A,(BC)
2D1D    32E92B      5067  LD   (APAR+1),A
2D20    03          5068  INC  BC
2D21    0A          5069 IMIC        LD   A,(BC)
2D22    32EA2B      5070  LD   (APAR+2),A
2D25    03          5071  INC  BC
2D26    0A          5072  LD   A,(BC)
2D27    32EB2B      5073  LD   (APAR+3),A
2D2A    03          5074  INC  BC
2D2B    0A          5075 CONT              LD   A,(BC)
2D2C    FE2C        5076  CP   ','
2D2E    CAE12D      5077  JP   Z,TSUB
2D31    CD122F      5078  CALL CSF
2D34    DAE12D      5079  JP C,TSUB
2D37    3E22        5080  LD   A,22H
2D39    C30F2F      5081  JP   ERNC
2D3C    D1          5082 TSF           POP  DE
2D3D    AF          5083  XOR  A
2D3E    82          5084  ADD A,D
2D3F    CA472D      5085  JP   Z,CU
2D42    3E01        5086  LD   A,1
2D44    C3102F      5087  JP   ERNP
2D47    D5          5088 CU          PUSH DE
2D48    2AF42B      5089  LD   HL,(APS)
2D4B    33          5090  INC  SP
2D4C    33          5091  INC  SP
2D4D    D1          5092  POP  DE
2D4E    C5          5093  PUSH BC
2D4F    01F82B      5094  LD   BC,ATABET
2D52    1D          5095 SALT        DEC  E
2D53    0A          5096  LD   A,(BC)
2D54    2F          5097  CPL
2D55    77          5098  LD   (HL),A
2D56    03          5099  INC  BC
2D57    23          5100  INC  HL
```

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2D58   7B          5101  LD   A,E
2D59   FE00        5102  CP   0
2D5B   C2522D      5103  JP   NZ,SALT
2D5E   C1          5104  POP  BC
2D5F   3E00        5105  LD   A,0
2D61   C9          5106  RET
2D62   0A          5107 TAS        LD   A,(BC)
2D63   FE30        5108  CP   '0'
2D65   DA0C2F      5109  JP   C,ERTAS
2D68   FE3A        5110  CP   3AH
2D6A   D20C2F      5111  JP   NC,ERTAS
2D6D   03          5112  INC  BC
2D6E   C9          5113  RET
2D6F   5F          5114 VER        LD   E,A
2D70   0A          5115  LD   A,(BC)
2D71   BB          5116  CP   E
2D72   DA7B2D      5117  JP   C,VALM
2D75   CA7E2D      5118  JP   Z,EG
2D78   3E00        5119  LD   A,0
2D7A   C9          5120  RET
2D7B   3E01        5121 VALM       LD   A,1
2D7D   C9          5122  RET
2D7E   3E02        5123 EG         LD   A,2
2D80   C9          5124  RET
2D81   CD6F2D      5125 SU         CALL VER
2D84   FE01        5126  CP   1
2D86   CA072F      5127  JP   Z,ERVIT
2D89   FE02        5128  CP   2
2D8B   C9          5129  RET
2D8C   D1          5130 SEMN       POP  DE
2D8D   15          5131  DEC  D
2D8E   D5          5132  PUSH DE
2D8F   0B          5133  DEC  BC
2D90   0A          5134  LD   A,(BC)
2D91   32E82B      5135  LD   (APAR),A
2D94   FE2B        5136  CP   '+'
2D96   CAAD2D      5137  JP   Z,CORECT
2D99   FE2D        5138  CP   '-'
2D9B   CAAD2D      5139  JP   Z,CORECT
2D9E   FE4C        5140  CP   'L'
2DA0   CAAD2D      5141  JP   Z,CORECT
2DA3   FE53        5142  CP   'S'
2DA5   CAAD2D      5143  JP   Z,CORECT
2DA8   3E22        5144  LD   A,22H
2DAA   C30F2F      5145  JP   ERNC
2DAD   CDC82D      5146 CORECT     CALL MEMT
2DB0   03          5147  INC  BC
2DB1   0A          5148  LD   A,(BC)
2DB2   CD122F      5149  CALL CSF
2DB5   DA3C2D      5150  JP C,TSF
2DB8   C3B02C      5151  JP   ALTC
2DBB   CDC82D      5152 SUBR       CALL MEMT
2DBE   0A          5153  LD   A,(BC)
2DBF   CD122F      5154  CALL CSF
2DC2   DA3C2D      5155  JP C,TSF
2DC5   C3B02C      5156  JP   ALTC
2DC8   E5          5157 MEMT       PUSH HL
2DC9   21F82B      5158  LD   HL,ATABET
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2DCC    D1          5159  POP  DE
2DCD    D1          5160  POP  DE
2DCE    D1          5161  POP  DE
2DCF    D1          5162  POP  DE
2DD0    57          5163  LD   D,A
2DD1    7D          5164  LD   A,L
2DD2    83          5165  ADD  A,E
2DD3    6F          5166  LD   L,A
2DD4    7C          5167  LD   A,H
2DD5    CE00        5168  ADC  A,0
2DD7    67          5169  LD    H,A
2DD8    7A          5170  LD   A,D
2DD9    77          5171  LD   (HL),A
2DDA    1C          5172  INC  E
2DDB    D5          5173  PUSH DE
2DDC    3B          5174  DEC  SP
2DDD    3B          5175  DEC  SP
2DDE    3B          5176  DEC  SP
2DDF    3B          5177  DEC  SP
2DE0    C9          5178  RET
2DE1    D1          5179 TSUB          POP   DE
2DE2    15          5180  DEC  D
2DE3    D5          5181  PUSH DE
2DE4    3AF72B      5182  LD   A,(APS+3)
2DE7    FE02        5183  CP   2
2DE9    CA4D2E      5184  JP   Z,TIP2
2DEC    C5          5185  PUSH BC
2DED    CD922E      5186  CALL CONV
2DF0    2AF22B      5187  LD   HL,(AZMAN+6)
2DF3    7C          5188  LD   A,H
2DF4    FE14        5189 AP            CP    14H
2DF6    D2072F      5190  JP   NC,ERVIT
2DF9    3AF72B      5191 BUN            LD    A,(APS+3)
2DFC    FE03        5192  CP   3
2DFE    CA202E      5193  JP   Z,IMP40
2E01    FE04        5194  CP   4
2E03    C20B2E      5195  JP   NZ,BUCLA
2E06    C30B2E      5196  JP   BUCLA
2E09    0E00        5197  LD   C,0
2E0B    7D          5198 BUCLA         LD    A,L
2E0C    D614        5199  SUB  20
2E0E    6F          5200  LD   L,A
2E0F    7C          5201  LD   A,H
2E10    DE00        5202  SBC  A,0
2E12    67          5203  LD   H,A
2E13    0C          5204  INC  C
2E14    D20B2E      5205  JP   NC,BUCLA
2E17    0D          5206  DEC  C
2E18    79          5207  LD   A,C
2E19    2F          5208  CPL
2E1A    3C          5209  INC  A
2E1B    3C          5210  INC  A
2E1C    C1          5211  POP  BC
2E1D    C3BB2D      5212  JP   SUBR
2E20    0E00        5213 IMP40         LD    C,0
2E22    7D          5214 BUCLA2        LD    A,L
2E23    D628        5215  SUB  40
2E25    6F          5216  LD   L,A
```

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2E26   7C          5217  LD   A,H
2E27   DE00        5218  SBC  A,0
2E29   67          5219  LD   H,A
2E2A   0C          5220  INC  C
2E2B   D2222E      5221  JP   NC,BUCLA2
2E2E   0D          5222  DEC  C
2E2F   79          5223  LD   A,C
2E30   2F          5224  CPL
2E31   E5          5225  PUSH HL
2E32   33          5226  INC  SP
2E33   33          5227  INC  SP
2E34   C1          5228  POP  BC
2E35   CDC82D      5229  CALL MEMT
2E38   C5          5230  PUSH BC
2E39   3B          5231  DEC  SP
2E3A   3B          5232  DEC  SP
2E3B   E1          5233  POP  HL
2E3C   3E28        5234  LD   A,40
2E3E   0E00        5235  LD   C,0
2E40   85          5236  ADD  A,L
2E41   D605        5237 IMP5          SUB  5
2E43   0C          5238  INC  C
2E44   D2412E      5239  JP   NC,IMP5
2E47   0D          5240  DEC  C
2E48   79          5241  LD   A,C
2E49   C1          5242  POP  BC
2E4A   C3BB2D      5243  JP   SUBR
2E4D   C5          5244 TIP2          PUSH BC
2E4E   CD922E      5245  CALL CONV
2E51   2AF22B      5246  LD HL,(AZMAN+6)
2E54   7C          5247  LD   A,H
2E55   FE00        5248  CP   0
2E57   C2602E      5249  JP   NZ,COR
2E5A   7D          5250  LD   A,L
2E5B   FE02        5251  CP   2
2E5D   DA072F      5252  JP   C,ERVIT
2E60   2B          5253 COR           DEC  HL
2E61   7D          5254  LD   A,L
2E62   2F          5255  CPL
2E63   C1          5256  POP  BC
2E64   CDC82D      5257  CALL MEMT
2E67   C5          5258  PUSH BC
2E68   3B          5259  DEC  SP
2E69   3B          5260  DEC  SP
2E6A   E1          5261  POP  HL
2E6B   7C          5262  LD   A,H
2E6C   2F          5263  CPL
2E6D   33          5264  INC  SP
2E6E   33          5265  INC  SP
2E6F   C3BB2D      5266  JP   SUBR
2E72   0B          5267 VAL           DEC  BC
2E73   CD622D      5268  CALL TAS
2E76   32E82B      5269  LD   (APAR),A
2E79   CD622D      5270  CALL TAS
2E7C   32E92B      5271  LD   (APAR+1),A
2E7F   CD622D      5272  CALL TAS
2E82   32EA2B      5273  LD   (APAR+2),A
2E85   CD622D      5274  CALL TAS
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2E88    32EB2B      5275  LD    (APAR+3),A
2E8B    D1          5276  POP   DE
2E8C    1E01        5277  LD    E,1
2E8E    D5          5278  PUSH  DE
2E8F    C32B2D      5279  JP    CONT
                    5260 TTYWR          EQU    06F9H
2E92    210000      5281 CONV             LD    HL,0
2E95    22EC2B      5282  LD    (AZMAN),HL
2E98    21E803      5283  LD    HL,1000
2E9B    22EE2B      5284  LD    (AZMAN+2),HL
2E9E    216400      5285  LD    HL,100
2EA1    22F02B      5286  LD    (AZMAN+4),HL
2EA4    210A00      5287  LD    HL,10
2EA7    22F22B      5288  LD    (AZMAN+6),HL
2EAA    21EC2B      5289  LD    HL,AZMAN
2EAD    3AE82B      5290  LD    A,(APAR)
2EB0    CDD52E      5291  CALL  RAD
2EB3    CDF52E      5292  CALL  MUT
2EB6    3AE92B      5293  LD    A,(APAR+1)
2EB9    CDD52E      5294  CALL  RAD
2EBC    CDF52E      5295  CALL  MUT
2EBF    3AEA2B      5296  LD    A,(APAR+2)
2EC2    CDD52E      5297  CALL  RAD
2EC5    CDF52E      5298  CALL  MUT
2EC8    3AEB2B      5299  LD    A,(APAR+3)
2ECB    E60F        5300  AND   0FH
2ECD    86          5301  ADD   A,(HL)
2ECE    77          5302  LD    (HL),A
2ECF    23          5303  INC   HL
2ED0    7E          5304  LD    A,(HL)
2ED1    CE00        5305  ADC   A,0
2ED3    77          5306  LD    (HL),A
2ED4    C9          5307  RET
2ED5    E60F        5308 RAD              AND   0FH
2ED7    4F          5309  LD    C,A
2ED8    A7          5310  AND A
2ED9    CA022F      5311  JP  Z,ZERO
2EDC    CDEA2E      5312 RADI             CALL  REP
2EDF    CDEA2E      5313  CALL  REP
2EE2    0D          5314  DEC   C
2EE3    C8          5315  RET   Z
2EE4    2B          5316  DEC   HL
2EE5    2B          5317  DEC   HL
2EE6    AF          5318  XOR   A
2EE7    C3DC2E      5319  JP    RADI
2EEA    7E          5320 REP              LD    A,(HL)
2EEB    CE00        5321  ADC   A,0
2EED    23          5322  INC   HL
2EEE    23          5323  INC   HL
2EEF    86          5324  ADD   A,(HL)
2EF0    2B          5325  DEC   HL
2EF1    2B          5326  DEC   HL
2EF2    77          5327  LD    (HL),A
2EF3    23          5328  INC   HL
2EF4    C9          5329  RET
2EF5    2B          5330 MUT              DEC   HL
2EF6    2B          5331  DEC   HL
2EF7    7E          5332  LD    A,(HL)
```

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2EF8    23          5333  INC  HL
2EF9    23          5334  INC  HL
2EFA    77          5335  LD   (HL),A
2EFB    2B          5336  DEC  HL
2EFC    7E          5337  LD   A,(HL)
2EFD    23          5338  INC  HL
2EFE    23          5339  INC  HL
2EFF    77          5340  LD   (HL),A
2F00    2B          5341  DEC   HL
2F01    C9          5342  RET
2F02    23          5343 ZERO          INC   HL
2F03    23          5344  INC   HL
2F04    C3F52E      5345  JP    MUT
2F07    3E21        5346 ERVIT         LD  A,21H
2F09    C30E2F      5347  JP  ERVAL
2F0C    3E22        5348 ERTAS         LD  A,22H
2F0E    D1          5349 ERVAL         POP  DE
2F0F    D1          5350 ERNC          POP  DE
2F10    D1          5351 ERNP          POP  DE
2F11    C9          5352  RET
                    5353 ;********CSF
                    5354 ; TESTEAZA DACA LA (BC) SE AFLA UN CARAC SFIRSIT
                    5355 ;        DE FRAZA =' ','%',ASCICR
                    5356 ; IESIRI =CY=1 (SUCCES)=SFIRSIT DE FRAZA
                    5357 ;            =0 (FALSE )=NU E SFRISIT
                    5358 ;
                    5359 CSF
2F12    0A          5360  LD A,(BC)
2F13    FE20        5361  CP ' '
2F15    CAB91A      5362  JP Z,SRET
2F18    FE25        5363  CP '%'
2F1A    CAB91A      5364  JP Z,SRET
2F1D    FE0D        5365  CP ASCICR
2F1F    CAB91A      5366  JP Z,SRET
2F22    C3CA19      5367  JP FRET
                    5368 ;
                    5369 ;********************************************** END OF FILE "TIMING"
```

```
                    5370 *H SUBR.SERVICIU INTRERUPERI
                    5371 EOI EQU 20H ;NON SPECIFIC END OF INTERRUPT
                    5372 ;*********************************************
                    5373 ; I S T O P
                    5374 ;
                    5375 ISTOP
2F25  CD312B        5376  CALL PWSRES ;ADUCE SURSELE LA 0
2F28  06FF          5377  LD B,255
2F2A  21382F        5378  LD HL,ISTOPM ;TIP MES 'OPI STOP'
2F2D  CD951A        5379  CALL PUTMSG
2F30  3E20          5380  LD A,EOI ;EOI ACKNOWLEDGE
2F32  3200A8        5381  LD (PIC),A
2F35  C3C522        5382  JP ININIT ;SALT LA INCEPUTUL INTERPRETORULUI
                    5383 ;
                    5384 ;
                    5385 ISTOPM
2F38  4F504920      5386  DEFM 'OPI "STOP"'
2F42  0D            5387  DEFB ASCICR
                    5388 ;*********************************************
                    5389 ; ISTART
                    5390 ;
                    5391 ;
                    5392 ISTART
2F43  3E20          5393  LD A,EOI ;EOI ACKNOWLEDGE
2F45  3200A8        5394  LD (PIC),A
2F48  06FF          5395  LD B,255
2F4A  21542F        5396  LD HL,ISTARM
2F4D  CD951A        5397  CALL PUTMSG
2F50  FB            5398  EI
2F51  C34A23        5399  JP RUNCMD ;SE LANSEAZA PROGRAMUL
                    5400 ;
                    5401 ;
                    5402 ISTARM
2F54  4F504920      5403  DEFM 'OPI "START"'
2F5F  0D            5404  DEFB ASCICR
                    5405 ;
                    5406 ;*********************************************
                    5407 ;
                    5408 ; IREL
                    5409 ;
                    5410 ;
                    5411 IREL
2F60  3E20          5412  LD A,EOI ;EOI ACKNOWLEDGE
2F62  3200A8        5413  LD (PIC),A
2F65  06FF          5414  LD B,255
2F67  21712F        5415  LD HL,IRELM
2F6A  CD951A        5416  CALL PUTMSG
2F6D  FB            5417  EI
2F6E  C38623        5418  JP GOCMD
                    5419 ;
                    5420 IRELM
2F71  4F504920      5421  DEFM 'OPI "REL"'
2F7A  0D            5422  DEFB ASCICR
                    5423 ;
                    5424 ;*********************************************
                    5425 ;
                    5426 ; IERH ;INTRERUPERE DE EROARE HARD
                    5427 ;
```

```
                    5428 IERH
2F7B    0610        5429  LD B,IERHML
2F7D    219D2F      5430  LD HL,IERHM
                    5431  ;SE TIP 'HARD ERROR '
2F80    CD951A      5432  CALL PUTMSG
2F83    06FF        5433  LD B,255
2F85    21AD2F      5434  LD HL,IERHM1
                    5435  ;PENTRU ORICE EV;SE PREG ADR MESAJ 'TESTOR'
2F88    3A00D0      5436  LD A,(TCDREG)
2F8B    0F          5437  RRCA ;DACA E CY=1 ;ESTE ERH TESTOR
2F8C    DA922F      5438  JP C,$+6
2F8F    21B22F      5439  LD HL,IERMH2
                    5440  ;SE ADUCE ADRESA MESAJ CUPLOR
2F92    CD951A      5441  CALL PUTMSG ;TIP FELUL ERORII
2F95    3E20        5442  LD A,EOI ;EOI ACKNOWLEDGE
2F97    3200A8      5443  LD (PIC),A
2F9A    C3C522      5444  JP ININIT
                    5445 ;
                    5446 ;
2F9D    48415244    5447 IERHM DEFM 'HARD ERROR TEST '
                    5448 IERHML EQU $-IERHM
2FAD    554E4954    5449 IERHM1 DEFM 'UNIT'
2FB1    0D          5450        DEFB ASCICR
