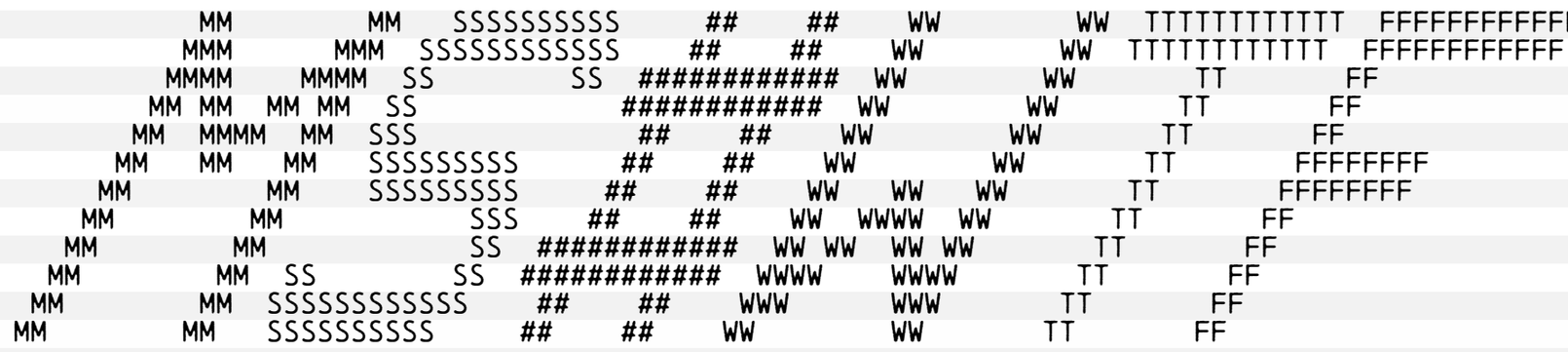
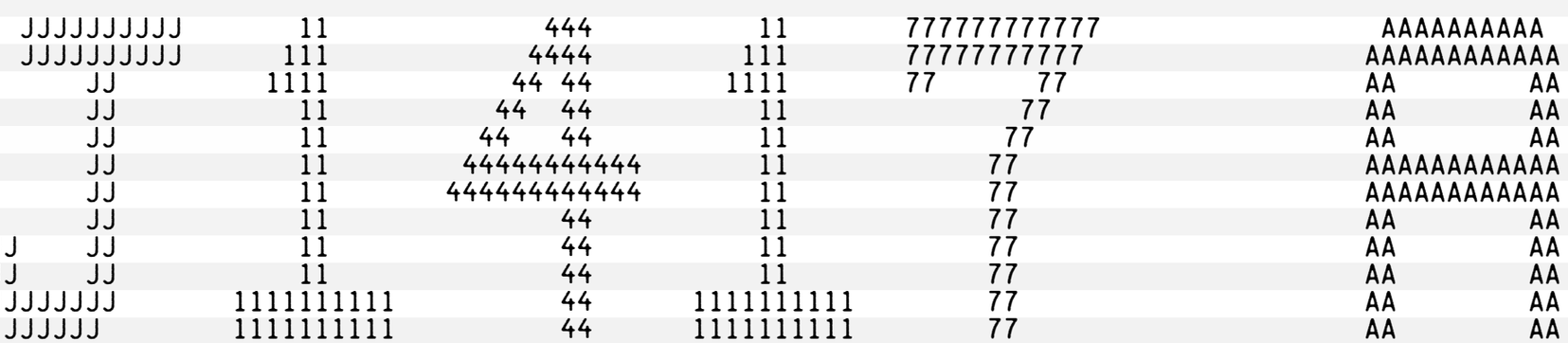




****A START JOB 1417 MS#WTF ROOM 7.53.37 PM 21 MAY 20 PRINTER1 SYS TK4- JOB 1417 START A****
****A START JOB 1417 MS#WTF ROOM 7.53.37 PM 21 MAY 20 PRINTER1 SYS TK4- JOB 1417 START A****
****A START JOB 1417 MS#WTF ROOM 7.53.37 PM 21 MAY 20 PRINTER1 SYS TK4- JOB 1417 START A****

