```
                                  2 ***********************************************************************
                                  3 *  MICHAEL BEAVER                                             *
                                  4 *  CS 310, SPRING 2013                                        *
                                  5 *  PROGRAM 7                                                  *
                                  6 *  DUE: MAY 1, 2013                                           *
                                  7 *                                                             *
                                  8 *  DESCRIPTION:                                               *
                                  9 *    THIS PROGRAM EXPECTS AS INPUT A FILE CONTAINING AN UNKNOWN   *
                                 10 *    NUMBER OF LINES FOLLOWING A SPECIFIC FORMAT. THE LINES SHOULD   *
                                 11 *    BEGIN IN COLUMN 1 WITH A TRAN. CODE: 0 IMPLIES INITIAL BALANCE, *
                                 12 *    1 IMPLIES A DEPOSIT, 2 IMPLIES A WITHDRAWAL, AND 3 IMPLIES   *
                                 13 *    INTEREST IS TO BE CALCULATED. FOR CODES 0-2, A 9 DIGIT NUMBER   *
                                 14 *    (COLUMNS 2-10) WILL FOLLOW AFTER THE TRAN. CODE. NUMBERS   *
                                 15 *    SHOULD BE RIGHT JUSTIFIED WITH LEADING BLANKS OR ZEROS. FOR   *
                                 16 *    CODE 3, A 3 DIGIT INTEREST RATE WILL FOLLOW THE TRAN. CODE.   *
                                 17 *    FOR CODES 0-2, THE NUMBERS REPRESENT, IN CENTS, THE AMOUNT TO   *
                                 18 *    ACT UPON. FOR CODE 3, THE NUMBER REPRESENTS THE INTEREST RATE   *
                                 19 *    USED IN CALCULATING THE INTEREST FOR THE BALANCE. THE PROGRAM   *
                                 20 *    PERFORMS THE VARIOUS ACTIONS, AS SPECIFIED BY THE TRAN. CODE,   *
                                 21 *    AND OUTPUTS THE ACTIONS AND CORRESPONDING VALUES IN A TABLE.   *
                                 22 *    FINALLY, THE TOTAL NUMBER OF DEPOSITS, TOTAL AMOUNT DEPOSITED,   *
                                 23 *    THE AVERAGE DEPOSIT AMOUNT, THE NUMBER OF WITHDRAWALS, THE TOTAL*
                                 24 *    AMOUNT WITHDRAWN, THE AVERAGE WITHDRAWAL AMOUNT, AND THE CURRENT*
                                 25 *    BALANCE ARE ALL DISPLAYED UNDER THE AFOREMENTIONED TABLE. THIS   *
                                 26 *    VERSION OF THE PROGRAM NOW ALLOWS FOR MULTIPLE ACCOUNTS. A NEW   *
                                 27 *    ACCOUNT REPORT IS GENERATED WHENEVER A TRAN. CODE OF 0 IS   *
                                 28 *    ENCOUNTERED IN THE DATA FILE.                             *
                                 29 *                                                             *
                                 30 *  NOTE:                                                      *
                                 31 *    THE GENERATED PRT FILE MAY BE QUITE LONG, SO BE SURE TO ADJUST   *
                                 32 *    YOUR ASSIST/I OPTIONS AS APPROPRIATE.                     *
                                 33 *                                                             *
                                 34 *  INTERNAL SUBROUTINES:                                      *
                                 35 *    READDATA: TAKE IN INPUT AND CALL SUBROUTINES BASED ON TRAN. CODE*
                                 36 *      INITMEM: INITIALIZE PACKED MEMORY TO ZEROS FOR ARITHMETIC   *
                                 37 *      INITBAL: SET THE INITIAL ACCOUNT BALANCE AND MINIMUM BALANCE   *
                                 38 *      DEPOSIT: DEPOSIT A SPECIFIED AMOUNT INTO THE ACCOUNT   *
                                 39 *    WITHDRAW: WITHDRAW AN AMOUNT FROM THE BALANCE AND SET MIN. BAL. *
                                 40 *      INTEREST: CALCULATE AND APPLY INTEREST BASED ON A GIVEN RATE   *
                                 41 *      PRNTSTAT: PRINT ALL ACCOUNT STATISTICS (VIA SUBROUTINES)   *
```

```
42 *      PRNTNDEP: PRINT THE NUMBER OF DEPOSITS MADE                    *
43 *      PRNTTDEP: PRINT THE TOTAL AMOUNT DEPOSITED INTO THE ACCOUNT    *
44 *      PRNTDAVG: PRINT THE AVERAGE AMOUNT PER DEPOSIT                 *
45 *      PRNTNWDR: PRINT THE NUMBER OF WITHDRAWALS MADE                 *
46 *      PRNTTWDR: PRINT THE TOTAL AMOUNT WITHDRAWN FROM THE ACCOUNT    *
47 *      PRNTWAVG: PRINT THE AVERAGE AMOUNT PER WITHDRAWAL              *
48 *      PRNTCBAL: PRINT THE CURRENT BALANCE                           *
49 ********************************************************************
```

```
  LOC   OBJECT CODE    ADDR1 ADDR2   STMT     SOURCE STATEMENT

                                      51 ****************************************************************************
                                      52 *   REGISTER KEY:                                                         *
                                      53 *      REG2: USED TO INITIALIZE NUMBER OF ACCOUNTS TO ZERO                *
                                      54 *      REG10: USED TO CALL THE MEMORY INITIALIZATION SUBROUTINE           *
                                      55 *      REG11: USED TO CALL THE MAIN DATA PROCESSING SUBROUTINE            *
                                      56 ****************************************************************************
 000000                               57 MBPROG7  START
 000000 90EC D00C           0000C     58          STM     14,12,12(13)           BEGINNING HOUSEKEEPING
 000004 05C0                          59          BALR    12,0
 000006                               60          USING   SAVING,12
 000006 50D0 C03E           00044     61 SAVING   ST      13,SAVEAREA+4
 00000A 41D0 C03A           00040     62          LA      13,SAVEAREA


 00000E 4120 0000           00000     64          LA      2,0                    INITIALIZE # OF ACCTS TO ZERO
 000012 5020 C0C2           000C8     65          ST      2,NUMACCTS
 000016 E020 C1BD 0034 001C3          66          XPRNT   DASHES,52
 00001C E020 C155 0034 0015B          67          XPRNT   HEADER1,52             PRINT MAIN HEADER
 000022 E020 C189 0034 0018F          68          XPRNT   HEADER2,52             PRINT TABLE SECTION HEADINGS
 000028 E020 C1BD 0034 001C3          69          XPRNT   DASHES,52

 00002E 45A0 C452           00458     71          BAL     10,INITMEM
 000032 45B0 C392           00398     72          BAL     11,READDATA            ACTION BEGINS HERE


 000036 58D0 C03E           00044     74          L       13,SAVEAREA+4          ENDING HOUSEKEEPING
 00003A 98EC D00C           0000C     75          LM      14,12,12(13)
 00003E 07FE                          76          BR      14


 000040                               78 SAVEAREA DS      18F
 000088                               79 REGSAVE  DS      16F
 0000C8                               80 NUMACCTS DS      1F
 0000CC                               81 TRANCODE DS      CL1
 0000CD                               82 NUMDEP   DS      PL2
 0000CF                               83 NUMWDRWL DS      PL2
 0000D1                               84 TOTALDEP DS      PL6
 0000D7                               85 TOTALWDR DS      PL6
 0000DD                               86 CURRBAL  DS      PL6
 0000E3                               87 MINBAL   DS      PL6
 0000E9                               88 RATE     DS      PL2
 0000EB                               89 PRODUCT  DS      PL8
 0000F3                               90 DIVISION DS      0PL8
```