2FB2    46495854    5451 IERMH2 DEFM 'FIXTURE'
2FB9    0D          5452        DEFB ASCICR
                    5453 ;*****************************************
                    5454 ;
                    5455 ; INTAB1 ;ACEASTA TABELA DE JP VA
                    5456 ; FI MUTATA LA INTAB
                    5457 ;
                    5458 INTAB1
2FBA    C3252F      5459  JP ISTOP
2FBD    00          5460  NOP
2FBE    C3432F      5461  JP ISTART
2FC1    00          5462  NOP
2FC2    C3602F      5463  JP IREL
2FC5    00          5464  NOP
2FC6    C37B2F      5465  JP IERH
2FC9    00          5466  NOP
2FCA    C9          5467  RET ;INTR. DE LA TESTOR (TERMIN TEST) ESTE
                    5468      ;ESTE DOAR UN RETURN
2FCB    00          5469  NOP
2FCC    00          5470  NOP
2FCD    00          5471  NOP
2FCE    C3D22F      5472  JP ITEMP
2FD1    00          5473  NOP
                    5474 ;
                    5475 ; S VA MEI COMPLETA
                    5476 ;
                    5477 ;*****************************************
                    5478 ;
                    5479 ITT
                    5480 ITEMP
2FD2    3E20        5481  LD A,EOI ;EOI ACKNOWLEDGE
2FD4    3200A8      5482  LD (PIC),A
2FD7    FB          5483  EI ;PERMITE DELA INTRERUPERI
                    5484 ; IN FAZA URMATOARE LA ADRBUF SE VA DEPUNE VALOAREA
                    5485 ; CONSTANTEI DE TIMP DEFINITA PRIN INSTR.FFW (ASCII
```

```
 LOC   OBJ CODE   STMT SOURCE STATEMENT                                  ASM 1.0

                  5486 ;
2FD8   2A6B39     5487  LD HL,(TIMOUT) ;ADUCE VALOAREA SI
2FDB   44         5488  LD B,H         ;SI O TRECE IN BC
2FDC   4D         5489  LD C,L
2FDD   CD5418     5490  CALL CHEXZ     ;TRANSF. IN ZECIMAL
2FE0   C5         5491  PUSH BC        ;SALVEAZA
2FE1   58         5492  LD E,B         ;DEPUNE OCTETUL SUP
2FE2   218531     5493  LD HL,ADRBUF   ;LA ADRBUF
2FE5   CDA51A     5494  CALL PUTNM
2FE8   C1         5495  POP BC         ;READUCE VALOAREA
2FE9   59         5496  LD E,C         ;DEPUNE SI OCTETUL INF
2FEA   CDA51A     5497  CALL PUTNM
2FED   23         5498  INC HL
                  5499 ; SE DEPUNE SI 'MS' (MILISECUNDE)
2FEE   364D       5500  LD (HL),'M'
2FF0   23         5501  INC HL
2FF1   3653       5502  LD (HL),'S'
                  5503 ;
                  5504 ;
2FF3   2A6B39     5505  LD HL,(TIMOUT) ;ADUCE CONSTANTA DE TIMP
2FF6   44         5506  LD B,H         ;SI O TRECE IN BC
2FF7   4D         5507  LD C,L
2FF8   CD4E2B     5508  CALL WAITMS ;ASTEAPTA NUMARUL DORIT DE MS
2FFB   F3         5509  DI ;URMEAZA O ZONA IN CARE NU SE MAI PERMIT
                  5510  ; INTRERUPERI
2FFC   E3         5511  EX (SP),HL ;SE DORESTE SA SE AJUNGA INAINTE
2FFD   2B         5512  DEC HL      ;DE 'EI' SI 'HALT' PENTRU A ASTEPTA
2FFE   2B         5513  DEC HL      ;DIN NOU O INTRERUPERE IN HALT
2FFF   2B         5514  DEC HL
3000   2B         5515  DEC HL
3001   00         5516  NOP
3002   00         5517  NOP
3003   E3         5518  EX (SP),HL ;SE TRIMITE ADRESA DE RETURN INAPOI
                  5519             ;IN STIVA
3004   3E01       5520  LD A,01 ;SE PERMITE CONTINUAREA SECVENTEI
3006   3200E5     5521  LD (PINREG),A ;PROCESORULUI RAPID
                  5522  ;
3009   C9         5523  RET         ;ENABLE INTERRUPT SE VA FACE IN PRG
                  5524              ; PRINC INAINTE DE HALT
                  5525 ;
                  5526 ;>
                  5527 ;********************************************** END OF FILE "INTRSV"
                  5528 ;**********************************************
                  5529 ; FUNTION = INITT
                  5530 ;
                  5531 ; INITIALIZEAZA ELEMENTELE TESTORULUI
                  5532 ;   -CUPLORUL
                  5533 ;   -BAZA DE TIMP
                  5534 ;   -PROCESORUL RAPID
                  5535 ; IN CU PARAMETRI DIN TABIS
                  5536 ;
                  5537 INITT
300A   3E00       5538  LD A,0 ;PENTRU SIGURANTA SE DA COMANDA STOP
300C   3200E0     5539  LD (PCRREG),A ;PROCESORULUI RAPID
300F   011400     5540  LD BC,20 ;SE ASTEAPTA 20MS
3012   CD4E2B     5541  CALL WAITMS
                  5542  ;
                  5543 ; SE FACE CORECTIA CODULUI MARCH FUNCTIE DE
```

```
                    5544 ; OCTETII DEFINITI PRIN DFM
3015    2A2A37      5545  LD HL,(MARCHC) ;SE ADUC OCTEITII DE CORECTIE
3018    225841      5546  LD (MARCH+3),HL
                    5547  ;
301B    3A2C37      5548  LD A,(REFFLG) ;INIT BAZA TIMP
301E    3200D0      5549  LD (TCDREG),A
                    5550  ;
3021    212D37      5551  LD HL,CUPBUF ;ADRESA SURSA IN HL
3024    1100F0      5552  LD DE,CCDREG   ;ADRESA DESTIN IN DE
3027    010400      5553  LD BC,4 ; 4 OCTETI DE TRANSFERAT
302A    CD1118      5554  CALL LDIR
                    5555 ;
302D    3E02        5556  LD A,00000010B ;COMANDA STERGERE MEMORIE
302F    3200E0      5557  LD (PCRREG),A  ;MICROPROGRAM
3032    CD602B      5558  CALL WAITFP    ;ASTEAPTA TERMINAREA EXECUTIEI
                    5559  ;
                    5560  ;
3035    1100E9      5561  LD DE,PVCREG ;INIT CAI TESTATE
3038    213137      5562  LD HL,PVCBUF
303B    010300      5563  LD BC,3 ;3 OCTETI
303E    CD1118      5564  CALL LDIR
                    5565  ;
3041    1100EA      5566  LD DE,PCPREG ;INIT REGISTRE CAPACITATE
3044    213437      5567  LD HL,PCPBUF
3047    010600      5568  LD BC,6 ;6 OCTETI
304A    CD1118      5569  CALL LDIR
                    5570  ;
304D    213B37      5571  LD HL,TOPXBF ;SE INIT TOATE MEMORIILE TOPO
3050    1100EC      5572  LD DE,PTMX
3053    011002      5573  LD BC,256+256+16
3056    CD1118      5574  CALL LDIR
                    5575  ;
3059    3A3A37      5576  LD A,(PCRFLG)  ;SE ADUCE OCTETUL DE C-DA PCRREG
305C    E604        5577  AND 00000100B ;SE IZOL NUMAI BITUL 2;
                    5578                ;COMANDA TOPO AUTOLOAD
305E    C8          5579  RET Z ;NICI O ACTIUNE DACA E ZERO
305F    3200E0      5580  LD (PCRREG),A ;
3062    CD602B      5581  CALL WAITFP ;ASTEAPTA TERMINAREA COMENZII
                    5582  ;
3065    C9          5583  RET
                    5584 ;
                    5585 ;
                    5586 ;********************************************** END OF FILE "INITT"
```

```
 LOC   OBJ CODE   STMT SOURCE STATEMENT                                ASM 1.0

                  5587 *H SUBRUTINE SPEC. CODURI
                  5588 ;*************************************************
                  5589 ; TABELA CODULUI CURENT
                  5590 ; ESTE COMPLETATA DE SUBRUTINE CODIDF
                  5591 ;
3066              5592 CODNBF DEFS 6 ;6 CARAC PT NUME COD
306C              5593 CODADR DEFS 2 ;2 OCTETI PT ADR. UCOD
306E              5594 CODFLG DEFS 1 ;CU OCTETUL CONTINUT AICI SE
                  5595                ;COMPLEM REZ. UNEI LANSARI
                  5596                ;DACA E 00=TEST NORMAL
                  5597                ;30 (38 ?) DACA MODULUL FIIND OK
                  5598                ;TESTUL TREBUIE SA DEA ERR
306F              5599 CODTPA DEFS 2 ;2 OCTETI PT ADRESA SALT T.P.TEST
                  5600 ;
3071              5601 CODPTR DEFS 2 ;POINTER IN UCOD
3073              5602 ERRFLG DEFS 1 ;FLAG EROARE IN TESTUL CURENT
                  5603 ;
                  5604 ;*************************************************
                  5605 ; FUNCTION : PUTCOD
                  5606 ; INPUTS   : (INTPTR)=POINTER PE PRIMA LOC. CU
                  5607 ;            NUMELE CODULUI (6 CARAC)
                  5608 ; OUTPUTS  : (CODNBF)=6 CARACTERE CU NUMELE COD.
                  5609 ; DESTR    : ALL
                  5610 ; CALLS    : N
                  5611 ;
                  5612 PUTCOD
3074   216630     5613  LD HL,CODNBF ;SE UMPLE INTII CU BLANCURI
3077   0606       5614  LD B,6
3079   3E20       5615  LD A,' '
                  5616  ;
307B   77         5617  LD (HL),A
307C   23         5618  INC HL
307D   05         5619  DEC B
307E   C27B30     5620  JP NZ,$-3
                  5621  ;
3081   2A063B     5622  LD HL,(INTPTR)  ;HL=POINTER PE SURSA
3084   116630     5623  LD DE,CODNBF    ;DE=POINTER PE DESTIN.
3087   0606       5624  LD B,6          ;MAX 6 CARAC
                  5625  ;
3089   7E         5626  LD A,(HL)  ;SE ADUCE UN CARAC.
308A   FE21       5627  CP ' '+1   ;SE TRANSFERA NUMAI CARAC >=20H
308C   F8         5628  RET M      ;GATA DACA E BLANC SAU <=' '
308D   12         5629  LD (DE),A ;TRANSF OCTETUL
308E   23         5630  INC HL    ;PREG ADRESELE PT RANSF URM.
308F   13         5631  INC DE
3090   05         5632  DEC B     ;DECREM CONTOR
3091   C28930     5633  JP NZ,$-8 ;REIA BUCLA DACA B>0
3094   C9         5634  RET ;GATA
                  5635 ;
                  5636 ;
                  5637 ;*************************************************
                  5638 ; FUNCTION :CODIDF (CODE IDENTIFY)
                  5639 ; INPUTS   :(INTPTR)=POINTER PE PRIMA
                  5640 ;            LOCATIE DIN NUME COD
                  5641 ; OUTPUTS  :CY=1 SUCCES
                  5642 ;            IN CAZ DE SUCCES SE COMPLETEAZA
                  5643 ;            PARAMETRI DIN TABELA CODULUI
                  5644 ;            CURENT (ADRESA COD,ADRESA SALT
```

```
                    5645 ;              TERMIN TEST,ADRESA SALT TERM.PART.
                    5646 ;              CODPTR)
                    5647 ; DESTR        ;ALL
                    5648 ; CALLS        :PUTCOD,CMPM,PUTMSG,INSERR,SRET
                    5647 ;
                    5650 ;
                    5651 ;
                    5652 CODIDF
3095    CD7430      5653  CALL PUTCOD ;PUNE NUMELE CODULUI
3098    21BD35      5654  LD HL,CODTAB ;HL=CAPUL TABELEI DE CODURI
309B    116630      5655  LD DE,CODNBF ;DE=NUMELE CODULUI DE CAUTAT
309E    0616        5656  LD B,CODTBL  ;B=CONTOR,INIT PE NUMARUL DE
                    5657                ; CODURI DIN TABELA
30A0    0E06        5658  LD C,6       ;COMPARATIA SE FACE PE 6 CARAC.
                    5659  ;
                    5660 CODID1
30A2    CDC51B      5661  CALL CMPM ;SE COMPARA CEI 6 OCTETI
30A5    DABD30      5662  JP C,CODID2 ;SALT IN CAZ DE IDENTIT
30A8    C5          5663  PUSH BC      ;SE FACE HL POINTER PE URM COD
30A9    010B00      5664  LD BC,CODTBS ;PASUL IN TABELA
30AC    09          5665  ADD HL,BC ;SE ADUNA LA HL
30AD    C1          5666  POP BC ;SE READUCE BC
30AE    05          5667  DEC B ;DECREM CONTOR
30AF    C2A230      5668  JP NZ,CODID1 ;MAI INCEARCA DACA B>0
                    5669 ;
                    5670  ; DACA SE AJUNGE AICI NU SE CUNOASTE CODUL
30B2    06FF        5671  LD B,255
30B4    21CC30      5672  LD HL,UNKCOD ;ADRESA MESAJ
30B7    CD951A      5673  CALL PUTMSG
30BA    C36B29      5674  JP INSERR ;ER. PARAM. INSTRUCTIE
                    5675  ;
                    5676 CODID2 ;SE AJUNGE AICI DACA S-A IDENTIF COD.
                    5677  ;SE MUTA INTREAGA RUBRICA DIN TABELA
                    5678  ;
30BD    010B00      5679  LD BC,CODTBS ;PASUL IN TABELA
30C0    CD1118      5680  CALL LDIR ;SE FACE MUTAREA
30C3    2A6C30      5681  LD HL,(CODADR) ;SE INIT POINTERUL DE MUCOD
30C6    227130      5682  LD (CODPTR),HL ;PE INCEPUT
30C9    C3B91A      5683  JP SRET ;GATA ;SUCCES
                    5684 ;
30CC    554E4B4E    5685 UNKCOD DEFM 'UNKNOWN CODE'
30D8    0D          5686        DEFB ASCICR
                    5687 ;
                    5688 ;*************************************************
                    5689 ;
                    5690 ; FUNCTION : CODEXQ - EXECUTIE UCOD
                    5691 ; INPUTS   : SE LAANSEAZA TESTUL INCARACAT IN
                    5692 ;             MEMORIA PROC. RAPID
                    5693 ; OUTPUTS   :A=REZ. TEST
                    5694 ; DESTR     : ALL
                    5695 ; CALLS     :
                    5696 ; DESCR     :
                    5697 ;
                    5698 CODEXQ
30D9    F3          5699  DI ;NU PERMITE INTRERUPERI PE AC PERIOADA
                    5700  ;SE VA UMPLE CU OO SPATIUL ADRBUF PENTRU
                    5701  ;ADRESELE DEFECTE LA TESTUL AFPX,AFPY
                    5702  ;
```

```
30DA    0608        5703  LD B,8 ;CONTOR
30DC    218531      5704  LD HL,ADRBUF
30DF    3E20        5705  LD A,' '  ;SE UMPLE BUFFERUL CU BLANCURI
                    5706  ;
30E1    77          5707  LD (HL),A
30E2    23          5708  INC HL
30E3    05          5709  DEC B
30E4    C2E130      5710  JP NZ,$-3 ;BUCLEAZA PINA CIND UMPLE ADRBUF
                    5711  ;
30E7    CDD42A      5712  CALL NXTCHI ;ADUCE URM CARAC SEMNIF DIN TEXT
                    5713              ; DACA ESTE 'I' SE LANS TEST INFINIT
30EA    FE49        5714  CP 'I' ;POZIT FLAGURI
30EC    3E10        5715  LD A,10H ;OCTETUL DE LANSARE SIMPLA
30EE    C2F330      5716  JP NZ,$+5 ;LASA OCTETUL NEMODIF DACA NU E 'I'
30F1    F630        5717  OR 30H    ;PUNE BITUL DE STRT INF PE 1
30F3    3200E0      5718  LD (PCRREG),A ;LANSEAZA TESTUL ;
                    5719  ;DACA S-A LANSAT TEST INFINIT SE FACE RET
30F6    E620        5720  AND 20H ;SE TEST BITUL 5
30F8    3E00        5721  LD A,0 ;SE INCARCA IN A REZ. CORECT
30FA    CAFF30      5722  JP Z,CODEX1 ;DACA ESTE LANSARE NORMALA SAE
30FD    FB          5723  EI
30FE    C9          5724  RET ;FACE RETURN DACA ESTE O LANSARE PE TEST INF
                    5725  ;
                    5726 CODEX1 ;
30FF    00          5727  NOP
3100    00          5728  NOP
3101    00          5729  NOP
3102    00          5730  NOP
3103    00          5731  NOP
3104    00          5732  NOP
3105    00          5733  NOP
3106    FB          5734  EI ;PERMITE INTRERUPERI
3107    76          5735  HALT ;ASTEAPTA INRERUPREA TT IN HALT
                    5736  ;
3108    3E20        5737  LD A,EOI ;SE FACE EOI ACKNOWLEDGE
310A    3200A8      5738  LD (PIC),A
                    5739  ;
310D    CDC431      5740  CALL GETREZ ;SE ADUCE REZULTATUL LANSARII
                    5741               ;CORECTAT FUNCTIE DE CODFLG
3110    47          5742  LD B,A ;SE SALV IN B
3111    E638        5743  AND 38H
3113    21403C      5744  LD HL,REZFLG
3116    B6          5745  OR (HL) ;SE NOT REZULTATUL
3117    77          5746  LD (HL),A
3118    217330      5747  LD HL,ERRFLG ;FLAGUL DE EROARE CURENTA
311B    78          5748  LD A,B
311C    E638        5749  AND 38H
311E    B6          5750  OR (HL)
311F    77          5751  LD (HL),A ;SE NOT SI ACOLO REZ. TESTULUI
                    5752  ;
3120    78          5753  LD A,B ;SE TESTEAZA BITUL DE TERM PARTIALA
3121    F5          5754  PUSH AF
3122    E638        5755  AND 38H ;SE DUCE IN B REZULT TESTULUI
3124    47          5756  LD B,A
3125    F1          5757  POP AF ;SE READUCE OCTETUL INIT
3126    E601        5758  AND 01H ;SE TEST BIT 0
3128    3A7330      5759  LD A,(ERRFLG) ;SE ADUCE IN A REZULTAT TEST.