J E S 2 J O B L O G

```
19.53.37 JOB 1417  $HASP373 MS#WTF   STARTED - INIT  1 - CLASS A - SYS TK4-
19.53.37 JOB 1417  IEF403I MS#WTF - STARTED - TIME=19.53.37
19.53.37 JOB 1417  IEFACTRT - STEPNAME  PROCSTEP  PROGRAM   RETCODE
19.53.37 JOB 1417  MS#WTF     GO                  WATFIV    RC= 0000
19.53.37 JOB 1417  IEF404I MS#WTF - ENDED - TIME=19.53.37
19.53.37 JOB 1417  $HASP395 MS#WTF   ENDED

------ JES2 JOB STATISTICS ------

 21 MAY 20 JOB EXECUTION DATE

         10 CARDS READ

        304 SYSOUT PRINT RECORDS

          0 SYSOUT PUNCH RECORDS

       0.00 MINUTES EXECUTION TIME
```

```
 1      //MS#WTF JOB CLASS=A,MSGCLASS=A,MSGLEVEL=(1,1),NOTIFY=HERC01,           JOB 1417
        //            USER=HERC01,PASSWORD=         GENERATED BY IKJEFF10
 2      // EXEC WATFIV
 3      XXWATFIV PROC PROG=WATFIV,LIB='FUNLIB',WLIB='WATLIB',
        XX            JB='JOBLIB',PFX='WATFIV'
        ********************************************************************
        ***
        *** NAME: SYS2.PROCLIB(WATFIV)
        ***
        *** DESC: EXECUTE WATFIV FORTRAN PROGRAMS
        ***
        ********************************************************************
 4      XXGO     EXEC PGM=&PROG
 5      XXSTEPLIB  DD DSN=&PFX..&JB,DISP=SHR
 6      XXWATLIB   DD DSN=&PFX..&LIB,DISP=SHR
 7      XX         DD DSN=&PFX..&WLIB,DISP=SHR
 8      XXFT01F001 DD SPACE=(TRK,(20,10)),DCB=(RECFM=VS,BLKSIZE=256),UNIT=SYSDA
 9      XXFT02F001 DD SPACE=(TRK,(20,10)),DCB=(RECFM=VS,BLKSIZE=256),UNIT=SYSDA
10      XXFT03F001 DD SPACE=(TRK,(20,10)),DCB=(RECFM=VS,BLKSIZE=256),UNIT=SYSDA
11      XXFT04F001 DD SPACE=(TRK,(20,10)),DCB=(RECFM=VS,BLKSIZE=256),UNIT=SYSDA
12      //FT05F001 DD *
        X/FT05F001 DD DDNAME=SYSIN
13      //         DD DSN=MAGIC.TEST.SOURCE(MS#WTF),DISP=SHR
14      //         DD *
15      //         DD DSN=MAGIC.TEST.DATA(ORDER),DISP=SHR
16      XXFT06F001 DD SYSOUT=*,DCB=(RECFM=FA,BLKSIZE=133)
17      XXFT07F001 DD SYSOUT=B
```

```
 STMT NO. MESSAGE
-
     4       IEF653I SUBSTITUTION JCL - PGM=WATFIV
     5       IEF653I SUBSTITUTION JCL - DSN=WATFIV.JOBLIB,DISP=SHR
     6       IEF653I SUBSTITUTION JCL - DSN=WATFIV.FUNLIB,DISP=SHR
     7       IEF653I SUBSTITUTION JCL - DSN=WATFIV.WATLIB,DISP=SHR
IEF236I ALLOC. FOR MS#WTF GO
IEF237I 240  ALLOCATED TO STEPLIB
IEF237I 191  ALLOCATED TO SYS00008
IEF237I 240  ALLOCATED TO WATLIB
IEF237I 240  ALLOCATED TO
IEF237I 180  ALLOCATED TO FT01F001
IEF237I 190  ALLOCATED TO FT02F001
IEF237I 140  ALLOCATED TO FT03F001
IEF237I 170  ALLOCATED TO FT04F001
IEF237I JES2 ALLOCATED TO FT05F001
IEF237I 242  ALLOCATED TO
IEF237I JES2 ALLOCATED TO
IEF237I 242  ALLOCATED TO
IEF237I JES2 ALLOCATED TO FT06F001
IEF237I JES2 ALLOCATED TO FT07F001
IEF142I MS#WTF GO - STEP WAS EXECUTED - COND CODE 0000
IEF285I   WATFIV.JOBLIB                                KEPT          *--------0
IEF285I   VOL SER NOS= PUB000.
IEF285I   SYS1.UCAT.MVS                                KEPT          *--------0
IEF285I   VOL SER NOS= MVSCAT.
IEF285I   WATFIV.FUNLIB                                KEPT          *--------6
IEF285I   VOL SER NOS= PUB000.
IEF285I   WATFIV.WATLIB                                KEPT          *--------0
IEF285I   VOL SER NOS= PUB000.
IEF285I   SYS20142.T195337.RA000.MS#WTF.R0000001       DELETED       *--------0
IEF285I   VOL SER NOS= WORK02.
IEF285I   SYS20142.T195337.RA000.MS#WTF.R0000002       DELETED       *--------0