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0000F3                         91 QUOTIENT DS     PL5
0000F8                         92 REMAINDR DS     PL3
0000FB                         93 TEMP     DS     PL5
000100                         94 DIVTEMP  DS     PL3
000103                         95 CARD     DS     CL10
00010D 40                      96 CARRIAGE DC     C' '
00010E                         97 OUTLINE1 DS     XL17
00011F                         98 OUTLINE2 DS     XL13
00012C                         99 OUTLINE3 DS     XL4
000130                        100 OUTLINE4 DS     XL5
000135 402020206B202020       101 PATTERN1 DC     X'402020206B2020206B2021204B202060'
000145 40206B2020206B20       102 PATTERN2 DC     X'40206B2020206B2021204B2020'
000152 40202120               103 PATTERN3 DC     X'40202120'
000156 40214B2020             104 PATTERN4 DC     X'40214B2020'
00015B 4040404040404040       105 HEADER1  DC     C'              SAVINGS  ACCOUNT  REPORT              '
00018F 40E3D9C1D54B40C3       106 HEADER2  DC     C' TRAN. CODE      AMOUNT      RATE    CURRENT BALANCE '
0001C3 4060606060606060       107 DASHES   DC     C' ------------------------------------------------'
0001F7 40404040404040D5       108 HEADER3  DC     C'          NUMBER OF DEPOSITS   =                    '
00022B 40E3D6E3C1D340C1       109 HEADER4  DC     C' TOTAL AMOUNT OF DEPOSITS   =                    '
00025F 4040C1E5C74B40C1       110 HEADER5  DC     C'   AVG. AMOUNT PER DEPOSIT   =                    '
000293 40404040404040D5       111 HEADER6  DC     C'          NUMBER OF WITHDRAWALS   =                '
0002C7 40E3D6E3C1D340C1       112 HEADER7  DC     C' TOTAL AMOUNT OF WITHDRAWALS   =                '
0002FB 4040C1E5C74B40C1       113 HEADER8  DC     C'   AVG. AMOUNT PER WITHDRAWAL   =                '
00032F 4040404040404040       114 HEADER9  DC     C'            CURRENT BALANCE   =                    '
000363                        115 LINE     DS     CL52
```

```
   LOC  OBJECT CODE     ADDR1 ADDR2   STMT     SOURCE STATEMENT

                                        117 ************************************************************************
                                        118 *   REGISTER KEY:                                                     *
                                        119 *     REG2: USED TO CHECK FOR NUMBER OF ACCOUNTS > 0 BEFORE PRINTING  *
                                        120 *     REG10: USED TO CALL VARIOUS DATA PROCESSING SUBROUTINES         *
                                        121 *     REG11: USED TO RETURN TO CALLER                                 *
                                        122 ************************************************************************
000398 900F C082           00088        123 READDATA STM   0,15,REGSAVE

00039C E000 C0FD 000A 00103              125 READTOP  XREAD CARD,10                 READ UNTIL EOF
0003A2 4740 C448           0044E         126          BC    B'0100',READEND

0003A6 9240 C35D     00363                128          MVI   LINE,C' '             CASCADE BLANKS INTO DATA LINE
0003AA D232 C35E C35D 00364 00363         129          MVC   LINE+1(51),LINE

0003B0 D200 C0C6 C0FD 000CC 00103         131          MVC   TRANCODE(1),CARD      GET TRAN. CODE
0003B6 D200 C362 C0C6 00368 000CC         132          MVC   LINE+5(1),TRANCODE

0003BC 95F0 C0C6     000CC                134          CLI   TRANCODE,C'0'         SET INITIAL BALANCE
0003C0 4770 C412           00418          135          BC    B'0111',NOTINIT