312B    CA3B31      5760  JP Z,TERMT ;SALT LA TERM TEST DACA E CAZUL
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```
312E    2A6F30      5761  LD HL,(CODTPA) ;TERMINARE PARTIALA
3131    C5          5762  PUSH BC ;SALV BC
3132    47          5763  LD B,A ;SALVEAZA A,IN B
3133    7D          5764  LD A,L
3134    B4          5765  OR H ;DACA HL=0 ATUNCI ADRESA DE TERM PARTIALA
                    5766  ;ESTE TERMPN (CEA NORMALA)
3135    78          5767  LD A,B ;REFACE A
3136    C1          5768  POP BC ; REFACE BC
3137    CA5631      5769  JP Z,TERMPN ;SALT LA TERM PARTIALA NORMALA
                    5770  ;
313A    E9          5771  JP (HL)        ;SALT LA ADRESA SPECIFICA DE
                    5772                 ;TERMINARE PARTIALA
                    5773  ;
                    5774 TERMT ;TERMINARE FINALA ;
313B    F5          5775  PUSH AF ;SE SALV REZULTAT TEST
313C    3A8D31      5776  LD A,(ANUM) ;DACA NUMARATORUL ADRESEI TESTATE
                    5777                ;ESTE DIF DE 0 A FOST TEST AFP
                    5778                ;SI SE VA COMPLETA LOCATIA CORESP
                    5779                ;DIN ADRBUF FUNCTIE DE REZULT TESTULUI
313F    A7          5780  AND A
3140    CA5431      5781  JP Z,TERMT1 ;NU E CAZUL DACA E 0
3143    5F          5782  LD E,A       ;SE DETERMINA ADRESA DIN LOCATIA DIN ADRBUI
3144    1600        5783  LD D,0
3146    218531      5784  LD HL,ADRBUF
3149    19          5785  ADD HL,DE
314A    78          5786  LD A,B ;SE READUCE REZ TEST DE LA ULTIMA
                    5787         ;PARCURGERE
314B    E638        5788  AND 38H ;SE VERIF DACA ESTE EROARE
314D    7B          5789  LD A,E  ;RANGUL ADRESEI DIN NOU IN A
314E    CA5431      5790  JP Z,TERMT1 ;NIMIC DACA NU E EROARE
3151    F630        5791  OR 30H ;SE TRANSF IN ASCII
3153    77          5792  LD (HL),A ;SE PUNE CIFRA ASCII LA LOCUL ET
                    5793 TERMT1
3154    F1          5794  POP AF ;SE READUCE REZULTATUL TESTULUI
3155    C9          5795  RET     ;GATA S-A TERMINAT CODUL SI REZULT ESTE
                    5796          ;IN A
                    5797 ;
                    5798 ;
                    5799 ;
                    5800 ;************ TERMPN ***************************
                    5801 ; TERMINARE PARTIALA NORMALA
                    5802 ; NORMALA IN SENSUL CA NU SE FAC PRELUCRARI
                    5803 ; SPECIALE ALE REZULTATULUI LANSARII ABIA
                    5804 ; TERMINATE CI DOAR SE INCARCA IN CONTINUARE
                    5805 ; CODUL DUPA CARE SE RELANSEAZA TESTUL
                    5806 ;
                    5807 TERMPN
3156    CD1335      5808  CALL INCCOD ;INCARCA CODUL IN CONTINUARE
3159    F3          5809  DI ;DISABLE INTERRUPT PINA CIND AJUNGE INHALT
315A    3E10        5810  LD A,10H ;START PROCESOR RAPID
315C    3200E0      5811  LD (PCRREG),A
315F    C3FF30      5812  JP CODEX1
                    5813 ;
                    5814 ;
                    5815 ;******** A F P **********************************
                    5816 ; PROGRAM DE TRATARE PARTIC A INT. TERMIN PART.
                    5817 ; PENTRU TESTELE DE AFP
                    5818 ;
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 LOC    OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

                    5819 AFP
3162    3A8D31      5820  LD A,(ANUM) ;SE ADUCE RANGUL ADRESE CARE A
                    5821              ;FOST TESTATA
3165    5F          5822  LD E,A ;SE MUTA IN E
3166    1600        5823  LD D,0 ;SE CALCULEAZA POZITIA UNDE TREBUIE
                    5824         ;INSCRIS RANGUL DACA ESTE DEFECT
3168    218531      5825  LD HL,ADRBUF ;BAZA BUFFERULUI IN HL
316B    19          5826  ADD HL,DE
316C    78          5827  LD A,B ;SE ADUCE REZULTATUL ULTIMEI LANSARI
316D    E638        5828  AND 38H ;SE TEST BITII DE ERR
316F    7B          5829  LD A,E   ;SE READUCE RANFUL DEFECT IN A
3170    CA7631      5830  JP Z,AFP1 ;SALT PESTE INSTR. URM DACA NUNERR
3173    F630        5831  OR 30H ;SE TR IN COD ASCII
3175    77          5832  LD (HL),A ;SE PUNE IN BUFF
                    5833 AFP1
3176    218D31      5834  LD HL,ANUM ;SE VA INCREMENTA RANGUL ADR TESTATE
3179    34          5835  INC (HL)
317A    CD1335      5836  CALL INCCOD ;SE INCARACA IN CONT.CODUL
317D    3E10        5837  LD A,10H ;CUVINTUL DE START
317F    3200E0      5838  LD (PCRREG),A ;SE LANSEAZA TESTUL
3182    C3FF30      5839  JP CODEX1 ;SALT LA ASTEPTAREA INTRERUP.
                    5840 ;
                    5841 ;
3185                5842 ADRBUF DEFS 8
318D                5843 ANUM DEFS 1 ;RANGUL ADRESEI TESTATE
                    5844 ;*****************************************
                    5845 ;
                    5846 ;   T E R M S 1
                    5847 ;
                    5848 ; SUBRUTINA SPECIFICA CODULUI SELMEM
                    5849 ;
                    5850 ;
                    5851 ;DESCRIERE ;LA PRIMA APELARE SE MODIFICA CODFLG SI AI
                    5852 ;             TERM PARTIALA
                    5853 ;             LA A DOUA APELARE SE REFACE CODFLG
                    5854 ;
                    5855 TERMS1
318E    CD1335      5856  CALL INCCOD ;INCARCA IN CONTINUARE MINCROCODUL
3191    F3          5857  DI
3192    21AD31      5858  LD HL,TERMS2 ;SE MODIF ADRESA DE TERMINARE PARTIALA
3195    226F30      5859  LD (CODTPA),HL
3198    216E30      5860  LD HL,CODFLG
319B    36FF        5861  LD (HL),0FFH ;SE MODIF.CODFLG
319D    3A2E37      5862  LD A,(CUPBUF+1) ;SE NEAGA SEMNALUL SM
31A0    EE01        5863  XOR 00000001B
31A2    3201F0      5864  LD (CCPREG),A
31A5    3E10        5865  LD A,10H          ;SE RELANSEAZA PROCESORUL RAPID
31A7    3200E0      5866  LD (PCRREG),A
31AA    C3FF30      5867  JP CODEX1 ;CONTINUA
                    5868 ;
                    5869 ;
                    5870 TERMS2
31AD    CD1335      5871  CALL INCCOD ;INCARCA IN CONTINUARE MICROCODUL
31B0    F3          5872  DI
31B1    216E30      5873  LD HL,CODFLG ;REFACE CODFLG
31B4    3600        5874  LD (HL),0
31B6    3A2E37      5875  LD A,(CUPBUF+1)
31B9    3201F0      5876  LD (CCPREG),A ;REFACE SEMNALUL SM CUM A FOST
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 LOC    OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

31BC    3E10        5877  LD A,10H ;RELANSEAZA PROCESORUL RAPID
31BE    3200E0      5878  LD (PCRREG),A
31C1    C3FF30      5879  JP CODEX1
                    5880 ;
                    5881 ;
                    5882 ;*****************************************************
                    5883 ;
                    5884 ; GETREZ ;
                    5885 ; ADUCE IN A,REZULTATUL PARCURGERII CORECTAT
                    5886 ; FUNCTIE DE OCTETUL DE LA LOCATIA CODFLF
                    5887 ;   NU DISTRUGE DECIT AF
                    5888 ;
                    5889 GETREZ
31C4    E5          5890  PUSH HL
31C5    C5          5891  PUSH BC
31C6    2100E0      5892  LD HL,PCRREG
31C9    46          5893  LD B,(HL) ;SE CITESTE REGISTRUL DE STARE
                    5894          ;PROC. RAPID IN B
31CA    216E30      5895  LD HL,CODFLG
31CD    7E          5896  LD A,(HL) ;SE ADUCE OCTETUL
31CE    E638        5897  AND 00111000B ;SE PUN PE ZERO BITII CARE
                    5898              ;NU AU SEMNIF. DE EROARE
31D0    A8          5899  XOR B ;SE NEAGA BITII DE EROARE DACA E CAZUL
                    5900        ;ACUM REZULTATUL PARCURGERII ESTE IN A
31D1    C1          5901  POP BC
31D2    E1          5902  POP HL
31D3    C9          5903  RET
                    5904 ;
                    5905 ;*****************************************************
                    5906 ; MANK? - COD DE LA CHEI ?
                    5907 ;
                    5908 ;
                    5909 ;
                    5910 MANK?
31D4    3A00B0      5911  LD A,(MANKEY)
31D7    E61C        5912  AND 00011100B ;SE IZOL BITII CHEILOR RESP
31D9    C8          5913  RET Z ;RET DACA NU S CERE COD MAN
                    5914  ; DACA SE CERE COD MAN SE LANSEAZA
31DA    47          5915  LD B,A ;SE ADUCE REZ CITIRII IN B
31DB    C5          5916  PUSH BC ;SE SALVEAZA BC
31DC    3A00B0      5917  LD A,(MANKEY) ;SE CITESTE DIN NOU POZ.CHEI
31DF    47          5918  LD B,A ;SE RETINE IN B
                    5919  ;
31E0    E621        5920  AND 00100001B ;SE IZOL BITUL PT REFRE SH SI DD.
31E2    C2F731      5921  JP NZ,MANK?2  ;NU SE FACE NIMIC DACA SINT 1
31E5    E601        5922  AND 00000001B ; SE RETINE IN C POZITIA CHEII "0"
31E7    4F          5923  LD C,A        ;
31E8    3E20        5924  LD A,00100000B ; TEST BIT REFRESH.
31EA    A0          5925  AND B
31EB    3A2C37      5926  LD A,(REFFLG)  ;PREGATESTE REG. ACC.
31EE    CAF331      5927  JP Z,$+5       ; SALT FUNCTIE DE BIT REFRESH.
31F1    E6FD        5928  AND .NOT.00000010B ;SE ANULEAZA BIT REFRESH
31F3    B1          5929  OR C
31F4    3200D0      5930  LD (TCDREG),A ;SE IMPUNE BAZEI DE TIMP REGIMUL DORIT
                    5931  ;
                    5932 MANK?2
31F7    78          5933  LD A,B        ;READUCE POZ.CHEILOR
31F8    07          5934  RLCA          ; SE TRECE BITO - 2,7-1,6-0
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 LOC   OBJ CODE   STMT SOURCE STATEMENT                                ASM 1.0

31F9   07          5935  RLCA
31FA   F6F8        5936  OR 11111000B  ;SE PUN CEILALTI PE 1
31FC   2F          5937  CPL           ;SE PREGATESTE PT.FAZA URM.
31FD   4F          5938  LD C,A        ;SE RETINE IN C
31FE   3A3037      5939  LD A,(CUPBUF+3) ;;SE ADUCE OCTETUL CORESP DIN DFM
3201   B1          5940  OR C          ;SE PN PE 1 BITII DORITI
3202   3203F0      5941  LD (CPRREG),A ;SE INCACA OCTETUL IN CUPLOR
3205   C1          5942  POP BC
                   5943  ;
                   5944  ;
3206   21BD4B      5945  LD HL,CMAN ;ADRESA CODULUI MANUAL LA
3209   227130      5946  LD (CODPTR),HL ;LA CODPTR
320C   3E10        5947  LD A,00010000B
320E   A0          5948  AND B
320F   C22D32      5949  JP NZ,MANK?1 ;LANSEAZA MANK1 DACA ESTE CHEIA PE 1
3212   21FD4B      5950  LD HL,CADR
3215   227130      5951  LD (CODPTR),HL
3218   3E08        5952  LD A,00001000B
321A   A0          5953  AND B
321B   C22D32      5954  JP NZ,MANK?1 ;LANSEAZA TESTUL ADRESE
321E   21274B      5955  LD HL,INFINIT
3221   227130      5956  LD (CODPTR),HL
3224   3E04        5957  LD A,00000100B
3226   A0          5958  AND B
3227   C22D32      5959  JP NZ,MANK?1 ;LANSEAZA TESTUL INFINIT
322A   C36B29      5960  JP INSERR ;EROARE DACA S-A MODIF POZ CHEII
                   5961   ;PE DURATA TESTARII EI
                   5962 MANK?1 ;SE LANSEAZA TESTUL SELECTAT
322D   C5          5963   PUSH BC
322E   214B32      5964   LD HL,MANK?M ;
3231   0620        5965   LD B,MANKML
3233   CD951A      5966   CALL PUTMSG
                   5967   ;SE TIPARESTE SI NUMARUL TESTULUI SELECTAT
3236   C1          5968   POP BC ;READUCE POZ.CHEILOR
3237   78          5969   LD A,B
3238   0F          5970   RRCA
3239   0F          5971   RRCA ;TRECE PE POZ.0-2
323A   CD691A      5972   CALL NMOUT ;AFISEAZA NM.
323D   CDB219      5973   CALL CROUT ;RIND NOU
3240   CD1335      5974   CALL INCCOD ;SE INCARCA TESTUL
3243   3E30        5975   LD A,30H ;OCTETU SE START INFINIT
3245   3200E0      5976   LD (PCRREG),A ;SE LANSEAZA
3248   C3DA22      5977   JP INGCM2 ;ASTEAPTA COMENZI
                   5978 ;
                   5979 MANK?M
324B   53544152    5980   DEFM 'START OF MANUAL KEYBOARD TEST $ '
                   5981 MANKML EQU $-MANK?M
326B   0D          5982   DEFB ASCICR
                   5983 ;
                   5984 ;
                   5985 ;*************************************************
                   5986 ;
                   5987 ; PRTTER ;PRINT TEST ERROR
                   5988 ;
                   5989 ; SE FACE APEL LA ACEASTA SUBRUTINA NUMAI
                   5990 ; CIND ESTE EROARE
                   5991 ;  EX DE TIPARIRE:
                   5992 ; ~ TEST ERR 30 C=AFP U1=-05.00V U2=  U3=
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 LOC    OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

                    5993 ;
                    5994 ; DACA CHEIA VLEM ESTE PE 1 SE TIPARESTE SI BEM
                    5995 ;  DACA SINTEM IN MODUL DISPAY (ONLY) SE INTRERUPE
                    5996 ;  EXECUTIA PROGRAMULUI,SE TIPARESTE 'PRESS "REL"
                    5997 ;  TO PROCEED' SE SE REVIN LA INGCM2
                    5998 ; DACA SE FACE TIPARIREA BEM ACESTA ESTE ANULAT
                    5999 ; (NU SE CUMULEAZA
                    6000 ;
                    6001 PRTTER
326C    3A00B0      6002  LD A,(MANKEY) ;DACA CHEILE 7 SI 0 SINT PE 0 NU SE TIP.