IEF285I   VOL SER NOS= WORK03.
IEF285I   SYS20142.T195337.RA000.MS#WTF.R0000003       DELETED       *--------0
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS20142.T195337.RA000.MS#WTF.R0000004       DELETED       *--------0
IEF285I   VOL SER NOS= WORK01.
IEF285I   JES2.JOB01417.SI0101                         SYSIN
IEF285I   MAGIC.TEST.SOURCE                            KEPT          *--------2
IEF285I   VOL SER NOS= MV0001.
IEF285I   JES2.JOB01417.SI0102                         SYSIN
IEF285I   MAGIC.TEST.DATA                              KEPT          *--------2
IEF285I   VOL SER NOS= MV0001.
IEF285I   JES2.JOB01417.SO0103                         SYSOUT
IEF285I   JES2.JOB01417.SO0104                         SYSOUT
IEF373I STEP /GO      / START 20142.1953
IEF374I STEP /GO      / STOP  20142.1953 CPU    0MIN 00.03SEC SRB    0MIN 00.00SEC VIRT   808K SYS   180K
*********************************************************************************************************************
*     1. JOBSTEP OF JOB: MS#WTF      STEPNAME: GO          PROGRAM NAME: WATFIV     EXECUTED ON 21.05.20 FROM 19.53.37 TO 19.53.37 *
*         ELAPSED TIME  00:00:00,18                    CPU-IDENTIFIER:  TK4-          PAGE-IN:      0                          *
*             CPU TIME  00:00:00,03              VIRTUAL STORAGE USED:    808K       PAGE-OUT:      0                          *
*     I/O OPERATION                                                                                                           *
*     NUMBER OF RECORDS READ VIA DD * OR DD DATA:      3                                                                      *
*     240.......0 191.......0 240.......6 240.......0 180.......0 190.......0 140.......0 170.......0 DMY.......0 242.......2      *
*     DMY.......0 242.......2 DMY.......0 DMY.......0                                                                         *
*                                                                                                                             *
*                                        CHARGE FOR STEP (W/O SYSOUT):          0,05                                      *
*********************************************************************************************************************
IEF375I  JOB /MS#WTF  / START 20142.1953
IEF376I  JOB /MS#WTF  / STOP  20142.1953 CPU    0MIN 00.03SEC SRB    0MIN 00.00SEC
```

```
      $JOB           MAGIC,NOCHECK,PROF
      C$PROFON
      C PROGRAMMA PER TESTARE LA SUBROUTINE MAGIC
 1          INTEGER M(30,30)
 2          READ(5,*) N
 3          CALL MAGIC(M,N)
 4          CALL PMAGIC(M,N)
 5          STOP
 6          END
      C
      C SUBROUTINE PER STAMPARE IL QUADRATO MAGICO

 7          SUBROUTINE PMAGIC(A,N)
 8          INTEGER A(N,N)
      C LA DOCUMENTAZIONE DIFFERISCE DALLA REALTÀ, PAG. 65 E SEGUENTI
 9          CHARACTER*12 FMTCHR(1)
10          WRITE(FMTCHR,100) N,INT(ALOG10(N**2.0))+2
11    100   FORMAT(1H(,I2,1HI,I2,1H))
12          WRITE(6,FMTCHR) ((A(I,J),J=1,N),I=1,N)
13          RETURN
14          END
      C
      C VERSIONE MODIFICATA DI DSWAP.F DEL PACCHETTO OPENBLAS
      C     INTERCHANGES TWO VECTORS.
      C     USED UNROLLED LOOPS FOR INCREMENTS EQUAL ONE.

15          SUBROUTINE SWAP(N,X,Y)
      C     .. SCALAR ARGUMENTS ..
16          INTEGER N
      C     .. ARRAY ARGUMENTS ..
17          INTEGER X(N),Y(N)
      C     .. LOCAL SCALARS..