0003C4 5820 C0C2           000C8          137          L     2,NUMACCTS
0003C8 5920 C7E2           007E8          138          C     2,=F'0'               CHECK # OF ACCOUNTS > 0
0003CC 4780 C3FE           00404          139          BC    B'1000',NOACCTS
0003D0 45A0 C5EE           005F4          140          BAL   10,PRNTSTAT           PRINT ACCOUNT INFORMATION

0003D4 E020 C107 0001 0010D               142          XPRNT CARRIAGE,1
0003DA E020 C107 0001 0010D               143          XPRNT CARRIAGE,1           PRINT SEPARATING WHITESPACE
0003E0 E020 C107 0001 0010D               144          XPRNT CARRIAGE,1
0003E6 E020 C107 0001 0010D               145          XPRNT CARRIAGE,1
0003EC E020 C1BD 0034 001C3               146          XPRNT DASHES,52            PRINT NEW ACCOUNT HEADERS
0003F2 E020 C155 0034 0015B               147          XPRNT HEADER1,52
0003F8 E020 C189 0034 0018F               148          XPRNT HEADER2,52
0003FE E020 C1BD 0034 001C3               149          XPRNT DASHES,52

000404 4122 0001           00001          151 NOACCTS  LA    2,1(2)                INCREMENT # OF ACCOUNTS
000408 5020 C0C2           000C8          152          ST    2,NUMACCTS
00040C 45A0 C452           00458          153          BAL   10,INITMEM
000410 45A0 C484           0048A          154          BAL   10,INITBAL
000414 47F0 C43E           00444          155          B     PRNTLINE

000418 95F1 C0C6     000CC                157 NOTINIT  CLI   TRANCODE,C'1'         MAKE A DEPOSIT
00041C 4770 C422           00428          158          BC    B'0111',NOTDEP
000420 45A0 C4B0           004B6          159          BAL   10,DEPOSIT
```

```
000424 47F0 C43E              00444    160              B      PRNTLINE

000428 95F2 C0C6      000CC            162 NOTDEP   CLI    TRANCODE,C'2'        MAKE A WITHDRAWAL
00042C 4770 C432              00438    163              BC     B'0111',NOTWDRWL
000430 45A0 C4EE              004F4    164              BAL    10,WITHDRAW
000434 47F0 C43E              00444    165              B      PRNTLINE

000438 95F3 C0C6      000CC            167 NOTWDRWL CLI    TRANCODE,C'3'        CALCULATE INTEREST
00043C 4770 C444              0044A    168              BC     B'0111',READBOTM
000440 45A0 C550              00556    169              BAL    10,INTEREST

000444 E020 C35D 0034 00363            171 PRNTLINE XPRNT  LINE,52              PRINT RESULTS

00044A 47F0 C396              0039C    173 READBOTM B      READTOP

00044E 45A0 C5EE              005F4    175 READEND  BAL    10,PRNTSTAT          PRINT ACCOUNT STATISTICS

000452 980F C082              00088    177              LM     0,15,REGSAVE
000456 07FB                            178              BR     11
```

```
   LOC   OBJECT CODE     ADDR1 ADDR2   STMT      SOURCE STATEMENT

                                        180 ***********************************************************************
                                        181 *   REGISTER KEY:                                                     *
                                        182 *      REG10: USED TO RETURN TO CALLER                                *
                                        183 ***********************************************************************
000458 F810 C0C7 C830 000CD 00836       184 INITMEM   ZAP     NUMDEP(2),=P'0'         INITIALIZE MEMORY WITH ZEROS
00045E F810 C0C9 C830 000CF 00836       185           ZAP     NUMWDRWL(2),=P'0'
000464 F850 C0CB C830 000D1 00836       186           ZAP     TOTALDEP(6),=P'0'
00046A F850 C0D1 C830 000D7 00836       187           ZAP     TOTALWDR(6),=P'0'
000470 F850 C0D7 C830 000DD 00836       188           ZAP     CURRBAL(6),=P'0'
000476 F850 C0DD C830 000E3 00836       189           ZAP     MINBAL(6),=P'0'
00047C F850 C0ED C830 000F3 00836       190           ZAP     DIVISION(6),=P'0'
000482 F840 C0F5 C830 000FB 00836       191           ZAP     TEMP(5),=P'0'


000488 07FA                             193           BR      10
```

```
  LOC   OBJECT CODE    ADDR1 ADDR2    STMT     SOURCE STATEMENT

                                      195 *******************************************************************
                                      196 *   REGISTER KEY:                                                *
                                      197 *     REG10: USED TO RETURN TO CALLER                             *
                                      198 *******************************************************************
00048A F248 C0F5 C0FE 000FB 00104     199 INITBAL  PACK   TEMP(5),CARD+1(9)         GET INITIAL BALANCE
000490 F854 C0D7 C0F5 000DD 000FB     200          ZAP    CURRBAL(6),TEMP(5)
000496 F855 C0DD C0D7 000E3 000DD     201          ZAP    MINBAL(6),CURRBAL(6)      MIN. BALANCE = INIT. BALANCE

00049C D210 C108 C12F 0010E 00135     203          MVC    OUTLINE1(17),PATTERN1
0004A2 DE10 C108 C0D7 0010E 000DD     204          ED     OUTLINE1(17),CURRBAL      EDIT LINE TO HOLD BALANCE
0004A8 D210 C367 C108 0036D 0010E     205          MVC    LINE+10(17),OUTLINE1
0004AE D210 C380 C108 00386 0010E     206          MVC    LINE+35(17),OUTLINE1

0004B4 07FA                           208          BR     10
```

```
   LOC   OBJECT CODE      ADDR1 ADDR2    STMT      SOURCE STATEMENT


                                         210 ****************************************************************************
                                         211 *   REGISTER KEY:                                                          *
                                         212 *      REG10: USED TO RETURN TO CALLER                                     *
                                         213 ****************************************************************************
 0004B6 F248 C0F5 C0FE 000FB 00104       214 DEPOSIT  PACK   TEMP(5),CARD+1(9)         GET DEPOSIT AMOUNT
 0004BC FA54 C0D7 C0F5 000DD 000FB       215          AP     CURRBAL(6),TEMP(5)        MAKE THE DEPOSIT