326F    E681        6003  AND 10000001B
3271    C8          6004  RET Z
3272    218531      6005  LD HL,ADRBUF ;E TIP ADRBUR
3275    0608        6006  LD B,8
3277    CD951A      6007  CALL PUTMSG
327A    21F032      6008  LD HL,TERM1 ;TEST ERR MESSAGE 1
327D    060B        6009  LD B,TERM1L
327F    CD951A      6010  CALL PUTMSG
3282    3A7330      6011  LD A,(ERRFLG) ;TIP FELUL ERORII
3285    CD691A      6012  CALL NMOUT
3288    0E20        6013  LD C,' '
328A    CD961C      6014  CALL ECHO
328D    0E43        6015  LD C,'C'
328F    CD961C      6016  CALL ECHO
3292    0E3D        6017  LD C '='
3294    CD961C      6018  CALL ECHO
3297    216630      6019  LD HL,CODNBF ;TIP NUMELE CODULUI
329A    0606        6020  LD B,6 ;6 CARAC
329C    CD951A      6021  CALL PUTMSG
329F    0E20        6022  LD C,' ' ;TIP BLANC
32A1    CD961C      6023  CALL ECHO
32A4    CDFB32      6024  CALL PRTVLT ;TIPARESTE VAL TENS ALIM
32A7    CDB219      6025  CALL CROUT ;RIND NOU
32AA    3A7330      6026  LD A,(ERRFLG) ;DACA NE ESTE ERR IN TESTUL
32AD    E638        6027  AND 38H       ;PARCURS JOB-UL E GATA
32AF    C8          6028  RET Z
32B0    3A00B0      6029  LD A,(MANKEY) ;SE TIP BEM DOAR DACA CHEIA VLEM
32B3    E680        6030  AND 80H ;E PUSA PE 1
32B5    C8          6031  RET Z ;DACA NU,JOB-UL E GATA
32B6    CD5633      6032  CALL AFILEM ;TIP BOARD ERROR MAP
32B9    CDB219      6033  CALL CROUT ;SI RIND NOU
32BC    3E08        6034  LD A,00001000B ;COMANDA BEM DELETE
32BE    3200E0      6035  LD (PCRREG),A
32C1    CD602B      6036  CALL WAITFP ;ASTEAPTA TERMINAREA COMENZII
                    6037  ;
32C4    3A890F      6038  LD A,(TTYFLG) ;DACA ESTE IN MODUL TTY CONTINUA
32C7    E601        6039  AND 01H
32C9    C0          6040  RET NZ ;CONTINUA DACA BITUL E 1
32CA    CD5C1B      6041  CALL NEXTL ;MUTA POINTERII PE LINIA URM.
                    6042 PRTPRC
32CD    21D832      6043  LD HL,PROCEM ;MESAJ 'PROCEED'
32D0    0618        6044  LD B,PROCML
32D2    CD951A      6045  CALL PUTMSG
32D5    C3DA22      6046  JP INGCM2 ;ASTEAPTA COMENZI SAU INTRERUPERI
                    6047  ;
32D8    50524553    6048 PROCEM DEFM 'PRESS "REL" TO PROCEED. '
                    6049 PROCML EQU $-PROCEM
                    6050 ;
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                    6051 ;
32F0    20544553    6052 TERM1 DEFM ' TEST ERR. '
                    6053 TERM1L EQU $-TERM1
                    6054 ;
                    6055 ;*****************************************
                    6056 ;
                    6057 ;PRTVLT ;TIPARESTE TENSIUNILE DE ALIM
                    6058 ;
                    6059 PRTVLT
32FB    3E00        6060  LD A,0 ;SE INIT CURPWS CA NUMARATOR
32FD    32632A      6061  LD (CURPWS),A
                    6062 ;
                    6063 PRTVL1
3300    21632A      6064  LD HL,CURPWS
3303    34          6065  INC (HL) ;SE INCREMENTEAZA NUMARUL SURSEI
3304    CD1033      6066  CALL PRTVC ;SE TIP VAL TENSIUNII
3307    3A632A      6067  LD A,(CURPWS)
330A    FE03        6068  CP 3 ;DACA S-A TIPARIT SI A 3-A VAL E GATA
330C    FA0033      6069  JP M,PRTVL1 ;REIA DACA NU
330F    C9          6070  RET
                    6071 ;
                    6072 ;*****************************************
                    6073 ; PRTVC ;TIPARESTE TENSIUNEA INDIC DE
                    6074 ;         LOCATIA CURPWS
                    6075 ;
                    6076 PRTVC
                    6077 ;
3310    0E55        6078  LD C,'U'
3312    CD961C      6079  CALL ECHO ;TIP 'U'
3315    3A632A      6080  LD A,(CURPWS) ;ADUCE NUMARUL TENSIUNII
3318    F630        6081  OR 30H ;TRANSFORMA IN ASCII
331A    4F          6082  LD C,A ;TIPARESTE
331B    CD961C      6083  CALL ECHO
331E    C5          6084  PUSH BC
331F    0E3D        6085  LD C,'='
3321    CD961C      6086  CALL ECHO
3324    C1          6087  POP BC
3325    3E31        6088  LD A,'1' ;DACA A FOST '1' SE TIP -
3327    B9          6089  CP C ;SE COMPARA CU CARAC TIPARIT
3328    0E2D        6090  LD C,'-' ;SE PREG '-' PT TIP
332A    CA2F33      6091  JP Z,$+5 ;SE SARE PESTE URM INSTR DACA '1'
332D    0E2B        6092  LD C,'+' ;DACA NE E SURSA '1' SEMNUL E +
332F    CD961C      6093  CALL ECHO
                    6094  ; SE VA TIPARI ACUM VAL TENSIUNII
3332    3A632A      6095  LD A,(CURPWS)
3335    87          6096  ADD A,A;SE DUBLEAZA A PT A CALCULA ADRESAA DIN TABV
3336    4F          6097  LD C,A
3337    0600        6098  LD B,0
3339    21622A      6099  LD HL,TABV-2
333C    09          6100  ADD HL,BC ;ACUM HL=ADRESA MSB AL TENSIUNII
                    6101  ;
333D    7E          6102  LD A,(HL) ;SE ADUCE OCTETUL CMS
333E    CD691A      6103  CALL NMOUT ;SE TIP
3341    0E2E        6104  LD C,'.' ;SE TIP '.'
3343    CD961C      6105  CALL ECHO
3346    23          6106  INC HL
3347    7E          6107  LD A,(HL)
3348    CD691A      6108  CALL NMOUT
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334B   0E56       6109  LD C,'V'
334D   CD961C     6110  CALL ECHO
3350   0E20       6111  LD C,' '
3352   CD961C     6112  CALL ECHO ;S-A TIPARIT 'U1=--05.50V '
3355   C9         6113  RET
                  6114 ;
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                    6115 *H AFILEM
3356    212337      6116 AFILEM LD HL,TABIS+6 ;  HL POINTER PE PARAMETRII BEN
3359    0607        6117        LD B,07 ;  MUTA ZONA DE INIT. CORESP MODULULUI
335B    110035      6118        LD DE,PARAM ;   INTR-O ZONA DE MANEVRA A SUBRUTINEI
335E    7E          6119 ADU    LD A,(HL) ;
335F    EB          6120        EX DE,HL ;
3360    77          6121        LD (HL),A ;
3361    23          6122        INC HL ;
3362    13          6123        INC DE ;
3363    05          6124        DEC B ;
3364    EB          6125        EX DE,HL ;
3365    C25E33      6126        JP NZ,ADU ;
                    6127 ; TIPARIRE CR SI 4 BLANCURI
3368    210C35      6128        LD HL,BUFFER ;
336B    E5          6129        PUSH HL ;
336C    360D        6130        LD (HL),0DH ;
336E    0604        6131        LD B,04 ;
3370    23          6132 REPCI1 INC HL ;
3371    3620        6133        LD (HL),20H ;
3373    05          6134        DEC B ;
3374    C27033      6135        JP NZ,REPCI1 ;
3377    E1          6136        POP HL ;
3378    0605        6137        LD B,05 ;
337A    CDF434      6138      CALL TIP ;
                    6139 ; TERMINARE TIPARIRE
337D    3A0535      6140        LD A,(PARAM+5) ;
3380    A7          6141        AND A ;
3381    CA8B33      6142        JP Z,DEZER ;   SALT PT. INCREMENTARE CAP TABEL
3384    210435      6143        LD HL,PARAM+4 ;
3387    35          6144        DEC (HL) ;     NC=NC-1
3388    C39033      6145        JP ADR ;
338B    3E00        6146 DEZER  LD A,0 ;     NC=0
338D    320435      6147        LD (PARAM+4),A ;
3390    1E00        6148 ADR    LD E,0 ;
3392    210035      6149        LD HL,PARAM ;
3395    7B          6150        LD A,E ;
3396    85          6151        ADD A,L ;    HL -- ADR. PARAM + (NO)
3397    6F          6152        LD L,A ;
3398    7E          6153        LD A,(HL) ;  A -- CONTINUTUL OCTETULUI PARAM + (NO)
3399    0600        6154        LD B,0 ;       NB = 0
339B    07          6155 ANAL   RLCA ;
339C    D2D933      6156        JP NC,NUCALE ;  SALT DACA NU EXISTA CALE DE DATE
                    6157 ; TIPARESTE 1 BLANC SI (N-C)
339F    F5          6158        PUSH AF ;
33A0    C5          6159       PUSH BC ;
33A1    210C35      6160        LD HL,BUFFER ;
33A4    E5          6161       PUSH HL ;
33A5    3620        6162        LD (HL),20H ;
33A7    3A0435      6163        LD A,(PARAM+4) ;
33AA    320935      6164        LD (DECONV),A ;
33AD    CDB734      6165       CALL BIZEAS ;
33B0    3A0A35      6166        LD A,(ASCII) ;
33B3    320D35      6167        LD (BUFFER+1),A ;
33B6    3A0B35      6168        LD A,(ASCII+1) ;
33B9    320E35      6169        LD (BUFFER+2),A ;
33BC    E1          6170        POP HL ;
33BD    0603        6171        LD B,03 ;
33BF    CDF434      6172        CALL TIP ;
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33C2    C1          6173          POP BC ;
33C3    F1          6174          POP AF ;
                    6175 ; TERMINARE TIPARIRE
33C4    57          6176          LD D,A ;
33C5    3A0535      6177          LD A,(PARAM+5) ;
33C8    FE00        6178          CP 0 ;
33CA    7A          6179          LD A,D ;
33CB    210435      6180          LD HL,PARAM+4 ;
33CE    C2D533      6181          JP NZ,DECR ;
33D1    34          6182          INC (HL) ;     NC = NC + 1
33D2    C3F033      6183          JP INCR ;
33D5    35          6184 DECR     DEC (HL) ;     NC = NC - 1
33D6    C3F033      6185          JP INCR ;
                    6186 ; TIPARESTE 3 BLANCURI
33D9    C5          6187 NUCALE   PUSH BC ;
33DA    210C35      6188          LD HL,BUFFER ;
33DD    E5          6189          PUSH HL ;
33DE    0603        6190          LD B,03 ;
33E0    3620        6191 REPC12   LD (HL),20H ;
33E2    23          6192          INC HL ;
33E3    05          6193          DEC B ;
33E4    C2E033      6194          JP NZ,REPC12 ;
33E7    E1          6195          POP HL ;
33E8    0603        6196          LD B,03 ;
33EA    F5          6197          PUSH AF ;
33EB    CDF434      6198          CALL TIP ;
33EE    F1          6199          POP AF ;
33EF    C1          6200          POP BC ;
                    6201 ; TERMINARE TIPARIRE
33F0    04          6202 INCR     INC B ;     NB = NB + 1
33F1    57          6203          LD D,A ;
33F2    3E08        6204          LD A,08 ;
33F4    B8          6205          CP B ;   S-A TESTAT INTREG OCTETUL ?
33F5    7A          6206          LD A,D;
33F6    C29B33      6207          JP NZ,ANAL ;
33F9    1C          6208          INC E ;     NO = NO + 1
33FA    57          6209          LD D,A ;
33FB    3E03        6210          LD A,03 ;
33FD    BB          6211          CP E ;     S-AU TESTAT 3 OCTETI?
33FE    7A          6212          LD A,D ;
33FF    C29233      6213          JP NZ,ADR+2 ; DACA NU , ANALIZEAZA OCTETUL URMATOR
3402    0E00        6214          LD C,0 ;     NL = 0
3404    210335      6215          LD HL,PARAM+3 ;
3407    35          6216          DEC (HL) ;     NQ = NQ - 1
3408    F20C34      6217 RECO     JP P,TIPINF ;
340B    C9          6218          RET ;   REVENIRE PT. NQ < 0   (=FF)
340C    1E00        6219 TIPINF   LD E,0 ;      NO = 0
                    6220 ; TIPARESTE CR,LF (2XLF PT. CENTRONICS),'R',(N-0) SI 1 BLAN
340E    210C35      6221          LD HL,BUFFER ;
3411    E5          6222          PUSH HL ;
3412    360D        6223          LD (HL),ASCICR ;
3414    23          6224          INC HL ;
3415    3600        6225  LD (HL),0
3417    23          6226          INC HL ;
3418    3A0635      6227          LD A,(PARAM+6) ;
341B    FE44        6228          CP 'D' ;
341D    CA2334      6229          JP Z,DEPA ;
3420    360A        6230          LD (HL),ASCILF ;
```

```
3422    23          6231          INC HL ;
3423    3652        6232 DEPA     LD (HL),'R' ;
3425    23          6233          INC HL ;
3426    3A0335      6234          LD A,(PARAM+3) ;
3429    320935      6235          LD (DECONV),A ;
342C    CDB734      6236          CALL BIZEAS ;
342F    3A0A35      6237          LD A,(ASCII) ;
3432    77          6238          LD (HL),A ;
3433    23          6239          INC HL ;
3434    3A0B35      6240          LD A,(ASCII+1) ;
3437    77          6241          LD (HL),A ;
3438    23          6242          INC HL ;
3439    3620        6243          LD (HL),' ';
343B    E1          6244          POP HL ;
343C    3A0635      6245          LD A,(PARAM+6) ;
343F    FE44        6246          CP 'D' ;
3441    0606        6247          LD B,6 ;
3443    CA4734      6248          JP Z,FIN ;    FIN
3446    04          6249          INC B ;
3447    CDF434      6250 FIN      CALL TIP
                    6251 ; TERMINARE TIPARIRE
344A    210035      6252 CONTI    LD HL,PARAM ;
344D    7B          6253          LD A,E ;
344E    85          6254          ADD A,L ;
344F    6F          6255          LD L,A ;
3450    7E          6256      LD A,(HL) ;CITESTE OCTETUL DE LA ADR. PARAM + (NO)
3451    0600        6257          LD B,0 ;     NB = 0
3453    07          6258 ANALIZ   RLCA ;
3454    D28534      6259          JP NC,NUTIP ;   SALT DACA NU EXISTA CALE DE DATE
3457    F5          6260          PUSH AF ;
3458    79          6261          LD A,C ;
3459    2100E8      6262          LD HL,PBEMM ; POINTER IN MEMORIA BEM.