18          INTEGER TEMP
19          INTEGER I,IX,IY,M,MP1
      C     ..
      C     .. INTRINSIC FUNCTIONS ..
      C     INTRINSIC MOD
      C
      C    CODE FOR BOTH INCREMENTS EQUAL TO 1
      C
      C
      C    CLEAN-UP LOOP
      C
20          M = MOD(N,3)
21          IF (M.NE.0) THEN DO
22             DO 10 I = 1,M
23                TEMP = X(I)
24                X(I) = Y(I)
25                Y(I) = TEMP
26    10       CONTINUE
27             IF (N.LT.3) RETURN
28          END IF
29          MP1 = M + 1
30          DO 20 I = MP1,N,3
31             TEMP = X(I)
32             X(I) = Y(I)
33             Y(I) = TEMP
34             TEMP = X(I+1)
35             X(I+1) = Y(I+1)
36             Y(I+1) = TEMP
37             TEMP = X(I+2)
38             X(I+2) = Y(I+2)
39             Y(I+2) = TEMP
```

```
      20    CONTINUE
            RETURN
            END
      C
      C VERSIONE MODIFICATA DI MAGIC.F DEL PACCHETTO SCILAB

            SUBROUTINE MAGIC(A,N)
      C     ALGORITHMS FOR MAGIC SQUARES TAKEN FROM
      C        MATHEMATICAL RECREATIONS AND ESSAYS, 12TH ED.,
      C        BY W. W. ROUSE BALL AND H. S. M. COXETER
            INTEGER A(N,N),T
      C
            IF (MOD(N,4) .EQ. 0) GO TO 100
            IF (MOD(N,2) .EQ. 0) M = N/2
            IF (MOD(N,2) .NE. 0) M = N
      C
      C     ODD ORDER OR UPPER CORNER OF EVEN ORDER
      C
            DO 20 J = 1,M
               DO 10 I = 1,M
                  A(I,J) = 0
      10       CONTINUE
      20    CONTINUE
            I = 1
            J = (M+1)/2
            MM = M*M
            DO 40 K = 1, MM
               A(I,J) = K
               I1 = I-1
               J1 = J+1
               IF(I1.LT.1) I1 = M
               IF(J1.GT.M) J1 = 1
               IF(A(I1,J1).EQ.0) GO TO 30
                  I1 = I+1
                  J1 = J
      30          I = I1
               J = J1
      40    CONTINUE
      C
      C     REST OF EVEN ORDER
      C
            IF (MOD(N,2) .NE. 0) RETURN
            T = M*M
            DO 60 I = 1, M
               DO 50 J = 1, M
                  IM = I+M
                  JM = J+M
                  A(I,JM) = A(I,J) + 2*T
                  A(IM,J) = A(I,J) + 3*T
                  A(IM,JM) = A(I,J) + T
      50       CONTINUE
      60    CONTINUE
            M1 = (M-1)/2
            IF (M1.EQ.0) RETURN
            DO 70 J = 1, M1
               CALL SWAP(M,A(1,J),A(M+1,J))
      70    CONTINUE
            M1 = (M+1)/2
            M2 = M1 + M
            CALL SWAP(1,A(M1,1),A(M2,1))
            CALL SWAP(1,A(M1,M1),A(M2,M1))
            M1 = N+1-(M-3)/2
            IF(M1.GT.N) RETURN
```

```
      90          DO 80 J = M1, N
      91             CALL SWAP(M,A(1,J),A(M+1,J))
      92    80    CONTINUE
      93          RETURN
                C
                C     DOUBLE EVEN ORDER
                C
      94    100   K = 1
      95          DO 120 I = 1, N
      96             DO 110 J = 1, N
      97                A(I,J) = K
      98                IF (MOD(I,4)/2 .EQ. MOD(J,4)/2) A(I,J) = N*N+1 - K
      99                K = K+1
     100    110      CONTINUE
     101    120   CONTINUE
     102          RETURN
     103          END

                $ENTRY
  64   2   3 61 60   6   7 57
   9 55 54 12 13 51 50 16
  17 47 46 20 21 43 42 24
  40 26 27 37 36 30 31 33
  32 34 35 29 28 38 39 25
  41 23 22 44 45 19 18 48
  49 15 14 52 53 11 10 56
   8 58 59  5  4 62 63  1
```