 0004C2 FA10 C0C7 C831 000CD 00837       217          AP     NUMDEP(2),=P'1'           INCREMENT # OF DEPOSITS MADE
 0004C8 FA54 C0CB C0F5 000D1 000FB       218          AP     TOTALDEP(6),TEMP(5)       UPDATE TOTAL AMT OF DEPOSITS

 0004CE D20C C119 C13F 0011F 00145       220          MVC    OUTLINE2(13),PATTERN2     OUTPUT DEPOSIT AMOUNT AND
 0004D4 D210 C108 C12F 0010E 00135       221          MVC    OUTLINE1(17),PATTERN1        THE CURRENT BALANCE
 0004DA DE0C C119 C0F5 0011F 000FB       222          ED     OUTLINE2(13),TEMP
 0004E0 DE10 C108 C0D7 0010E 000DD       223          ED     OUTLINE1(17),CURRBAL
 0004E6 D20C C369 C119 0036F 0011F       224          MVC    LINE+12(13),OUTLINE2
 0004EC D210 C380 C108 00386 0010E       225          MVC    LINE+35(17),OUTLINE1

 0004F2 07FA                             227          BR     10
```

```
   LOC   OBJECT CODE     ADDR1 ADDR2   STMT     SOURCE STATEMENT


                                       229 *******************************************************************
                                       230 *   REGISTER KEY:                                                 *
                                       231 *      REG10: USED TO RETURN TO CALLER                             *
                                       232 *******************************************************************
0004F4 F950 C0D7 C830 000DD 00836      233 WITHDRAW CP      CURRBAL(6),=P'0'
0004FA 47D0 C538             0053E      234          BC      B'1101',WDRAWERR          DO NOT W'DRAW FROM <= 0 BAL

0004FE F248 C0F5 C0FE 000FB 00104      236          PACK    TEMP(5),CARD+1(9)         GET WITHDRAWAL AMOUNT
000504 FB54 C0D7 C0F5 000DD 000FB      237          SP      CURRBAL(6),TEMP(5)        MAKE THE WITHDRAWAL

00050A FA10 C0C9 C831 000CF 00837      239          AP      NUMWDRWL(2),=P'1'         INCREMENT # OF WITHDRAWALS
000510 FA54 C0D1 C0F5 000D7 000FB      240          AP      TOTALWDR(6),TEMP(5)       UPDATE AMNT WITHDRAWN

000516 D20C C119 C13F 0011F 00145      242          MVC     OUTLINE2(13),PATTERN2     OUTPUT WITHDRAWAL AMOUNT AND
00051C D210 C108 C12F 0010E 00135      243          MVC     OUTLINE1(17),PATTERN1                  THE CURRENT BALANCE
000522 DE0C C119 C0F5 0011F 000FB      244          ED      OUTLINE2(13),TEMP
000528 DE10 C108 C0D7 0010E 000DD      245          ED      OUTLINE1(17),CURRBAL
00052E D20C C369 C119 0036F 0011F      246          MVC     LINE+12(13),OUTLINE2
000534 D210 C380 C108 00386 0010E      247          MVC     LINE+35(17),OUTLINE1

00053A 47F0 C53E             00544      249          B       SWAPMIN

00053E D213 C369 C7E6 0036F 007EC      251 WDRAWERR MVC     LINE+12(20),=C'ERR: INVALID BALANCE'

000544 F955 C0DD C0D7 000E3 000DD      253 SWAPMIN  CP      MINBAL(6),CURRBAL(6)      CHANGE MINIMUM BALANCE
00054A 47D0 C54E             00554      254          BC      B'1101',ENDWDRWL
00054E F855 C0DD C0D7 000E3 000DD      255          ZAP     MINBAL(6),CURRBAL(6)

000554 07FA                             257 ENDWDRWL BR      10
```

```
  LOC  OBJECT CODE     ADDR1 ADDR2    STMT     SOURCE STATEMENT


                                      259 *******************************************************************************
                                      260 *   REGISTER KEY:                                                            *
                                      261 *      REG10: USED TO RETURN TO CALLER                                       *
                                      262 *******************************************************************************
000556 F950 C0DD C830 000E3 00836     263 INTEREST CP      MINBAL(6),=P'0'
00055C 47D0 C5CC           005D2      264            BC      B'1101',INTERR1            NO INTEREST FOR <= 0 BALANCE

000560 F212 C0E3 C0FE 000E9 00104     266            PACK    RATE(2),CARD+1(3)         GET INTEREST RATE

000566 F910 C0E3 C830 000E9 00836     268            CP      RATE(2),=P'0'             DO NOT USE 0 PERCENT RATE
00056C 47D0 C5D6           005DC      269            BC      B'1101',INTERR2

000570 D204 C12A C150 00130 00156     271            MVC     OUTLINE4(5),PATTERN4      OUTPUT INTEREST RATE
000576 DE04 C12A C0E3 00130 000E9     272            ED      OUTLINE4(5),RATE
00057C 9540 C12B      00131           273            CLI     OUTLINE4+1,X'40'          ADD LEADING ZERO IF NEEDED
000580 4770 C582           00588      274            BC      B'0111',NOTFILL
000584 92F0 C12B      00131           275            MVI     OUTLINE4+1,C'0'
000588 D204 C377 C12A 0037D 00130     276 NOTFILL  MVC     LINE+26(5),OUTLINE4