345C    85          6263          ADD A,L ;
345D    6F          6264          LD L,A ;
345E    7E          6265          LD A,(HL) ;   CITESTE OCTETUL DE LA ADR. PBEMM + (NL)
345F    50          6266          LD D,B ;
3460    07          6267 REPCI4   RLCA ;
3461    15          6268          DEC D ;
3462    F26034      6269          JP P,REPCI4 ;
                    6270 ; TIPARESTE 2 BLANCURI SI "." SAU "E"
3465    C5          6271          PUSH BC ;
3466    210C35      6272          LD HL,BUFFER ;
3469    E5          6273          PUSH HL ;
346A    3620        6274          LD (HL),' ' ;
346C    23          6275          INC HL ;
346D    3620        6276          LD (HL),' ';
346F    23          6277          INC HL ;
3470    DA7834      6278          JP C,TIPE ;
3473    362E        6279          LD (HL),2EH ;
3475    C37A34      6280          JP ELIB ;
3478    3620        6281 TIPE     LD (HL),' ' ;
347A    E1          6282 ELIB     POP HL
347B    0603        6283          LD B,03 ;
347D    CDF434      6284          CALL TIP ;
3480    C1          6285          POP BC ;
                    6286 ; TERMINARE TIPARIRE
3481    F1          6287          POP AF ;
3482    C39C34      6288          JP CREB ;
```

```
                    6289 ; TIPARESTE 3 BLANCURI
3485    C5          6290 NUTIP  PUSH BC
3486    210C35      6291        LD HL,BUFFER ;
3489    E5          6292        PUSH HL ;
348A    0603        6293         LD B,3
348C    3620        6294 REPCI3 LD (HL),' '
348E    23          6295        INC HL ;
348F    05          6296        DEC B ;
3490    C28C34      6297        JP NZ,REPCI3 ;   JNZ REPCI3
3493    E1          6298        POP HL ;   POP H
3494    0603        6299        LD B,03 ;   MVI B,03
3496    F5          6300        PUSH AF ;   PUSH PSW
3497    CDF434      6301        CALL TIP ;   CALL TIP
349A    F1          6302        POP AF ;   POP PSW
349B    C1          6303        POP BC ;   POP B
                    6304 ; TERMINARE TIPARIRE
349C    04          6305 CREB   INC B ;   INR B          NB = NB + 1
349D    57          6306        LD D,A ;   MOV D,A
349E    3E08        6307        LD A,08 ;   MVI A,08
34A0    B8          6308        CP B ;  TESTEAZA CEI 8 BITI AI UNUI OCTET
34A1    7A          6309        LD A,D ;   MOV A,D
34A2    C25334      6310        JP NZ,ANALIZ ;   JNZ ANALIZ
34A5    1C          6311        INC E ;   INR E          NO = NO + 1
34A6    0C          6312        INC C ;   INR C        NL = NL + 1
34A7    57          6313        LD D,A ;   MOV D,A
34A8    3E03        6314        LD A,03 ;   MVI A,03
34AA    B8          6315        CP E ;   CMP E
34AB    7A          6316        LD A,D ;   MOV A,D
34AC    C24A34      6317        JP NZ,CONTI ;  REIA CICLUL PT. TOTI CEI 3 OCTETI
34AF    0C          6318        INC C ;   INR C          NL = NL +1
34B0    210335      6319        LD HL,PARAM+3 ;   LXI H,PARAM+3
34B3    35          6320        DEC (HL) ;   DCR M          NQ = NQ - 1
34B4    C30834      6321        JP RECO ;   JMP RECO
34B7    F5          6322 BIZEAS PUSH AF ;   PUSH PSW
34B8    C5          6323        PUSH BC ;   PUSH B
34B9    D5          6324        PUSH DE ;   PUSH D
34BA    E5          6325        PUSH HL ;   PUSH H
34BB    0602        6326        LD B,02 ;    CICLUL SE PARCURGE DE 2 ORI
34BD    3A0935      6327        LD A,(DECONV) ;   NR. CARE VA FI CONVERTIT
34C0    210735      6328        LD HL,PONDER ;     ADR. PONDERILOR ZECIMALE
34C3    56          6329 REIA   LD D,(HL) ;   MOV D,M
34C4    0E00        6330        LD C,0 ;   MVI C,0
34C6    92          6331 SCADE  SUB D ;   SUB D
34C7    DACE34      6332        JP C,GATA  IMPARTE (A) LA PONDEREA ZECIMALA
34CA    0C          6333        INC C ;   C - DE CITE ORI SE CUPRINDE
34CB    C3C634      6334        JP SCADE ;   JMP SCADE
34CE    82          6335 GATA   ADD A,D ;   ADD D        RESTUL IMPARTIRII IN A
34CF    F5          6336        PUSH AF ;   PUSH PSW
34D0    79          6337        LD A,C ;   MOV A,C
34D1    C630        6338        ADD A,30H ; VALOAREA ASCII A CIFREI CONVERTITE
34D3    5F          6339        LD E,A ;   MOV E,A
34D4    78          6340        LD A,B ;   MOV A,B
34D5    FE01        6341        CP 01 ;AL DOILEA CARACTER NU SE INLOCUIESTE CU BLANC,
34D7    210B35      6342        LD HL,ASCII+1 ;    CHIAR DACA E ZERO
34DA    7B          6343        LD A,E ;   MOV A,E
34DB    CAE634      6344        JP Z,DEPART ;   JZ DEPART
34DE    2B          6345        DEC HL ;   DCX H
34DF    FE30        6346        CP 30H ;DACA PRIMUL CARACTER E ZERO,SE INLOCUIESTE CU BLANC
```

```
34E1    C2E634      6347          JP NZ,DEPART ;   JNZ DEPART
34E4    3E20        6348           LD A,' ' ;
34E6    77          6349 DEPART   LD (HL),A ;  DEPUNE CARACTERUL CONVERTIT
34E7    F1          6350          POP AF ;      REFACE RESTUL IMPARTIRII
34E8    210835      6351          LD HL,PONDER+1 ;   LXI H,PONDER+1
34EB    05          6352          DEC B ;    DCR B
34EC    C2C334      6353          JP NZ,REIA ; REIA CICLUL PT.CIFRA DE PONDERE M.P.S.
34EF    E1          6354          POP HL ;    POP H
34F0    D1          6355          POP DE ;    POP D
34F1    C1          6356          POP BC ;    POP B
34F2    F1          6357          POP AF ;    POP PSW
34F3    C9          6358          RET ;    RET
34F4    C5          6359 TIP      PUSH BC ;    PUSH B
34F5    4E          6360          LD C,(HL) ;    MOV C,M
34F6    CD961C      6361          CALL ECHO ;    CALL ECHO
34F9    23          6362          INC HL ;    INX H
34FA    05          6363          DEC B ;    DCR B
34FB    C2F534      6364          JP NZ,TIP+1 ;  JNZ TIP+1
34FE    C1          6365          POP BC ;    POP B
34FF    C9          6366          RET ;    RET
3500                6367 PARAM    DEFS 7 ; 7 OCTETI CORESPUNZATOR INIT. MODULULUI
3507    0A01        6368 PONDER   DEFW 010AH ; PONDERI ZECIMALE PT. CONVERSIE
3509                6369 DECONV   DEFS 1 ; CARACTERUL DE CONVERTIT
350A                6370 ASCII    DEFS 2 ; CARACTERELE CONVERTITE IN ASCII
350C                6371 BUFFER   DEFS 7 ; BUFFER PT. CARACTERELE DE TIPARIT
                    6372 ;
                    6373 ;********************************************** END OF FILE "COUSUB"
                    6374 ;**********************************************************
                    6375 ; FUNCTION   : INCCOD
                    6376 ; INPUTS     : LOCATIA CODPTR INDICA LOCUL DE UNDE
                    6377 ;               SE INCEPE INTERPRETAREA MICROCOD.
                    6378 ; OUTPUTS    : LOCATIA CODPTR INDICA URM.OCTET DE
                    6379 ;                 INTERPRETAT
                    6380 ; DESTR      ;A,B,C,D,E,F,H,L
                    6381 ; CALL       :
                    6382 ; DESCR      :INCEPIND DE LA ADRESA INDIC DE
                    6383 ;   LOCATIA CODPTR SE INTERPRETEAZA SI SE INCACA
                    6384 ;   MICROCODUL IN MEMORIA PROCESORULUI RAPID
                    6385 ;
                    6386 INCCOD
3513    2A7130      6387  LD HL,(CODPTR)
3516    7E          6388  LD A,(HL) ;SE ADUCE PRIMUL OCTET
3517    47          6389  LD B,A
3518    E6F0        6390  AND 0F0H ;SE IZOL CIFRA HEXA MSD
351A    FEA0        6391  CP 0A0H  ;DACA E 'A' --SA
351C    CA6535      6392  JP Z,SA
351F    FEB0        6393  CP 0B0H
3521    CA9D35      6394  JP Z,SB
3524    FEC0        6395  CP 0C0H
3526    CAB835      6396  JP Z,CSIA
                    6397  ;DACA NU ESTE A,B,C ESTE EROARE MICROCOD
3529    E5          6398  PUSH HL ;SE SALV.ADRESA CU EROARE
352A    214A35      6399  LD HL,MUCERM ;ADRESA MESAJ ERR
352D    061A        6400  LD B,MUCERL  ;LUNGIME MESAJ
352F    CD951A      6401  CALL PUTMSG ;TIP MESAJ
3532    E1          6402  POP HL ;READUCE ADRESA PT A O AFISA
3533    7C          6403  LD A,H ;
3534    CD691A      6404  CALL NMOUT
```

```
3537    7D          6405  LD A,L
3538    CD691A      6406  CALL NMOUT
353B    0E3D        6407  LD C,'='
353D    CD961C      6408  CALL ECHO ;AFISEAZA SI OCTETUL ERONAT
3540    7E          6409  LD A,(HL) ;ADUCE OCTETUL ERONAT
3541    CD691A      6410  CALL NMOUT
3544    CDB219      6411  CALL CROUT ;RIND NOU
3547    C36B29      6412  JP INSERR ;EROARE PARAM INSTRUCTIE
                    6413 ;
354A    4D494352    6414 MUCERM DEFM 'MICROCODGE SINTAX ERR. AT '
                    6415 MUCERL EQU  $-MUCERM
3564    0D          6416  DEFB ASCICR
                    6417 ;
                    6418 ;
                    6419 SA      ;******* MICROINSTR A **********
                    6420 ;
3565    E5          6421  PUSH HL ;SALV ADRESA IN STIVA
3566    1100E1      6422  LD DE,PPMEM ;DE =INCEPUTUL MEM. MICRO PROGNAM
3569    78          6423  LD A,B  ;READUCE OCTETUL SALVAT IN B
356A    E60F        6424  AND 0FH ;IZOL CIFRA LSD CARE INDICA RINDUL
356C    07          6425  RLCA
356D    07          6426  RLCA
356E    07          6427  RLCA
356F    83          6428  ADD A,E ;SE ADUNA ACUM LA DE
3570    5F          6429  LD E,A
3571    3E00        6430  LD A,0
3573    8A          6431  ADC A,D ;SE ADUNA TRANSPORTUL CU D
3574    57          6432  LD D,A  ;DE=POINTER PE LOC.0 DIN RINDUL INDICAT
                    6433  ;
3575    E1          6434  POP HL ;SE READUCE ADRESA DE MICROCOD
3576    23          6435  INC HL ;SE ADUCE URM OCTET SI SE SALV IN B
3577    7E          6436  LD A,(HL)
3578    47          6437  LD B,A
                    6438  ;
3579    E60F        6439  AND 0FH ;LSD =POZITIA PE RIND (SE ADUNA LA DE)
357B    83          6440  ADD A,E
357C    5F          6441  LD E,A
357D    3E00        6442  LD A,0
357F    8A          6443  ADC A,D
3580    57          6444  LD D,A ;DE=ADRESA OCTETULUI DORIT DIN MEMORIA
                    6445  ;PROCESORULUI RAPID
                    6446  ;
3581    78          6447  LD A,B ;SE READUCE OCTETUL SI SE TEST.BITUL 4
3582    E610        6448  AND 10H
3584    CA9535      6449  JP Z,NEG
3587    23          6450  INC HL
3588    7E          6451  LD A,(HL) ;SE ADUCE OCTETUL MODIFICAT
3589    E5          6452  PUSH HL ;SE SALV ADR MICROCOD IN STIVA
358A    EB          6453  EX DE,HL
358B    B6          6454  OR (HL) ;SE FACE OR CU CEEA CE EXISTA LA LOC.RESP
                    6455          ;IN MEMORIA PROC. RAPID
                    6456 ICREV
358C    77          6457  LD (HL),A ;OCTETUL MODIFICAT TRECE IN
                    6458            ;MEMORIA PROC. RAPID
358D    E1          6459  POP HL ;REFACE ADR MICROCOD
358E    23          6460  INC HL ;POINTER PE URM OCTET
358F    227130      6461  LD (CODPTR),HL ;REACTUALIZ.POINTERUL
3592    C31335      6462  JP INCCOD ;REIA BUCLA
```

```
 LOC    OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

                    6463 NEG
3595    23          6464  INC HL
3596    7E          6465  LD A,(HL)
3597    E5          6466  PUSH HL
3598    EB          6467  EX DE,HL
3599    A6          6468  AND (HL) ;SE FACE 'AND' CU OCTETUL DIN MEMO.
                    6469           ;MICROPROGRAM DACA BITUL 4=1
359A    C38C35      6470  JP ICREV
                    6471 ;
                    6472 ;
                    6473 SB     ;**********MICRO INSTR 'B' ***********
                    6474 ;
359D    23          6475  INC HL ;POINTER PE URM OCTET (LSB ADRESA)
359E    E5          6476  PUSH HL
359F    5E          6477  LD E,(HL) ;ADUCE LSB ADRESA
35A0    2100E0      6478  LD HL,PCRREG ;HL=BAZA ADRESEI GEN DE CODUR1
35A3    78          6479  LD A,B ;READUCE PRIMUL OCTET IN A
35A4    E60F        6480  AND 0FH ;LSD ESTE LSD ADRESA
35A6    57          6481  LD D,A  ;SE DUCE IN D
35A7    19          6482  ADD HL,DE ;HL=ADR DESTIN A OCTETILOR CARE URM.
35A8    EB          6483  EX DE,HL ;DE=ADR.DESTIN
35A9    E1          6484  POP HL   ;SE READUCE ADR. MICROCOD
35AA    23          6485  INC HL   ;SE VA ADUCE NR DE OCTETI DE TRANSFERAT
35AB    4E          6486  LD C,(HL)
35AC    0600        6487  LD B,0 ;BC=NR DE OCTETI DE TRANSFERAT
35AE    23          6488  INC HL ;HL=POINTER PE PRIMUL OCTET
                    6489  ;
35AF    CD1118      6490  CALL LDIR ;SE TRANSFERA OCTETII
                    6491  ;
35B2    227130      6492  LD (CODPTR),HL ;SE NOTEAZA NOUL POINTER IN
                    6493                 ;MICROCOD
35B5    C31335      6494  JP INCCOD
                    6495 ;
                    6496 ;
                    6497 CSIA   ;**********MICROINSTR 'C' (SFRIRSIT COD)****
                    6498 ;
                    6499  ;LA INTILNIREA AC MICROINSTR SE REACTUALIZEAZA
                    6500  ;CODPTR SI SE FACE RETURN
                    6501  ;
35B8    23          6502  INC HL
35B9    227130      6503  LD (CODPTR),HL
35BC    C9          6504  RET
                    6505 ;
                    6506 ;
                    6507 ;************************************************ END OF FILE "INCCOD"
```

```
 LOC    OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

                    6508 *H TABELA DE CODURI
                    6509 CODTAB
35BD    583F2020    6510  DEFM 'X?    '
35C3    413C        6511  DEFW X?