WATFIV PROGRAM PROFILE

210 STATEMENT(S) EXECUTED
33 SECONDARY STATEMENT(S) EXECUTED
60 STATEMENT(S) NOT EXECUTED

TABLE OF FREQUENCY COUNT

FROM	TO	COUNT	FROM	TO	COUNT	FROM	TO	COUNT	FROM	TO	COUNT
2	4	1	10	10	1	12	13	1	45	45	1
94	95	1	96	96	8	97	98	64	98	OBJECT	32
99	99	64	100	LEVEL 1	8	101	LEVEL 1	1	102	102	1

THE FOLLOWING STATEMENTS WERE NOT EXECUTED

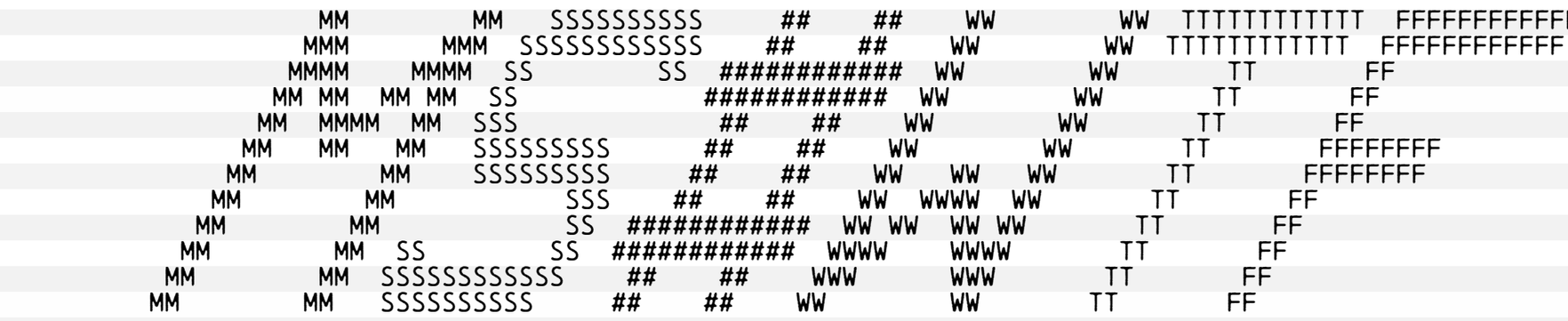
FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO
20	25	26	LEVEL 1	27	27	28	ENDIF	29	39
40	LEVEL 1	41	41	46	50	51	LEVEL 1	52	LEVEL 1
53	66	67	LEVEL 1	68	76	77	LEVEL 1	78	LEVEL 1
79	82	83	LEVEL 1	84	91	92	LEVEL 1	93	93