00058E F875 C0E5 C0DD 000EB 000E3     278            ZAP     PRODUCT(8),MINBAL(6)      PERFORM INTEREST CALCULATION
000594 FC71 C0E5 C0E3 000EB 000E9     279            MP      PRODUCT(8),RATE(2)
00059A F877 C0ED C0E5 000F3 000EB     280            ZAP     DIVISION(8),PRODUCT(8)
0005A0 FD72 C0ED C832 000F3 00838     281            DP      DIVISION(8),=P'10000'     SHIFT VALUE 4 SPOTS TO RIGHT

0005A6 F922 C0F2 C835 000F8 0083B     283            CP      REMAINDR(3),=P'5000'      ROUND UP IF NECESSARY
0005AC 4740 C5B0           005B6      284            BC      B'0100',NOROUND
0005B0 FA40 C0ED C831 000F3 00837     285            AP      QUOTIENT(5),=P'1'

0005B6 FA54 C0D7 C0ED 000DD 000F3     287 NOROUND  AP      CURRBAL(6),QUOTIENT(5)    ADD INTEREST TO CURR. BALANCE

0005BC D210 C108 C12F 0010E 00135     289            MVC     OUTLINE1(17),PATTERN1     OUTPUT THE CURRENT BALANCE
0005C2 DE10 C108 C0D7 0010E 000DD     290            ED      OUTLINE1(17),CURRBAL
0005C8 D210 C380 C108 00386 0010E     291            MVC     LINE+35(17),OUTLINE1

0005CE 47F0 C5DC           005E2      293            B       INTSWAP

0005D2 D21B C369 C7FA 0036F 00800     295 INTERR1  MVC     LINE+12(28),=C'ERR: INVALID MINIMUM BALANCE'
0005D8 47F0 C5DC           005E2      296            B       INTSWAP

0005DC D219 C369 C816 0036F 0081C     298 INTERR2  MVC     LINE+12(26),=C'ERR: INVALID INTEREST RATE'

0005E2 F955 C0DD C0D7 000E3 000DD     300 INTSWAP  CP      MINBAL(6),CURRBAL(6)
0005E8 47A0 C5EC           005F2      301            BC      B'1010',ENDINT
```

```
0005EC F855 C0DD C0D7 000E3 000DD    302        ZAP    MINBAL(6),CURRBAL(6)    UPDATE THE MINIMUM BALANCE
0005F2 07FA                          304 ENDINT  BR     10
```

```
   LOC   OBJECT CODE     ADDR1 ADDR2     STMT     SOURCE STATEMENT


                                         306 ********************************************************************
                                         307 *  REGISTER KEY:                                                    *
                                         308 *    REG9: USED TO CALL VARIOUS STATISTICAL SUBROUTINES             *
                                         309 *    REG10: USED TO RETURN TO CALLER                                *
                                         310 ********************************************************************
0005F4 E020 C107 0001 0010D              311 PRNTSTAT XPRNT CARRIAGE,1
0005FA E020 C107 0001 0010D              312          XPRNT CARRIAGE,1

000600 4590 C630            00636        314          BAL   9,PRNTNDEP          PRINT NUMBER OF DEPOSITS
000604 4590 C64A            00650        315          BAL   9,PRNTTDEP          PRINT TOTAL AMT OF DEPOSITS
000608 4590 C66E            00674        316          BAL   9,PRNTDAVG          PRINT DEPOSIT AVERAGE

00060C E020 C107 0001 0010D              318          XPRNT CARRIAGE,1
000612 E020 C107 0001 0010D              319          XPRNT CARRIAGE,1

000618 4590 C6F4            006FA        321          BAL   9,PRNTNWDR          PRINT NUMBER OF W'DRAWALS
00061C 4590 C70E            00714        322          BAL   9,PRNTTWDR          PRINT TOTAL AMT OF W'DRAWALS
000620 4590 C732            00738        323          BAL   9,PRNTWAVG          PRINT W'DRAWAL AVERAGE

000624 E020 C107 0001 0010D              325          XPRNT CARRIAGE,1
00062A E020 C107 0001 0010D              326          XPRNT CARRIAGE,1

000630 4590 C7B8            007BE        328          BAL   9,PRNTCBAL          PRINT THE CURRENT BALANCE

000634 07FA                              330          BR    10
```

```
  LOC   OBJECT CODE     ADDR1 ADDR2    STMT     SOURCE STATEMENT


                                        332 ***********************************************************************
                                        333 *   REGISTER KEY:                                                     *
                                        334 *     REG9: USED TO RETURN TO CALLER                                  *
                                        335 ***********************************************************************
000636 D203 C126 C14C 0012C 00152       336 PRNTNDEP MVC     OUTLINE3(4),PATTERN3        OUTPUT THE NUMBER OF DEPOSITS
00063C DE03 C126 C0C7 0012C 000CD       337          ED      OUTLINE3(4),NUMDEP
000642 D203 C21A C126 00220 0012C       338          MVC     HEADER3+41(4),OUTLINE3

000648 E020 C1F1 0034 001F7             340          XPRNT   HEADER3,52

00064E 07F9                             342          BR      9
```

```
   LOC   OBJECT CODE     ADDR1 ADDR2   STMT     SOURCE STATEMENT


                                       344 *******************************************************************
                                       345 *  REGISTER KEY:                                                 *
                                       346 *    REG1: USED TO MARK LOCATION TO PLACE DOLLAR SIGN IN OUTPUT   *
                                       347 *    REG9: USED TO RETURN TO CALLER                               *
                                       348 *******************************************************************
000650 D210 C108 C12F 0010E 00135      349 PRNTTDEP MVC   OUTLINE1(17),PATTERN1     OUTPUT TOTAL AMT OF DEPOSITS
000656 4110 C113            00119       350          LA    1,OUTLINE1+11
00065A DF10 C108 C0CB 0010E 000D1       351          EDMK  OUTLINE1(17),TOTALDEP
000660 0610                             352          BCTR  1,0
000662 925B 1000       00000            353          MVI   0(1),C'$'
000666 D210 C243 C108 00249 0010E       354          MVC   HEADER4+30(17),OUTLINE1