35C5    00          6512  DEFB 0
35C6    0000        6513  DEFW 0
                    6514 CODTBS EQU $-CODTAB ;PASUL IN TABELA DE CODURI
                    6515 ;
35C8    434B2020    6516  DEFM 'CK    '
35CE    D13D        6517  DEFW CK
35D0    00          6518  DEFB 0
35D1    0000        6519  DEFW 0
                    6520 ;
35D3    50415249    6521  DEFM 'PARITY'
35D9    213E        6522  DEFW PARITY
35DB    00          6523  DEFB 0
35DC    0000        6524  DEFW 0
                    6525 ;
35DE    47414C52    6526  DEFM 'GALROW'
35E4    713E        6527  DEFW  GALROW
35E6    00          6528  DEFB 0
35E7    0000        6529  DEFW 0
                    6530 ;
35E9    47575220    6531  DEFM 'GWR   '
35EF    073F        6532  DEFW GWR
35F1    00          6533  DEFB 0
35F2    0000        6534  DEFW 0
                    6535 ;
35F4    4D415345    6536  DEFM 'MASEST'
35FA    893F        6537  DEFW MASEST
35FC    00          6538  DEFB 0
35FD    0000        6539  DEFW 0
                    6540 ;
35FF    45584441    6541  DEFM 'EXDATA'
3605    1F40        6542  DEFW EXDATA
3607    00          6543  DEFB 0
3608    0000        6544  DEFW 0
                    6545 ;
360A    57414C4B    6546  DEFM 'WALK  '
3610    D340        6547  DEFW WALK
3612    00          6548  DEFB 0
3613    0000        6549  DEFW 0
                    6550 ;
3615    4D415243    6551  DEFM 'MARCH '
361B    5541        6552  DEFW MARCH
361D    00          6553  DEFB 0
361E    0000        6554  DEFW 0
                    6555 ;
3620    494E4441    6556  DEFM 'INDATA'
3626    EB41        6557  DEFW INDATA
3628    00          6558  DEFB 0
3629    0000        6559  DEFW 0
                    6560 ;
362B    47414C43    6561  DEFM 'GALCOL'
3631    6342        6562  DEFW  GALCOL
3633    00          6563  DEFB  0
3634    0000        6564  DEFW  0
                    6565 ;
```

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 LOC    OBJ CODE    STMT SOURCE STATEMENT                          ASM 1.0

3636    47414C44    6566  DEFM 'GALDIA'
363C    F942        6567  DEFW  GALDIA
363E    00          6568  DEFB 0
363F    0000        6569  DEFW 0
                    6570 ;
3641    47414C50    6571  DEFM 'GALPAT'
3647    8F43        6572  DEFW GALPAT
3649    00          6573  DEFB 0
364A    0000        6574  DEFW 0
                    6575 ;
364C    52454652    6576  DEFM 'REFRST'
3652    1144        6577  DEFW REFRST
3654    00          6578  DEFB 0
3655    0000        6579  DEFW 0
                    6580 ;
3657    52454652    6581  DEFM 'REFRDN'
365D    B144        6582  DEFW REFRDN
365F    00          6583  DEFB 0
3660    0000        6584  DEFW 0
                    6585 ;
3662    534F4354    6586  DEFM 'SOCTET'
3668    FB45        6587  DEFW  SOCTET
366A    00          6588  DEFB 0
366B    0000        6589  DEFW 0
                    6590 ;
366D    46424154    6591  DEFM 'FBAT   '
3673    B946        6592  DEFW  FBAT
3675    00          6593  DEFB 0
3676    0000        6594  DEFW 0
                    6595 ;
3678    54524953    6596  DEFM 'TRIST  '
367E    3147        6597  DEFW  TRIST
3680    00          6598  DEFB 0
3681    0000        6599  DEFW 0
                    6600 ;
3683    45525250    6601  DEFM 'ERRPAR'
3689    7147        6602  DEFW  ERRPAR
368B    00          6603  DEFB 0
368C    0000        6604  DEFW 0
                    6605 ;
368E    41465058    6606  DEFM 'AFPX   '
3694    1148        6607  DEFW AFPX
3696    00          6608  DEFB 0
3697    6231        6609  DEFW AFP
                    6610 ;
3699    41465059    6611  DEFM 'AFPY   '
369F    5149        6612  DEFW AFPY
36A1    00          6613  DEFB 0
36A2    6231        6614  DEFW AFP
                    6615 ;
36A4    53454C4D    6616  DEFM 'SELMEM'
36AA    914A        6617  DEFW SELMEM
36AC    00          6618  DEFB 0
36AD    8E31        6619  DEFW TERMS1
                    6620 ;
                    6621 CODTBL EQU ($-CODTAB)/CODTBS ;NR DE RUBRICI
                    6622 ;
36AF                6623  DEFS 10*11 ;LASA SPATIU PENTRU INCA 10 CODURI
```

```
6624 ;********************************************** END OF FILE "TABCOD"
```

```
                    6625 *H TABIS
                    6626 ;*************************************************
                    6627 ; TABIS =TABEL CU DATE DI INIT SPECIFICE
                    6628 ; MODULULUI
                    6629 TABIS
                    6630 ;************ LIMITE TENSIUNI ******************
                    6631 ;
371D                6632  DEFS 6 ;6 OCTETI PENTRU LIMITELE SUPERIOARE SI
                    6633         ;INF ALE TENSIUNILOR DE ALIM
                    6634 ;
                    6635 ;********* PARAMETRI STRUCTURA BEM **************
                    6636 ;
3723                6637  DEFS 3 ;TREI OCTETI CARE INDICA BITII CARE
                    6638         ;APAR IN LEM
3726                6639  DEFS 1 ;1 OCTET CARE INDICA NR DE RINDURI DIN LEM
3727                6640  DEFS 1 ;NR CAI DATE IN LEM (PT NUMEROTAREA INV)
3728                6641  DEFS 1 ;FLAG DIRECT(0) / INVERS (FF)
3729                6642  DEFS 1 ;FLAG FORMAT LARG (0) SAU STRINS (44H)
                    6643 ;
                    6644 ;
                    6645 ;********** OCTETI SPECIFICI PT CODURI **********
                    6646 ;
                    6647 MARCHC
372A                6648  DEFS 2 ;2 OCTETI SPACIFICI PT CODUL MARCH
                    6649 ;
                    6650 ;******** OCTETI DE INITIALIZARE ***********
                    6651 ;
372C                6652 REFFLG DEFS 1   ;FLAG REFRESH & HARD ERROR
372D                6653 CUPBUF DEFS 4   ;4 OCTETI DE INIT CUPLOR
                    6654                 ;VOR FI MUTATI LS F000-F003
3731                6655 PVCBUF DEFS 3   ;3 OCTETI CE INDICA CAILE TESTATE;
                    6656                 ;EI TREC LA PVCREG
                    6657                 ;IN CADRUL FIECARUI OCTET BITII SINT
                    6658                 ;IN ORDINE INV (0-7,2-6,ETC )
3734                6659 PCPBUF DEFS 6 ;6 OCTETI PENTRU CAPACITATE
373A                6660 PCRFLG DEFS 1   ;1 OCTET DE COMANDA A PROCESORULUI
                    6661                 ;RAPID ;04H=AUTOLOAD MEM TOPO
373B                6662 TOPXBF DEFS 256; BUFFER DE 256 OCTETI PT MEMORIA TOPO
                    6663                 ;PE AXA X;
383B                6664 TOPYBF DEFS 256; IDEM PE AXA Y
393B                6665 TOPZBF DEFS 16  ;IDEM AXA Z,16 OCTETI
                    6666 ;
                    6667 ;
394B                6668  DEFS 32 ;PENTRU SIGURANTA SE MAI LASA UN SPATIU
                    6669 ;
396B                6670 TIMOUT DEFS 2 ;VARIABILA PENTRU TEMPORIZARE
                    6671          ;TESTOR ;ESTE ALTERATA DE INSTR FPW
                    6672 ;
                    6673 ;
                    6674 ;************************************************ END OF FILE "TABIS"
```

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 LOC    OBJ CODE    STMT SOURCE STATEMENT                                ASM 1.0

                    6675 *H REZERVARI SPATIU INTERPRETER
                    6676 ;
                    6677 LABTBL  EQU 50 ;LUNGIMEA TABELEI DE ETIC
396D                6678 LABNB DEFS 1 ;NR DE ETICHETE DIN TABELA
396E                6679 LABTAB DEFS LABTBL*8 ; LABTBL DE ETICHETE A 6 CARAC
3AFE                6680 LABCR  DEFS 6 ;LOCATII PENTRU ETICHETA CURENTA
3B04                6681 LABCRA DEFS 2 ;ADRESA ETICHETEI CURENTE
                    6682 ;
3B06                6683 INTPTR DEFS 2 ;INTERPRETER POINTER
                    6684                ;CONTINE ADRESA CARACTERULUI CARE
                    6685                ;URMEAZA A FI ANALIZAT
3B08                6686 INSADR DEFS 2 ; LOCATII CARE VOR CONTINE ADRESA
                    6687               ; SUBRUTINEI CORESPUNZATOARE INSTRUCTIEI
                    6688               ; CE TREBUIE EXECUTATE
                    6689 ;
                    6690 ;
3B0A                6691 SSTFLG DEFS 1 ;FLAG PENTRU EXEC PAS CU PAS
3B0B                6692 PRTFLG DEFS 1 ;PRINT ALL FLAG ;DACA AC FLAG = 0
                    6693 ;           NU SE TIPARESTE TEXTUL DAT PRIN INSTR
                    6694 ;           "NAME"
                    6695 ;              DACA EL ESTE 1 SE TIPARESTE
3B0C                6696 ISTCKP DEFS 2 ; INDIC. DE STIVA AL INTERPRETERULUI
3B0E                6697 ISTCKA DEFS 256 ;ZONA DE STIVA PENTRU 128 CALL
                    6698                ;INCLUSE
                    6699 ;
                    6700 ; AICI SE COMPUNE MESAJUL DE SFIRSIT DE PROGRAM
3C0E    454E4420    6701 ENDM DEFM 'END OF '
3C15                6702 TITBUF DEFS 16 ;REZERVARE 16 OCTETI PENTRU TITLUL
                    6703                ;PROGRAMULUI.AC OCTETI SINT COMPLE
                    6704                ;TETI DE INSTR. TITLE
3C25    204F4E20    6705  DEFM ' ON ' ;
3C29                6706 SERBUF DEFS 6 ;6 OCTETI PENTRU SERIA MODUL
                    6707               ;COMPLETATI DE COMANSA SERIES DIN INTERP
3C2F    0D          6708  DEFB ASCICR
                    6709 ENDML EQU $-ENDM
                    6710 ; MESAJUL TIPARIT LA INSTR END VA ARATA ASTFEL :
                    6711 ;END OF TITLE     ON 2684
3C30                6712 NAMBUF DEFS 16 ;REZERVARE 16 OCTETI PENTRU NUMELE
                    6713                ;SETULUI DE TESTE COMPLETAT DE INSTR
                    6714                ;NAME
                    6715 ;
                    6716 NAMBFLEN EQU $-NAMBUF
                    6717 ;
3C40                6718 REZFLG DEFS 1 ;REZULT FLAG
                    6719  ;ACEST OCTET SE INIT PE 0 (MODUL OK)
                    6720  ;APOI SE FACE OR CU REZULTATUL FIECARUI
                    6721  ;TEST
                    6722  ;DACA OCEST OCTET E DIF DE 0 ATUNCI
                    6723  ;REZULTATUL NU ESTE OK
                    6724 ;********************************************** END OF FILE "1NTREZ"
```

```
                    6725 *H SPATIU MICROCODURI
                    6726 ;
                    6727 ;
                    6728 ;
                    6729 X?
                    6730  ;COD PROGRAMABIL PRIN TEXT SURSA
3C41                6731  DEFS 400
                    6732 CK
                    6733  ;COD CHECKER BOARD
3DD1                6734  DEFS 80
                    6735 PARITY
                    6736  ;COD PARITATE
3E21                6737  DEFS 80
                    6738 GALROW
                    6739  ; COD GALLOPING LINII
3E71                6740  DEFS 150
                    6741 GWR
                    6742  ;COD GALOPPING WRITE RECOVERY
3F07                6743  DEFS 130
                    6744 MASEST
                    6745  ;COD MASEST
3F89                6746  DEFS 150
                    6747 EXDATA
                    6748  ;COD EXISTENTA CAI DATE
401F                6749  DEFS 180
                    6750 WALK
                    6751  ;COD WALKING
40D3                6752  DEFS 130
                    6753 MARCH
                    6754  ;COD MARCH
4155                6755  DEFS 150
                    6756 INDATA
                    6757  ;COD INDATA (INTERACTIUNE CAI DATE )
41EB                6758  DEFS 120
                    6759 GALCOL
                    6760  ;COD GALOPPING COLOANE
4263                6761  DEFS 150
                    6762 GALDIA
                    6763  ;COD GALLOPING DIAGONAL
42F9                6764  DEFS 150
                    6765 GALPAT
                    6766  ;COD GALPAT
438F                6767  DEFS 130
                    6768 REFRST
                    6769  ;COD REG. STATICA
4411                6770  DEFS 160
                    6771 REFRDN
                    6772  ;COD REG. DINAMICA
44B1                6773  DEFS 330
                    6774 SOCTET
                    6775  ;COD VERIF SCRIERE PE OCTET
45FB                6776  DEFS 190
                    6777 FBAT
                    6778  ;COD FUNCTIONARE PE BATERIE
46B9                6779  DEFS 120
                    6780 TRIST
                    6781  ;COD TESTARE STARE TRI-STATE REG. DATA OUT
4731                6782  DEFS 64
```

```
 LOC    OBJ CODE    STMT SOURCE STATEMENT                                  ASM 1.0

                    6783 ERRPAR
                    6784  ;COD ER. PARIT (VERIF CIRC DE PARIT DE PE MODUL)
4771                6785  DEFS 160
                    6786 AFPX
                    6787  ;COD AFPX
4811                6788  DEFS 320
                    6789 AFPY
                    6790  ;COD AFPY
4951                6791  DEFS 320
                    6792 SELMEM
                    6793  ; COD SELETARE MODUL
4A91                6794  DEFS 150
                    6795 ;
                    6796 ;
                    6797 INFINIT
                    6798  ;COD LANSAT DE LA CHEI
4B27                6799  DEFS 150
                    6800 CMAN
                    6801  ;COD MANUAL (CTIONAT DE LA CHEI)
4BBD                6802  DEFS 64
                    6803 CADR
                    6804  ;COD ADRESE MANUAL (ACTIONAT DE LA CHEI)
4BFD                6805  DEFS 64
                    6806 ;************************************** END OF FILE "CODSPA"
                    6807 ;*****************************************************
                    6808 ; INTEND ESTE UN FISIER CARE MARCHEAZA SFIRSITUL
                    6809 ; INTERPRETERULUI SI CALCULEAZA LUNGIMEA IN
                    6810 ; SECTOARE A SA
                    6811 ;
                    6812 INTLEN EQU ($-INSTART)/128+1 ;LUNGIMEA IN SECTOARE
                    6813 ;
                    6814 ; GATA
                    6815 ;************************************** END OF FILE "INTEND"
```

```
                    6816 *H TEST SISTEM CONSTANT DEFINITION.
                    6817 ;*****************************************
                    6818 ; BAZA DE TIMP PROGRAMABILA
                    6819 ;   GHERMAN
                    6820 ;
                    6821 TCDREG EQU 0D000H ;TIMING COMMAND REGISTER
                    6822 TDREG  EQU 0D010H ; 1 OCTET  DATE
                    6823 TTREG  EQU 0D020H ; 1 OCTET  DATE
                    6824 TRREG  EQU 0D030H ; 2 OCTETI DATE
                    6825 TWREG  EQU 0D100H ; 6 OCTETI DATE,2 OCTETI SEMN
                    6826 TCREG  EQU 0D110H ; 4 OCTETI DATE,1 OCTET  SEMN
                    6827 TGREG  EQU 0D120H ; 4 OCTETI DATE,1 OCTET  SEMN
                    6828 TMREG  EQU 0D200H ; 2 OCTETI DATE
                    6829 TOREG  EQU 0D210H ; 2 OCTETI DATE
                    6830 TIREG  EQU 0D220H ; 4 OCTETI DATE,1 OCTET  SEMN
                    6831 TAREG  EQU 0D230H ; 4 OCTETI DATE,1 OCTET  SEMN
                    6832 TEREG  EQU 0D240H ; 2 OCTETI DATE,1  OCTET SEMN
                    6833                   ; 1 OCTET  L(S)
                    6834 TBREG  EQU 0D300H ; 4 OCTETI DATE,1 OCTET  SEMN
                    6835 TSREG  EQU 0D310H ; 4 OCTETI DATE,1 OCTET  SEMN
                    6836 ;
                    6837 ;*****************************************
                    6838 ; SURSELE PROGRAMABILE
                    6839 ;
                    6840 ;OBS :FIECARE SURSA ESTE DOTATA CU UN CONVERTOR
                    6841 ; DE 12 BITI BCD IN CAE TREBUIE INCACATA VALOA-
                    6842 ;REA TENSIUNII ,FIECARE BIT FIIND COMPLEMENTAT
                    6843 ; LA ADRESA INDICATA SE INCARCA MSB (2 CIFRE BCD)
                    6844 ; LA ADR.+1 SE INCARCA LSB AVIND CIFRA FE POZ 4-7
                    6845 ;
                    6846 ; CONVERTORUL U3 (PT TENS DE 12V) VA DUBLA VALOA-
                    6847 ; REA IN V A TENSIUNII INSCRISE IN EL (PT A DA 12V
                    6848 ; TREBUIE SA FIE INCARCAT CU 0600 )
                    6849 ;
                    6850 PCDREG EQU 0C000H ;POWER SUPP COMMAND REG
                    6851 ;
                    6852 PU1REG EQU 0C00AH ;U1 (-) COMMAND REG
                    6853 PU2REG EQU 0C00CH ;U2 (+) COMMAND REG
                    6854 PU3REG EQU 0C00EH ;U3 (+,X2) COMMAND REG
                    6855 ;
                    6856 ;
                    6857 ;*****************************************
                    6858 ; PROCESOR RAPID NICOLAE BALMEZ
                    6859 ;
                    6860 ;
E000                6861  ORG 0E000H
E000                6862 PCRREG DEFS 1 ;COMMPAND & REZULT REGISTER
                    6863 ;
E100                6864  ORG 0E100H
E100                6865 PPMEM DEFS 16*8 ; MEMORIE MICROPROGRAM
                    6866 ;
E200                6867  ORG 0E200H
                    6868 PSTREG         ;REGISTRE DE SALT
E200                6869  DEFS 64 ;64 REGISTRE DE STARE
                    6870 ;
E300                6871  ORG 0E300H
                    6872 PCTREG      ;REGISTRE DE CONSTANTE (12)
E300                6873  DEFS 12
```

```
                    6874 ;
E400                6875  ORG 0E400H
                    6876 PDTREG     ;REGISTRU DE DATE
E400                6877  DEFS 1
                    6878 ;
E500                6879  ORG 0E500H
                    6880 PINREG     ;REGISTRU DE INTRERUPERE
E500                6881  DEFS 1
                    6882 ;
E800                6883  ORG 0E800H
                    6884 PBEMM      ;MEMORIA BEM
E800                6885  DEFS 48
                    6886 ;
E900                6887  ORG 0E900H
                    6888 PVCREG     ;REGISTRE VALIDARE COMPARATIE
E900                6889  DEFS 3    ; (BITI TESTATI)
                    6890 ;
EA00                6891  ORG 0EA00H
                    6892 PCPREG     ;REGISTRE CAPACITATE
EA00                6893  DEFS 6
                    6894 ;
EC00                6895  ORG 0EC00H
EC00                6896 PTMX DEFS 256 ; MEMORIA TOPO X
ED00                6897 PTMY DEFS 256 ; MEMORIA TOPO Y
EE00                6898 PTMZ DEFS 16  ; MEMORIA TOPO Z
                    6899 ;
                    6900 ;*************************************************
                    6901 ; CUPLOR :MIHAI RIMBASIU
                    6902 ;
                    6903 CCDREG EQU 0F000H ;REGISTRU COMENZI CUPLOR
                    6904 CCPREG EQU 0F001H ;REGISTRU COMPARATIE CUOLOR
                    6905 CSMREG EQU 0F002H ;REGISTRU SELECT MODUL
                    6906 CPRREG EQU 0F003H ;REGISTRU PARAMETRI
                    6907 ;
                    6908 ;SEMNIF:
                    6909 ;
                    6910 ;1. CCDREG
                    6911 ; BIT0 =0 CAPSULA 4K
                    6912 ;       =1 CAPSULA 16K (NUMAI LA I100 AUTONOM)
                    6913 ; BIT1 = X
                    6914 ; BIT2 = X
                    6915 ; BIT3 = X
                    6916 ; BIT4 = X
                    6917 ; BITII 5,6,7 SELECTEAZA UN ANUME TIP DE MODUL
                    6918 ;      PE PRINCIPIUL CA NUMAI UNUL ESTE 1
                    6919 ;    BIT 5 = 1 : MODUL TIP 1
                    6920 ;    BIT 6 = 1 : MODUL TIP 2 (I 100 AUT )
                    6921 ;    BIT 7 = 1 : MODUL TIP 3 ( 8010 )
                    6922 ;2. CCPREG
                    6923 ;  PENTRU MODULE TIP 2
                    6924 ;    SE INCARCA CU O ADRESA ;DACA ACEASTA NU
                    6925 ;     NU COINCIDE CU CEA DIN CSMREG MODULUL TREBUIE
                    6926 ;     SA NU SE SELECTEZE
                    6927 ;  PENTRU CELELALTE:
                    6928 ; BIT 0 = 0 ;SE NEAGA SELECT MODUL
                    6929 ; BIT 1 = 0 ;SE NEAGA DOI  (INIT MODUL)
                    6930 ;
                    6931 ;3. CSMREG
```

```
                    6932 ; BITII 0,1,2 FIXEAZA ADRESA DE SELECTIE A
                    6933 ;   UNUI MODUL CARA ARE CA INTRARI SI ADRESE SUP.