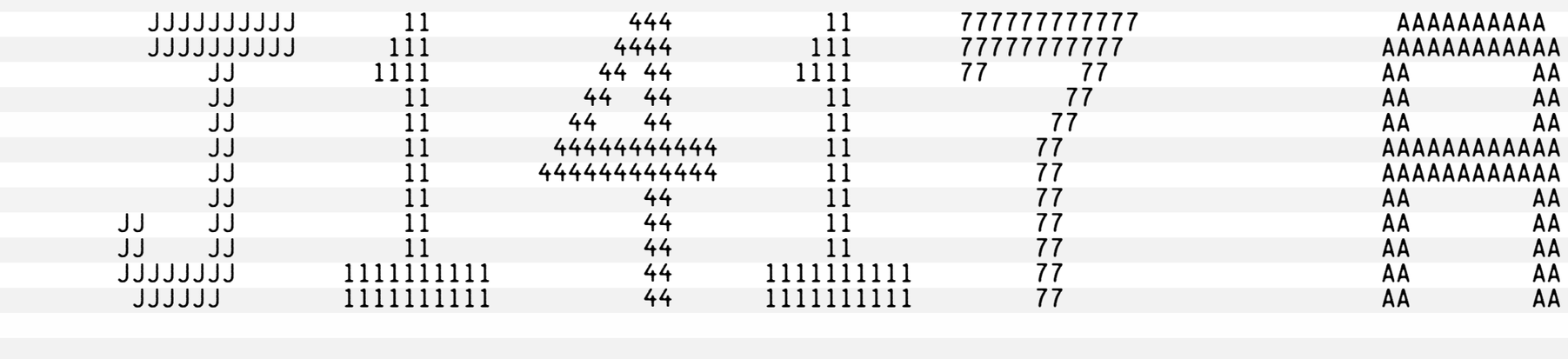
HISTOGRAM OF PERCENTAGE FREQUENCY COUNT

STMT	COUNT	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2	1	*	.	.	.	.	.	.	.	.	.	.
3	1	*	.	.	.	.	.	.	.	.	.	.
4	1	*	.	.	.	.	.	.	.	.	.	.
10	1	*	.	.	.	.	.	.	.	.	.	.
12	1	*	.	.	.	.	.	.	.	.	.	.
13	1	*	.	.	.	.	.	.	.	.	.	.
45	1	*	.	.	.	.	.	.	.	.	.	.
OBJECT	1	*	.	.	.	.	.	.	.	.	.	.
94	1	*	.	.	.	.	.	.	.	.	.	.
95	1	*	.	.	.	.	.	.	.	.	.	.
96	8	****	.	.	.	.	.	.	.	.	.	.
97	64	**********	.	.	.	.	.	.	.	.	.	.
98	64	**********	.	.	.	.	.	.	.	.	.	.
OBJECT	32	**********	.	.	.	.	.	.	.	.	.	.
99	64	**********	.	.	.	.	.	.	.	.	.	.
102	1	*	.	.	.	.	.	.	.	.	.	.
	243	TOTAL STATEMENT(S) EXECUTED										

HISTOGRAM OF ABSOLUTE FREQUENCY COUNT

```
     STMT    COUNT
                     0         7         14        21        28        35        42        49        56        63        70
        2        1 **        .         .         .         .         .         .         .         .         .         .
        3        1 **        .         .         .         .         .         .         .         .         .         .
        4        1 **        .         .         .         .         .         .         .         .         .         .
       10        1 **        .         .         .         .         .         .         .         .         .         .
       12        1 **        .         .         .         .         .         .         .         .         .         .
       13        1 **        .         .         .         .         .         .         .         .         .         .
       45        1 **        .         .         .         .         .         .         .         .         .         .
   OBJECT        1 **        .         .         .         .         .         .         .         .         .         .
       94        1 **        .         .         .         .         .         .         .         .         .         .
       95        1 **        .         .         .         .         .         .         .         .         .         .
       96        8 ***********         .         .         .         .         .         .         .         .         .
       97       64 ************************************************************************************************         .
       98       64 ************************************************************************************************         .
   OBJECT       32 ************************************************  .         .         .         .         .         .
       99       64 ************************************************************************************************         .
      102        1 **        .         .         .         .         .         .         .         .         .         .
                243 TOTAL STATEMENT(S) EXECUTED

CORE USAGE       OBJECT CODE=    4952 BYTES,ARRAY AREA=    3612 BYTES,TOTAL AREA AVAILABLE=  673792  BYTES

DIAGNOSTICS        NUMBER OF ERRORS=       0, NUMBER OF WARNINGS=       0, NUMBER OF EXTENSIONS=       2

COMPILE TIME=     0.01 SEC,EXECUTION TIME=     0.00 SEC,     19.53.37    THURSDAY     21 MAY 20    WATFIV - JAN 1976 V1L5


          C$STOP
```






```
****A   END   JOB 1417  MS#WTF                          ROOM       7.53.37 PM 21 MAY 20  PRINTER1  SYS TK4-  JOB 1417   END   A****
****A   END   JOB 1417  MS#WTF                          ROOM       7.53.37 PM 21 MAY 20  PRINTER1  SYS TK4-  JOB 1417   END   A****
****A   END   JOB 1417  MS#WTF                          ROOM       7.53.37 PM 21 MAY 20  PRINTER1  SYS TK4-  JOB 1417   END   A****
```