00066C E020 C225 0034 0022B             356          XPRNT HEADER4,52

000672 07F9                             358          BR    9
```

```
  LOC   OBJECT CODE    ADDR1 ADDR2   STMT    SOURCE STATEMENT


                                     360 ***************************************************************************
                                     361 *  REGISTER KEY:                                                          *
                                     362 *     REG1: USED TO MARK LOCATION TO PLACE DOLLAR SIGN IN OUTPUT          *
                                     363 *     REG9: USED TO RETURN TO CALLER                                      *
                                     364 ***************************************************************************
000674 F910 C0C7 C830 000CD 00836   365 PRNTDAVG CP     NUMDEP(2),=P'0'           DO NOT DIVIDE BY ZERO
00067A 4780 C6AA            006B0    366          BC     B'1000',NODEPDIV

00067E F875 C0ED C0CB 000F3 000D1   368          ZAP    DIVISION(8),TOTALDEP(6)   CALCULATE DEPOSIT AVERAGE
000684 F821 C0FA C0C7 00100 000CD   369          ZAP    DIVTEMP(3),NUMDEP(2)
00068A FD72 C0ED C0FA 000F3 00100   370          DP     DIVISION(8),DIVTEMP(3)
000690 F842 C0F5 C0F2 000FB 000F8   371          ZAP    TEMP(5),REMAINDR(3)
000696 FA44 C0F5 C0F5 000FB 000FB   372          AP     TEMP(5),TEMP(5)
00069C F942 C0F5 C0FA 000FB 00100   373          CP     TEMP(5),DIVTEMP(3)
0006A2 4750 C6D0            006D6    374          BC     B'0101',DNOTZERO
0006A6 FA40 C0ED C831 000F3 00837   375          AP     QUOTIENT(5),=P'1'

0006AC 47F0 C6D0            006D6    377          B      DNOTZERO

0006B0 F840 C0ED C830 000F3 00836   379 NODEPDIV ZAP    QUOTIENT(5),=P'0'         DEPOSIT AVERAGE IS 0 DOLLARS

0006B6 D20C C119 C13F 0011F 00145   381          MVC    OUTLINE2(13),PATTERN2     OUTPUT ZERO AVERAGE
0006BC 4110 C122            00128    382          LA     1,OUTLINE2+9
0006C0 DF0C C119 C0ED 0011F 000F3   383          EDMK   OUTLINE2(13),QUOTIENT
0006C6 0610                          384          BCTR   1,0
0006C8 925B 1000       00000        385          MVI    0(1),C'$'
0006CC D20C C279 C119 0027F 0011F   386          MVC    HEADER5+32(13),OUTLINE2

0006D2 47F0 C6EC            006F2    388          B      DAVGEND

0006D6 D20C C119 C13F 0011F 00145   390 DNOTZERO MVC    OUTLINE2(13),PATTERN2     OUTPUT DEPOSIT AVERAGE
0006DC 4110 C124            0012A    391          LA     1,OUTLINE2+11
0006E0 DF0C C119 C0ED 0011F 000F3   392          EDMK   OUTLINE2(13),QUOTIENT
0006E6 0610                          393          BCTR   1,0
0006E8 925B 1000       00000        394          MVI    0(1),C'$'
0006EC D20C C279 C119 0027F 0011F   395          MVC    HEADER5+32(13),OUTLINE2

0006F2 E020 C259 0034 0025F         397 DAVGEND  XPRNT  HEADER5,52

0006F8 07F9                         399          BR     9
```

  LOC   OBJECT CODE   ADDR1 ADDR2   STMT   SOURCE STATEMENT

                                       401 ***
                                       402 *   REGISTER KEY: *
                                       403 *   REG9: USED TO RETURN TO CALLER   *
                                       404 ***
0006FA D203 C126 C14C 0012C 00152   405 PRNTNWDR MVC   OUTLINE3(4),PATTERN3   OUTPUT NUMBER OF WITHDRAWALS
000700 DE03 C126 C0C9 0012C 000CF   406   ED   OUTLINE3(4),NUMWDRWL
000706 D203 C2B9 C126 002BF 0012C   407   MVC   HEADER6+44(4),OUTLINE3

00070C E020 C28D 0034 00293   409   XPRNT HEADER6,52

000712 07F9   411   BR   9

```
   LOC   OBJECT CODE      ADDR1 ADDR2   STMT      SOURCE STATEMENT

                                         413 ********************************************************************
                                         414 *  REGISTER KEY:                                                   *
                                         415 *    REG1: USED TO MARK PLACE TO PUT DOLLAR SIGN IN OUTPUT          *
                                         416 *    REG9: USED TO RETURN TO CALLER                                *
                                         417 ********************************************************************
000714 D210 C108 C12F 0010E 00135        418 PRNTTWDR MVC   OUTLINE1(17),PATTERN1     OUTPUT TOTAL AMT OF W'DRAWALS
00071A 4110 C113           00119         419      LA    1,OUTLINE1+11
00071E DF10 C108 C0D1 0010E 000D7        420      EDMK  OUTLINE1(17),TOTALWDR
000724 0610                              421      BCTR  1,0
000726 925B 1000      00000              422      MVI   0(1),C'$'
00072A D210 C2E2 C108 002E8 0010E        423      MVC   HEADER7+33(17),OUTLINE1