                    6934 ;   CAPACITATII SALE SI CARE II FIXEAZA ADRESA
                    6935 ;4. CPRREG
                    6936 ; BIT 0 = 0 STROBARE ADRESE
                    6937 ;       = 1 FARA STROBARE ADRESE
                    6938 ; BIT 1 = 0 STROBARE DATE INTRARE MODUL
                    6939 ;       = 1 FARA STRABARE DATE INTRARE
                    6940 ;
                    6941 ;*************************************************
                    6942 ; CHEI COMENZI MANUALE
                    6943 ;
                    6944 MANKEY EQU 0B000H ;ESTE CABLATA MEMORY MAPPED
                    6945 ;BIT 7 = VLEM `
                    6946 ;BIT 6 = CLEM
                    6947 ;BIT 5 =
                    6948 ;BIT 4 =
                    6949 ;BIT 3 =
                    6950 ;BIT 2 =
                    6951 ;BIT 1 =REZ
                    6952 ;BIT 0 =REZ
                    6953 ;
                    6954 ;************************************************* END OF FILE "SISDEF"

  0 ASSEMBLY ERRORS
     PASS 2 COMPLETE
     DISK ERROR 88 IN MOSO3D.A.S
     ASSEMBLY COMPLETE
     *  A
     BAD FILE NAME
     * A SPARE   RZ DOSCMD FEDIT AUXDOS AUX REAL EDCMD INTST PUBLIC SVAREA INTERF
SUBINT INSTAB SIMINS AUXI TIMINO INTRSV INITT CODSB INCCOD TABCOD TABIS INTREZ
CODSPA INTEND SISDEF ( X NOO O=S L=S N=MOSO3D D=TDD.82.06.16 )
     ASM 1.0
     PASS 1 COMPLETE
                         89  CALL GET    ;ASTEAPTA O COMANDA
      ***  UNDEFINED SYMBOL  ***
                        335  CALL GET ;ASTEAPTA RASPUNS
      ***  UNDEFINED SYMBOL  ***
                        359  CALL GET ;SE ASTEAPTA RASPUNS
      ***  UNDEFINED SYMBOL  ***
```

```
SYMBOL   VAL  DEFN REFS

AAF     7F9E 3115  298  564  586  712  761  928
ACF     7F97 3110
AD      2C7A 4982 4974
ADDZ    1891 1157
ADR     3390 6148 6145 6213
ADRBUF  3185 5842 5493 5704 5784 5825 6005
ADREV   7F04 3106  299  565  587  713  762  905
ADRSS   7F00 3105
ADU     335E 6119 6126
AEF     7FA0 3116
AFILEM  3356 6116 3452 3965 6032
AFF     3162 5819 6609 6614
AFF1    3176 5833 5830
AFFX    4811 6786 6607
AFFY    4951 6789 6612
ALF     7F9C 3114  296  562  584  710  759  924
ALTC    2CB0 5015 5151 5156
ANAL    339B 6155 6207
ANALIZ  3453 6258 6310
ANUM    318D 5843 3802 5776 5820 5834
AP      2DF4 5189
APAR    2BE8 4893 5036 5040 5042 5046 5048 5052 5054 5060 5064 5067 5070
                  5073 5135 5269 5271 5273 5275 5290 5293 5296 5299
APF     7F9A 3112  291  557  579  704  753  933
APS     2BF4 4895 4937 4988 4991 4994 4997 5012 5089 5182 5191
ASCICR  000D 2217  216  224  256  406  478  505  513  517  521  526  531
                   536  539  542  546  610  995 1392 1415 1517 1521 1674
                  1846 1900 1934 1943 1976 1987 2116 2161 2201 2599 2617
                  2620 2640 2707 2715 2779 2791 2851 3227 3229 3310 3344
                  3382 3463 3473 3492 3606 3609 3760 3836 3846 3877 3980
                  4052 4076 4162 4164 4193 4203 4388 4424 4663 4703 4822
                  5365 5387 5404 5422 5450 5452 5686 5982 6223 6416 6708
ASCII   350A 6370 6166 6168 6237 6240 6342
ASCILF  000A 2218 2204 6230
ASEL    7F99 3111
ASF     7F9B 3113  922
ATABET  2BF8 4896 5094 5158
ATABIT  2BA6 4837 4890 4914
ATBITL  000D 4890 4925
AZMAN   2BEC 4894 5187 5246 5282 5284 5286 5288 5289
BEEI10  2748 3989 3994
BEEINS  2741 3965 3684
BEMCMD  2419 3448 3267
BEMESL  000A 3979 3954
BEMINS  26FB 3947 3681
BEMMES  2736 3977 3449 3953 3979
BIZEAS  34B7 6322 6165 6236
BUCLA   2E0B 5198 5195 5196 5205
BUCLA2  2E22 5214 5221
BUFF    7F16 3108
BUFFER  350C 6371 6128 6160 6167 6169 6188 6221 6272 6291
BUN     2DF9 5191
CA      2D0F 5059 5056
CADR    4BF0 6003 5950
CALINS  2750 4001 3687
CASC    2C64 4971 4960 4968
CAT     16D6  808  189
CAT1    16F4  822  842
```

```
SYMBOL  VAL  DEFN REFS

CAT2    1711  837  847
CAT3    1719  844  825
CATCMD  12E2  189  103
CCDREG  F000 6903 5552
CCMD    1E9D 2624  393
CCMD10  1EBC 2646 2636
CCMD30  1EC2 2651 2673 2688 2709
CCMD40  1ED0 2661 2655
CCMD50  1EF6 2690 2664
CCMD60  1EFE 2699 2668
CCMD70  1F10 2712 2706
CCMD80  1F18 2720 2710
CCMD85  1F3B 2742 2737
CCMD90  1F47 2753 2741 2749
CCPREG  F001 6904 5864 5876
CHEXZ   1854 1106  833  937 1860 4492 4718 5490
CHEXZ1  1884 1144 1113 1122 1127 1136
CI      1CD1 2244   62  315 2227 2352 3158
CI05    1CD3 2250 2252
CI10    1CE2 2257 2265
CIC     2C96 4999 5007
CK      3DD1 6732 6517
CMAN    4BBD 6800 5945
CMPM    1BC5 1999  199  652 2801 3534 3628 5661
CMPM1   1BCF 2009 2003 2016
CNVBN   19A9 1364 1472 4642
CO      8006 3076
CODADR  306C 5593 5681
CODEX1  30FF 5726 5722 5812 5839 5867 5879
CODEXQ  30D9 5698 3807
CODFLG  306E 5594 5860 5873 5895
CODID1  30A2 5660 5668
CODID2  30BD 5676 5662
CODIDF  3095 5652 3799
CODINS  264E 3796 3678
CODNBF  3066 5592 5613 5623 5655 6019
CODPTR  3071 5601 5682 5946 5951 5956 6387 6461 6492 6503
CODTAB  35BD 6509 4111 4117 5654 6514 6621
CODTBL  0016 6621 5656
CODTBS  000B 6514 5664 5679 6621
CODTPA  306F 5599 5761 5859
CONT    2D2B 5075 5062 5279
CONTI   344A 6252 6317
CONV    2E92 5281 5186 5245
COP     1CFC 2292 2200 2205 2302
COP10   1D1B 2310 2298
COR     2E60 5253 5249
CORECT  2DAD 5146 5137 5139 5141 5143
CPDR    1832 1062 1074 1902 1980 2121 2643 2852
CPIR    1843 1080 1092 1936 2162 4706
CPRREG  F003 6906 5941
CREB    349C 6305 6288
CROUT   19B2 1388  813  814  836 1886 2717 3453 3887 3960 3966 5973 6025
                   6033 6411
CSF     2F12 5359 4955 5020 5078 5149 5154
CSIA    35B8 6497 6396
CSMREG  F002 6905
CSR1    0098 2219   51  239 2220 2295
```

```
SYMBOL  VAL  DEFN REFS

CT      2C76 4979 4976
CU      2D47 5088 5085
CUPBUF  372D 6653 5551 5862 5875 5939
CURPWS  2A63 4548 4410 4448 4464 4476 4517 6061 6064 6067 6080 6095
CZHEX   191A 1250 2393 2424 2456 2478 2503 2545 2826 3922 4332 4483
CZHEX1  194A 1288 1257 1266 1271 1280
DECONV  3509 6369 6164 6235 6327
DECR    33D5 6184 6181
DEFMS   286C 4163 4149
DELAY   1D27 2331 2208 2254 2258 2267 2335
DELCMD  1E1F 2527  381
DELFIL  1612  677  181
DEPA    3423 6232 6229
DEPART  34E6 6349 6344 6347
DEZER   338B 6146 6142
DFCMD   12C2  164   95
DFMINS  25FD 3738 3660
DGETCM  1229   76   78
DIRBUF  0F98   34  563  585  647  772  811  819  862  879  891
DLCM10  1E44 2551 2565
DLCM20  1E59 2567 2564
DLFIL2  1656  721  679
DOSBGN  120A   49   43
DOSGNO  14CF  503   66
DOSREV  1213   56   85  262  304  570  592  718  767  909 3223 3285
DOSTAR  1200   42
DOSTCK  90A0   40   58   77  310
DPRCMD  1333  254  105  264
ECHO    1C96 2171  445  471  486  829 1393 1619 1624 1668 1868 2355 2658
                  2685 2695 3879 4726 6014 6016 6018 6023 6079 6083 6086
                  6093 6105 6110 6112 6361 6408
ECHOP   1CA9 2193 2175
ECHOS   8009 3077 2178 3990
ECHP05  1CB2 2199 2197
ECHP10  1CC8 2210 2203
EDRTN   0F8C   23   86 2986 3167 3280
EDSTAR  1385  312   99  348  351  354 3219 3283
EERR    19B8 1406
EFPTR   0EFE   10  133  339  345 2035 2047 2052 2058 2128 2139 2154 2910
                  2934 2941 2966
EG      2D7E 5123 5118
EGAL    2CA8 5010 5003
EGETCM  13F9  368  320  370 1927 1959
EIPTR   0EFC    9  327 1897 1918 1933 1938 1971 1975 1982 2045 2083 2104
                  2118 2126 2135 2155 2164 2379 2509 2561 2603 2638 2723
                  2740 2800 2847 2875 2932 2955 2967 2969 3180 3182 3196
                  3237 3305 3336 3364 3369 3512 4006 4016 4038 4063 4086
                  4123 4178 4222 4571 4695 4710 4727
ELIB    347A 6282 6280
ELIND   1C2F 2098 2553 2727
ELIND2  1C56 2124 2115
ELIND3  1C88 2158 2147
EMES1   1459  407  331  408
EMES1L  0009  408  332
EMES2   1462  409  356  410
EMES2L  0010  410  357
ENCMD   1D46 2388  385
ENCMD1  1D6A 2409 2407
```

```
SYMBOL  VAL  DEFN REFS

ENCML   1D55 2394 2401
ENDINS  281F 4132 3702
ENDM    3C0E 6701 4138 6709
ENDML   0022 6709 4139
EOI     0020 5371 5380 5393 5412 5442 5481 5737
ERMES   19C4 1413 1408
ERNC    2F0F 5350 4958 5058 5081 5145
ERNP    2F10 5351 5087
ERORAM  7F07 3107
ERRFLG  3073 5602 3801 4352 5747 5759 6011 6026
ERROR   19B8 1407  106  120  148  174  179  226  259  400  607  614  876
                   946  955 1471 1511 1518 1522 2069 2533 2537 2549 2571
                  2630 2775 2780 2831 2838 2900 2904 2911 3224 3286 3399
ERRPAR  4771 4783 6602
ERRTN   0F8A   22   81  321 1411 3165 3213 3246
ERTAS   2F0C 5348 5109 5111
ERVAL   2F0E 5349 4978 5347
ERVIT   2F07 5346 5127 5190 5252
ESC     001B 2361 2195
ESCNON  1445  405  322
ESPACH  0EFC    8  138  349 2038 2920
ESPACL  0200    5  135  270  326  338  346  711  760 1885 1893 1970 2113
                  2378 2508 2635 2739 2844 3179 3195 3236 3304 4694
ESTACK  90A0  310  313  369 3146
ETCMD   1D39 2377  383
ETEMP   0F02   12 2459 2463 2465 2481 2485 2487 2506 2516 2725 2746
EUCMD   1D73 2419  387
EUCML   1D82 2425 2432
EXDATA  401F 6747 6542
FBAT    46B9 6777 6592
FCMD    1F54 2769  395
FCMD10  1F6A 2787 2795
FCMD20  1F7A 2797 2792 2794 2810
FCMD30  1F91 2812 2804
FDFIL1  15F6  651  661
FDFIL2  1609  663  653
FDFILE  15E9  644  678  701  742
FETCH1  2A98 4591 4118 4629
FETCHR  1805 1014 1459
FILMS1  14E1  511  723
FILMS2  14F0  515  798
FILMS3  14FA  519  815
FILMS4  1509  523  525  745
FILMS5  151B  528  530  871
FILMS6  1526  533  855  950
FILMS7  153F  537  941
FILMS8  1559  541  981
FILMS9  155E  544  155
FIN     3447 6250 6248
FLMS4L  0011  525  746
FLMS5L  000A  530  872
FNAD    0F97   32  667  705  754  788
FNBUF   0F8F   31  603  646  790
FPPINS  27F3 4109 3699
FPWINS  26EC 3920 3716
FRET    19CA 1428  655  726  750  801  860 1469 1817 1822 1824 1850 2012
                  3528 3537 3631 4639 5367
GALCOL  4263 6759 6562
```

```
SYMBOL   VAL  DEFN REFS

GALDIA 42F9 6762 6567
GALPAT 438F 6765 6572
GALROW 3E71 6738 6527
GATA   34CE 6335 6332
GECMD  1FF9 2894 2501
GET    1472  439   89  335  359  375  487  748  858  874  944  953 2598
                  3217 3255
GET10  147F  446  476
GET15  149F  465  455
GET16  149A  461  468
GET20  1488  452  460  464  473  484
GET30  14AD  474  457
GET40  14C8  488  479
GETCH  1D2E 2352   63  316  453 3159
GETCM  8012 3080
GETHX  19CD 1455 1510 2390 2421 2453 2475 2500 2541 2823
GETHXI 2AA4 4625 3921 4110 4113 4174 4191 4199 4331 4429 4438
GETNM  19FD 1504
GETREZ 31C4 5889 5740
GHX05  19D2 1459 1481
GHX10  19E7 1470 1461
GHXI05 2AA9 4629 4651
GHXI10 2ABE 4640 4631
GLCMD  1DEE 2498  391
GLCMD1 1E0B 2513 2520
GNM05  1A04 1510 1519
GNM10  1A19 1520 1515
GNM15  1A27 1527 1529
GNM20  1A2C 1530 1526
GNM25  1A37 1537 1534
GNM30  1A3B 1541 1545
GOCMD  2386 3333 3259 3366 3417 5418
GTOINS 27B6 4058 3693 4356 4374
GWR    3F07 6741 6532
HCHAR  000F 1616 1615 1621 1708
HEXA   2C21 4932 4929 4935
HILO5  1A63 1590 1568 1572
HILO   1A42 1562  136  139  347  350 1533 2042 2519 2921 4028 4698 4713
HL_DE  1827 1048 2048 2129 2878 2935
IBTIM  01AE 2364 2257 2266
ICREV  358C 6456 6470
IDCAR  2C80 4986 4916
IERH   2F7B 5428 5465
IERHM  2F9D 5447 5430 5448
IERHM1 2FAD 5449 5434
IERHML 0010 5448 5429
IERMH2 2FB2 5451 5439
IFEINS 294D 4347 3719
IFKINS 2960 4370 3722
IMIC   2D21 5069 5050
IMP40  2E20 5213 5193
IMP5   2E41 5237 5239
INCCOD 3513 6386 3803 5808 5836 5856 5871 5974 6462 6494
INCMD  1E64 2591  379
INCR   33F0 6202 6183 6185
INDATA 41EB 6756 6557
INFINI 4B27 6797 5955
INGCM1 2266 3200 3164 3212 3460 3470 3595 3603 4049 4074 4385
```

```
SYMBOL  VAL  DEFN REFS

INGCM2 22DA 3242 3245 4088 4573 4818 5977 6046
INGCMM 22B3 3228 3214
INIFDC 803F 3095  290
ININIT 22C5 3232 3198 4157 5382 5444
INITCD 12E5  194   97