000730 E020 C2C1 0034 002C7              425      XPRNT HEADER7

000736 07F9                              427      BR    9
```

```
  LOC   OBJECT CODE     ADDR1 ADDR2   STMT    SOURCE STATEMENT


                                      429 ***************************************************************************
                                      430 *   REGISTER KEY:                                                        *
                                      431 *      REG1: USED TO MARK LOCATION TO PLACE DOLLAR SIGN IN OUTPUT        *
                                      432 *      REG9: USED TO RETURN TO CALLER                                    *
                                      433 ***************************************************************************
000738 F910 C0C9 C830  000CF 00836    434 PRNTWAVG CP     NUMWDRWL(2),=P'0'        DO NOT DIVIDE BY ZERO
00073E 4780 C76E             00774     435          BC     B'1000',NOWDRDIV

000742 F875 C0ED C0D1  000F3 000D7    437          ZAP    DIVISION(8),TOTALWDR(6)  CALCULATE W'DRAWAL AVERAGE
000748 F821 C0FA C0C9  00100 000CF    438          ZAP    DIVTEMP(3),NUMWDRWL(2)
00074E FD72 C0ED C0FA  000F3 00100    439          DP     DIVISION(8),DIVTEMP(3)
000754 F842 C0F5 C0F2  000FB 000F8    440          ZAP    TEMP(5),REMAINDR(3)
00075A FA44 C0F5 C0F5  000FB 000FB    441          AP     TEMP(5),TEMP(5)
000760 F942 C0F5 C0FA  000FB 00100    442          CP     TEMP(5),DIVTEMP(3)
000766 4750 C794             0079A     443          BC     B'0101',WNOTZERO
00076A FA40 C0ED C831  000F3 00837    444          AP     QUOTIENT(5),=P'1'

000770 47F0 C794             0079A     446          B      WNOTZERO

000774 F840 C0ED C830  000F3 00836    448 NOWDRDIV ZAP    QUOTIENT(5),=P'0'        WITHDRAWAL AVERAGE IS 0

00077A D20C C119 C13F  0011F 00145    450          MVC    OUTLINE2(13),PATTERN2    OUTPUT ZERO AVERAGE
000780 4110 C122             00128     451          LA     1,OUTLINE2+9
000784 DF0C C119 C0ED  0011F 000F3    452          EDMK   OUTLINE2(13),QUOTIENT
00078A 0610                            453          BCTR   1,0
00078C 925B 1000       00000          454          MVI    0(1),C'$'
000790 D20C C318 C119  0031E 0011F    455          MVC    HEADER8+35(13),OUTLINE2

000796 47F0 C7B0             007B6     457          B      WAVGEND

00079A D20C C119 C13F  0011F 00145    459 WNOTZERO MVC    OUTLINE2(13),PATTERN2    OUTPUT WITHDRAWAL AVERAGE
0007A0 4110 C124             0012A     460          LA     1,OUTLINE2+11
0007A4 DF0C C119 C0ED  0011F 000F3    461          EDMK   OUTLINE2(13),QUOTIENT
0007AA 0610                            462          BCTR   1,0
0007AC 925B 1000       00000          463          MVI    0(1),C'$'
0007B0 D20C C318 C119  0031E 0011F    464          MVC    HEADER8+35(13),OUTLINE2

0007B6 E020 C2F5 0034  002FB          466 WAVGEND  XPRNT  HEADER8,52

0007BC 07F9                            468          BR     9
```

```
  LOC   OBJECT CODE      ADDR1 ADDR2   STMT    SOURCE STATEMENT

                                       470 ***************************************************************************
                                       471 *   REGISTER KEY:                                                       *
                                       472 *     REG1: USED TO MARK LOCATION TO PLACE DOLLAR SIGN IN OUTPUT        *
                                       473 *     REG9: USED TO RETURN TO CALLER                                    *
                                       474 ***************************************************************************
0007BE D210 C108 C12F 0010E 00135      475 PRNTCBAL MVC    OUTLINE1(17),PATTERN1     OUTPUT THE CURRENT BALANCE
0007C4 4110 C113          00119        476          LA     1,OUTLINE1+11
0007C8 DF10 C108 C0D7 0010E 000DD      477          EDMK   OUTLINE1(17),CURRBAL
0007CE 0610                            478          BCTR   1,0
0007D0 925B 1000       00000           479          MVI    0(1),C'$'
0007D4 D210 C34A C108 00350 0010E      480          MVC    HEADER9+33(17),OUTLINE1

0007DA E020 C329 0034 0032F            482          XPRNT  HEADER9,52

0007E0 07F9                            484          BR     9
                                       485          END    MBPROG7
0007E8 00000000                                     =F'0'
0007EC C5D9D97A40C9D5E5                             =C'ERR: INVALID BALANCE'
000800 C5D9D97A40C9D5E5                             =C'ERR: INVALID MINIMUM BALANCE'
00081C C5D9D97A40C9D5E5                             =C'ERR: INVALID INTEREST RATE'
000836 0C                                           =P'0'
000837 1C                                           =P'1'
000838 10000C                                       =P'10000'
00083B 05000C                                       =P'5000'


***   0 STATEMENTS FLAGGED - 0 WARNINGS, 0 ERRORS


*** PROGRAM EXECUTION BEGINNING -
ANY OUTPUT BEFORE EXECUTION COMPLETE MESSAGE IS PRODUCED BY USER PROGRAM ***


     ---------------------------------------------------
              SAVINGS  ACCOUNT  REPORT
     TRAN. CODE     AMOUNT       RATE     CURRENT BALANCE
     ---------------------------------------------------
          0         212.14                   212.14
          1         110.00                   322.14
          2          42.00                   280.14
          3                      4.00        288.63
          3                      5.50        304.50
          1         252.36                   556.86
          2           3.50                   553.36
          2          10.00                   543.36
          1          20.00                   563.36
```

```
        3                        2.55                 571.12
        1             30.00                            601.12
        3                        9.00                 652.52
        1          5,000.00                         5,652.52
        2            341.35                          5,311.17
        3                        0.99               5,317.63
        1             10.00                          5,327.63


        NUMBER OF DEPOSITS      =                  6
  TOTAL AMOUNT OF DEPOSITS      =         $5,422.36
   AVG. AMOUNT PER DEPOSIT      =           $903.73


        NUMBER OF WITHDRAWALS   =                  4
  TOTAL AMOUNT OF WITHDRAWALS   =           $396.85
   AVG. AMOUNT PER WITHDRAWAL   =            $99.21


        CURRENT BALANCE   =         $5,327.63



  --------------------------------------------------
          SAVINGS   ACCOUNT   REPORT
  TRAN. CODE      AMOUNT       RATE    CURRENT BALANCE
  --------------------------------------------------
        0          512.34                     512.34
        1           23.04                     535.38
        1          123.42                     658.80
        2           50.00                     608.80
        3                      6.90           644.15
        2          120.00                     524.15


        NUMBER OF DEPOSITS      =                  2
  TOTAL AMOUNT OF DEPOSITS      =           $146.46
   AVG. AMOUNT PER DEPOSIT      =            $73.23


        NUMBER OF WITHDRAWALS   =                  2
  TOTAL AMOUNT OF WITHDRAWALS   =           $170.00
   AVG. AMOUNT PER WITHDRAWAL   =            $85.00


        CURRENT BALANCE   =           $524.15
```

```
-----------------------------------------------------
                SAVINGS  ACCOUNT  REPORT
TRAN. CODE        AMOUNT        RATE     CURRENT BALANCE
-----------------------------------------------------
     0             30.00                        30.00
     3                          9.99            33.00
     3                          4.31            34.42
     3                          1.23            34.84
     3                          7.89            37.59
     1             50.00                        87.59


        NUMBER OF DEPOSITS    =                 1
TOTAL AMOUNT OF DEPOSITS      =             $50.00
 AVG. AMOUNT PER DEPOSIT      =             $50.00


        NUMBER OF WITHDRAWALS =                 0
TOTAL AMOUNT OF WITHDRAWALS   =              $0.00
 AVG. AMOUNT PER WITHDRAWAL   =              $0.00


        CURRENT BALANCE       =             $87.59




-----------------------------------------------------
                SAVINGS  ACCOUNT  REPORT
TRAN. CODE        AMOUNT        RATE     CURRENT BALANCE
-----------------------------------------------------
     0              0.69                         0.69


        NUMBER OF DEPOSITS    =                 0
TOTAL AMOUNT OF DEPOSITS      =              $0.00
 AVG. AMOUNT PER DEPOSIT      =              $0.00


        NUMBER OF WITHDRAWALS =                 0
TOTAL AMOUNT OF WITHDRAWALS   =              $0.00
 AVG. AMOUNT PER WITHDRAWAL   =              $0.00


        CURRENT BALANCE       =              $0.69
```

```
---------------------------------------------------
              SAVINGS  ACCOUNT  REPORT
TRAN. CODE       AMOUNT      RATE    CURRENT BALANCE
---------------------------------------------------
    0            1,000.00               1,000.00
    2            2,000.00               1,000.00-
    3        ERR: INVALID MINIMUM BALANCE


       NUMBER OF DEPOSITS    =                0
TOTAL AMOUNT OF DEPOSITS    =             $0.00
 AVG. AMOUNT PER DEPOSIT    =             $0.00


       NUMBER OF WITHDRAWALS    =             1
TOTAL AMOUNT OF WITHDRAWALS    =     $2,000.00
 AVG. AMOUNT PER WITHDRAWAL    =     $2,000.00


       CURRENT BALANCE    =      $1,000.00-




---------------------------------------------------
              SAVINGS  ACCOUNT  REPORT
TRAN. CODE       AMOUNT      RATE    CURRENT BALANCE
---------------------------------------------------
    0        2,394,204.21           2,394,204.21


       NUMBER OF DEPOSITS    =                0
TOTAL AMOUNT OF DEPOSITS    =             $0.00
 AVG. AMOUNT PER DEPOSIT    =             $0.00


       NUMBER OF WITHDRAWALS    =             0
TOTAL AMOUNT OF WITHDRAWALS    =          $0.00
 AVG. AMOUNT PER WITHDRAWAL    =          $0.00


       CURRENT BALANCE    =    $2,394,204.21
```

```
    ----------------------------------------------------
              SAVINGS  ACCOUNT  REPORT
    TRAN. CODE      AMOUNT      RATE    CURRENT BALANCE
    ----------------------------------------------------
        0          3,490.21                 3,490.21


          NUMBER OF DEPOSITS    =                  0
    TOTAL AMOUNT OF DEPOSITS    =              $0.00
     AVG. AMOUNT PER DEPOSIT    =              $0.00


          NUMBER OF WITHDRAWALS =                  0
    TOTAL AMOUNT OF WITHDRAWALS =              $0.00
     AVG. AMOUNT PER WITHDRAWAL =              $0.00


          CURRENT BALANCE       =          $3,490.21




    ----------------------------------------------------
              SAVINGS  ACCOUNT  REPORT
    TRAN. CODE      AMOUNT      RATE    CURRENT BALANCE
    ----------------------------------------------------
        0         12,341.25                12,341.25


          NUMBER OF DEPOSITS    =                  0
    TOTAL AMOUNT OF DEPOSITS    =              $0.00
     AVG. AMOUNT PER DEPOSIT    =              $0.00


          NUMBER OF WITHDRAWALS =                  0
    TOTAL AMOUNT OF WITHDRAWALS =              $0.00
     AVG. AMOUNT PER WITHDRAWAL =              $0.00


          CURRENT BALANCE       =         $12,341.25

    *** EXECUTION COMPLETED ***
    →
```