INITD  1720  854  202
INITD1 1753  881  888
INITD2 175F  889  884
INITD3 1765  893  899
INITD4 1792  931  975
INITD5 17E1  978  973
INITT  300A 5537 3797
INMAR  12F6  204  197  205
INMARL 0009  205  198
INMSG  1E90 2615 2592
INPBF  0F06   16  440  447  489  878 2033 2085 2648 2722 2896
INPQMS 1E96 2619 2610
INPTR  0F04   14  165  196  441  602  993 1008 1016 1020 2443 2529 2776
                  3427 3436
INPUT2 1E6C 2597 2607
INPUTQ 1E87 2609 2600
INSADR 3808 6686 3355 3644
INSERM 2979 4387 4382
INSERR 296B 4380 3754 3762 3828 3837 3869 3902 4114 4120 4175 4195 4265
                  4402 4406 4408 4414 4420 4425 4432 4439 4442 4543 4641
                  5674 5960 6412
INSID1 2532 3627 3636
INSID2 2545 3637 3629
INSIDF 2527 3620 3348
INSNB  0021 3730 3621
INSTAB 2558 3658 3623 3730
INSTAR 2200 3149  297  306 3166 6812
INSTCK 90A0 3146 3150 3203 3244 3301
INTO1  237C 3323 3371
INTO2  23BD 3362 3342 3345 3347
INTO3  23C9 3367 3356
INTAB  90E0 3147 3153
INTAB1 2FBA 5458 3152
INTCMD 133C  285  200 3206 3279
INTINS 2876 4173 3705
INTLEN 0055 6812  295
INTPTR 3B06 6683 3183 3197 3306 3337 3365 3370 3485 3624 3751 3823 3866
                  3882 3897 4087 4124 4179 4208 4217 4223 4247 4291 4309
                  4399 4426 4572 4593 4597 4661 4676 5622
INTSTO 206F 3021   59 3151 3204
INTST1 2075 3035 3253 4155
INTST2 207C 3048 3805
INTST3 2083 3064 3334 3809
INVIM  2A92 4576 4566 4577
INVIML 0006 4577 4567
IREL   2F60 5411 5463
IRELM  2F71 5420 5415
ISGNON 229A 3226 3169
ISTARM 2F54 5402 5396
ISTART 2F43 5392 5461
ISTCKA 3B0E 6697 3234 3302 4025
ISTCKP 3B0C 6696 3235 3303 4009 4014 4024 4036
ISTOP  2F25 5375 5459
```

```
SYMBOL  VAL  DEFN REFS

ISTOPM 2F38 5385 5378
ITEMP  2FD2 5480 5472
ITT    2FD2 5479
LABCR  3AFE 6680 3486 3531 3584 3589 3597
LABCRA 3B04 6681 3513 3552 4015 4062
LABID1 2499 3533 3543
LABID2 24AC 3544 3535
LABIDF 2489 3525 3569 4003 4060
LABNB  396D 6678 3178 3526 3571 3575
LABTAB 396E 6679 3532 3576
LABTBL 0032 6677 3572 6679 6679
LBFIL0 2232 3175 3274
LBFIL1 223D 3181 3193
LBFIL3 225A 3194 3186
LDDR   181C 1037 1046 2060 2945
LDIR   1811 1026  792 1035 2089 2136 2884 2958 3155 3439 3586 5554 5564
                  5569 5574 5680 6490
LETR   1A90 1650 1647
LINCNT 0F00   11  329 1857 1882 1988 1930 1932 1950 1964 2099 2108 2145
                  2151 2381 2511 2518 2604 2606 2627 2733 2738 2835 2971
                  2975
LINDER 19B8 1405 2102
MANK?  31D4 5910 3798
MANK?1 322D 5962 5949 5954 5959
MANK?2 31F7 5932 5921
MANK?M 324B 5979 5964 5981
MANKEY B000 6944 3949 4348 4371 5911 5917 6002 6029
MANKML 0020 5981 5965
MAR    2C54 4959 4945 4950
MARCH  4155 6753 5546 6552
MARCHC 372A 6647 5545
MASEST 3F89 6744 6537
MEMT   2DC8 5157 4946 4951 5146 5152 5229 5257
MEOF   1B86 1941 1924 2410 2568
MMIC   2D17 5063 5038
MONREV 801E 3084  170
MOVE   8021 3085
MOVLIN 1C1F 2082 2602 2756
MOVTD  1BDD 2031 2601 2754
MSPERL 0006 2071 2067
MSPERR 1C19 2070 2066 2071
MTOF   1BC1 1985 1956
MUCERL 001A 6415 6400
MUCERM 354A 6414 6399 6415
MUT    2EF5 5330 5292 5295 5298 5345
NAMBFL 0010 6716 3831
NAMBUF 3C30 6712 3311 3830 3848 3956 6716
NAMI1  2686 3832 3843
NAMI2  2698 3845 3835
NAMINS 2677 3824 3666
NEG    3595 6463 6449
NEXTCH 17EA  992  118  146  177  215  233  255 2389 2420 2449 2473 2499
                  2540 2773 2822 3378 3432
NEXTL  1B5C 1916 2396 2469 2491 2514 2758 2807 2813 2865 3192 3363 3786
                  3814 3854 3889 3903 3926 3948 3986 4005 4085 4121 4177
                  4221 4230 4271 4304 4323 4334 4350 4354 4373 4535 4569
                  6041
NEXTL1 1B65 1923
```

```
SYMBOL  VAL  DEFN REFS

NEXTL2 1B70 1929 1921
NMOUT  1A69 1608  835  939 1864 1866 4722 4724 5972 6012 6103 6108 6404
                 6406 6410
NUCALE 33D9 6187 6156
NUTIP  3485 6290 6259
NXCH1  1801 1007  996
NXTCH1 2AEB 4675 4664
NXTCHI 2AD4 4660 3343 3646 3883 4125 4224 4250 5712
NXTTRK 0F8E   29  919  932  959  974
OBTIM  01AE 2365
OKM    285F 4161 4145
OPIINS 2A6A 4565 3725
OUTCM1 1307  219  235
OUTCM2 132E  243  225
OUTCMD 12FF  214  101  397 3263
OUTD   1325  237  223
OUTT   1319  228  221  241
PARAM  3500 6367 6118 6140 6143 6147 6149 6163 6177 6180 6215 6227 6234
                 6245 6252 6319
PARITY 3E21 6735 6522
PBEMM  E800 6884 6262
PCDREG C000 6850
PCPBUF 3734 6659 5567
PCPREG EA00 6892 5566
PCRFLG 373A 6660 4267 4269 4275 4277 5576
PCRREG E000 6862 3297 3968 4799 4802 4806 5539 5557 5580 5718 5811 5838
                 5866 5878 5892 5976 6035 6478
PCTREG E300 6872
PDTREG E400 6876
PIC    A800 3118 3023 3038 3051 3067 5381 5394 5413 5443 5482 5738
PINREG E500 6880 5521
PNCCH  8027 3087
PNCHX  802A 3088
PONDER 3507 6368 6328 6351
PORTB1 009A 2220 2317
POUT   802D 3089
PPMEM  E100 6865 6422
PRCMD  1D91 2441  389
PRCMD1 1DB4 2461 2470
PRCMD2 1DDB 2483 2492
PRCMDN 1DC7 2472 2451
PRII01 26B7 3871 3880
PRII02 26CA 3881 3876 3878
PRII03 26D8 3888 3885
PRIINS 26AE 3865 3669
PRLCMD 23D2 3377 3265
PRLI   2AEF 4693 3353 3384 3465 4045 4070 4084 4381 4817
PRLI1  2AFF 4702 4715
PRLI2  2B16 4716 4700
PRLIN  1B31 1877 2484
PRLIN1 1B56 1905 1895
PRLINN 1B1A 1856 2403 2433 2462 2522 2759 2814 2885 2978
PRMPT  0F88   18   84  319  374  443 3163 3211 3252
PROCEM 32D8 6048 6043 6049
PROCML 0018 6049 6044
PRTALL 23EB 3401 3396
PRTCMD 23DE 3393 3383
PRTFIL 134D  268  263  277
```

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SYMBOL  VAL DEFN REFS

PRTFLG 3B0B 6692 3403 3407 3850 3958 3961
PRTNOT 23F1 3405 3398
PRTPRC 32CD 6042 3974
PRTTER 326C 6001 3813
PRTVC  3310 6076 6066
PRTVL1 3300 6063 6069
PRTVLT 32FB 6059 6024
PRTY0  007F 2362 2353
PRV05  1A92 1651 1649
PRVAL  1A84 1643 1618 1623 1711
PSTREG E200 6868
PTCM1  1FCC 2855 2845
PTCM20 1FCF 2859 2867
PTCM30 1FDD 2869 2863
PTLAB2 24E4 3588 3570
PTLAB3 24F7 3596 3573
PTLAB4 250A 3604 3592
PTLAB5 251A 3607 3600
PTLBC1 2465 3488 3499
PTLBC2 247A 3502 3491 3493
PTLBC3 247C 3505 3509
PTLBC4 2482 3511 3500
PTMX   EC00 6896 5572
PTMY   ED00 6897
PTM2   EE00 6898
PU1REG C00A 6852 4521 4751
PU2REG C00C 6853 4741
PU3REG C00E 6854
PUTCMD 1F98 2821 2447
PUTCOD 3074 5612 5653
PUTFLN 15BC  601  121  149  180  260
PUTFN1 15CA  608  621
PUTFN2 15E0  624  611  613
PUTFN3 15E2  627  631
PUTLAB 24BA 3568 3191
PUTLBC 245D 3484 3190 4002 4059
PUTMSG 1A95 1657   68  156  276  324  333  358  725  747  800  812  817
                   827  857  873  943  952  983 1410 1675 1907 1926 1958
                  2068 2412 2570 2594 2612 3172 3216 3451 3459 3469 3591
                  3594 3599 3602 3779 3782 3853 3955 3963 4048 4073 4140
                  4143 4150 4384 4542 4568 4729 4816 5379 5397 5416 5432
                  5441 5673 5966 6007 6010 6021 6045 6401
PUTNM  1AA5 1699 5494 5497
PUTNM1 1AAE 1707 1705
PVCBUF 3731 6655 5562
PVCREG E900 6888 5561
PWSI10 29BB 4421 4418
PWSI20 29E5 4445 4436
PWSI30 2A22 4497 4479
PWSI40 2A24 4503 4513
PWSINS 298E 4398 3672
PWSRES 2B31 4740 4154 5376
QCMD   206A 2984  399
RAD    2ED5 5308 5291 5294 5297
RADI   2EDC 5312 5319
RBYTNB 208C 3127  364 2879 2916 2950
RDDIR  1570  556  645  809
RDFIL2 1656  722  702
```

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SYMBOL  VAL  DEFN REFS

RDFILE 1628  700  122  261
READCH 8033 3091
READHX 8036 3092
RECO   3408 6217 6321
REFFLG 372C 6652 5548 5926
REFRDN 44B1 6771 6582
REFRST 4411 6768 6577
REIA   34C3 6329 6353
REP    2EEA 5320 5312 5313
REPCI1 3370 6132 6135
REPCI2 33E0 6191 6194
REPCI3 348C 6294 6297
REPCI4 3460 6267 6269
RETINS 2771 4023 3690
REV    2C07 4915 4927
REZFLG 3C40 6718 3240 4146 5744
REZM   2857 4159 4141 4160
REZML  0008 4160 4142
RFCMD  1280  117   91 3221 3277
RI     8039 3093
RIM    0020 3119 2250 2259
RLINB  208A 3126  363 2872 2908 2973
RSPACL 2200 3139  925 2883 2957
RUNCMD 234A 3295 3257 5399
SA     3565 6419 6392
SALT   2052 5095 5103
SB     359D 6473 6394
SCADE  34C6 6331 6334
SELMEM 4A91 6792 6617
SEMN   208C 5130 5019 5021
SERBUF 3C29 6706 3437
SERCMD 23FF 3425 3261
SETI10 2893 4198 374C 4127 4228 4295 4313
SETI20 28C6 4229 4200 4204 4213
SETI30 28C2 4225 4220
SETINS 2888 4190 3707
SF     8042 3096  906
SI     8045 3097
SIM    0030 3120
SMIC   2D1C 5066 5044
SOCTET 45FB 6774 6587
SPERR  1C0E 2064 2043 2922
SR     8048 3098  301  567  715  948
SRET   1AB9 1731  571  593  668  692  719  768 1468 1594 1819 1820 1825
                  1843 1845 1847 1849 2017 3553 3587 3648 4638 5362 5364
                  5366 5683
SSTCMD 23F7 3414 3431
SSTFLG 3B0A 6691 3239 3308 3324 3327 3351 3416
SSTRT  0080 2369
STCERM 2799 4051 4046
STCKER 278B 4044 4029
STHOS  1ADB 1789 1783
STHFO  1ABB 1749
STHLF  1AC8 1775 1754
STOPB  0040 2367
STPINS 27E4 4083 3696
STRT   00C0 2368
STRTM  2645 3789 3777 3790
```

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SYMBOL  VAL. DEFN REFS

STRTML 0009 3790 3778
SU     2D81 5125 5037 5043 5049 5055
SUBR   2DBB 5152 5212 5243 5266
SV     804B 3099
SW     804E 3100  589  764  957
TABCF  7F96 3109
TABCHZ 189A 1170 1148
TABCZH 1959 1303 1292
TABIS  371D 6629 3739 4452 6116
TABV   2A64 4549 4468 6099
TAREG  D230 6831 4863
TAS    2D62 5107 5030 5031 5032 5033 5268 5270 5272 5274
TBREG  D300 6834 4883
TCDREG D000 6821 5436 5549 5930
TCREG  D110 6826 4879
TDREG  D010 6822 4839
TEMP   1AC6 1756 1750 1781
TEREG  D240 6832 4867
TERM1  32F0 6052 6008 6053
TERM1L 000B 6053 6009
TERMPN 3156 5807 5769
TERMS1 318E 5855 6619
TERMS2 31AD 5870 5858
TERMT  313B 5774 5760
TERMT1 3154 5793 5781 5790
TGREG  D120 6827 4887
TIM4   01AE 2366
TIMING 2C00 4909 3900
TIMINS 26DC 3896 3675
TIMOUT 396B 6670 3925 5487 5505
TIP    34F4 6359 6138 6172 6198 6250 6284 6301 6364
TIP2   2E4D 5244 5184
TIPE   3478 6281 6278
TIPINF 340C 6219 6217
TIREG  D220 6830 4859
TITBUF 3C15 6702 3315 3757 3780
TITI10 2612 3758 3770
TITI20 2624 3771 3764
TITINS 2603 3750 3663
TMREG  D200 6828 4851
TOPINS 28CA 4246 3710
TOPRES 2904 4274 4255
TOPS1  2900 4270 4278
TOPSET 28F8 4266 4253
TOPX   290F 4280 4258
TOPX1  291C 4298 4302
TOPXBF 373B 6662 4257 5571
TOPY   290F 4281 4261
TOPYBF 383B 6664 426C
TOPZ   2926 4307 4264
TOPZ1  2935 4317 4322
TOPZBF 393B 6665 4262
TOREG  D210 6829 4855
TRIST  4*31 6780 6597
TRKDIR 0014  550  558  580  650  775  820  972
TRREG  D030 6824 4847 4936
TSF    2D3C 5082 4956 5150 5155
TSREG  D310 6835 4871
```

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SYMBOL  VAL  DEFN REFS

TSUB    2DE1 5179 5077 5079
TTREG   D020 6823 4843
TTYFLG  0F89   19   53  245 2173 2176 2304 2307 3773 3776 3785 3971 4134
                    4137 4153 6038
TTYIN   1CCA 2226 2652
TTYWR   06F9 5280
TWREG   D100 6825 4875
UDLERM  27D4 4075 4071
UDLERR  27C6 4069 4004 4061
UEOF    2428 3456 3340
UEOFM   2433 3461 3457
UINS    2442 3464 3349
UINSM   2450 3471 3467
UNKCOD  30CC 5685 5672
UPLIN   1B8A 1948 2427 2751
UPLIN1  1B92 1955 1972
UPLIN2  1B9D 1961 1953
UPLIN3  1BAF 1974 1968
VAL     2E72 5267 5026
VALDG   1AE7 1814 1470 4640
VALDL   1B02 1840 1460 4630
VALM    2D7B 5121 5117
VER     2D6F 5114 5125
VLIM    2A4E 4538 4456 4460
VLIML   000A 4546 4541
VLIMM   2A59 4545 4540 4546
WAIINS  2940 4330 3713
WAIT    00D7 2363 2253 2364 2365 2366
WAITFF  2B60 4795 3298 3969 5558 5581 6036
WAITMS  2B4E 4766 4333 4534 4750 5508 5541
WALK    40D3 6750 6547
WFCM1   12B9  153  137  140  144
WFCMD   128F  130   93
WRDIR   1596  578  691  794  907
WRFIL1  1677  752  795
WRFIL2  169F  770  743
WRFIL3  16B5  785  779
WRFIL5  16CB  797  782
WRFILE  1661  741  150
WTFF01  2B63 4797 4804 4812
WTFF02  2B79 4808 4801
WTFFM   2B8D 4820 4814
X?      3C41 6729 4126 6511
ZERO    2F02 5343 5311
:
```