CSCI 360 **Fall 2016**

Dump Assignment 2
(25 points)

This program creates a table, then attempts to process it. You are to provide documentation on All lines of the program. Your documentation should represent your best estimate at what the program is **trying** to do. After adding the necessary JCL, run the program (which will ABEND), and then, based on that ABENDing program, answer the questions below. You will turn in a copy of the ABENDing program. You may write your answers to the questions on the back of the program output that you turn in.

Remember, your entire program (from CSECT statement through the last of the six data records) must be contained **between**

```
the      //SYSIN  DD  *      JCL record          , and
the      /*                  JCL record          , as shown below.
```

Note: Do Not put your /* record immediately after your END DUMP2 record. If you do so, your six input records will not be found by the XREAD instruction (because the operating system throws the six records away) and your first XREAD will indicate "End of File". Your END DUMP2 record must be immediately followed by the six input records, and finally, by the /* record.

```
//SYSIN DD *            JCL RECORD THAT PRECEDES THE PROGRAM
DUMP2    CSECT
         USING DUMP2,15
         LA    2,TABLE
         SR    3,3
         XREAD DATA,80
*
LOOP1    BC    B'0100',ENDLOOP1
         XDECI 4,DATA
         ST    4,0(3,2)
         LA    3,4(,3)
         XREAD DATA,80
         BC    B'1111',LOOP1
*
ENDLOOP1 SR    3,3
         LA    7,TABLE
         LA    5,TABEND
*
LOOP2    CR    2,5
         BC    B'1000',ENDLOOP2
         L     6,0(,2)
         ST    6,0(,7)
         L     7,4(,7)
         LA    2,4(,2)
         BC    B'1111',LOOP2
*
```

```
ENDLOOP2 BCR   B'1111',14
*
         LTORG
DATA     DS    CL80
TABLE    DC    30F'-1'
TABEND   DS    0X
         END   DUMP2
0
1 2
50
32 24 19 62
123 456 789
987 654 321
/*                      JCL RECORD THAT FOLLOWS THE PROGRAM
```

Use the resulting output to answer the following questions:

1. What was the interruption code?
    1. 0006
2. What instruction caused the program to abend?
    1. 00003A
       Why?
        1. It was attempting to access protected storage
3. What was the condition code at the time of the ABEND?
    1. 1
4. How many table entries were built?
    1. 6
       How did you figure this?
        1. Line A0 – C0 in the dump
5. What is the return address to the calling routine?
    1. FFFE7960
       Where did you find this?
        1. Register 14
           Does your answer really make any sense?
            1. Yes
6. What are the contents of register 7?
    1. 00000001
7. Was any object code changed by this program?
    1. yes
       If so, for which instructions?
    2. The store address for table end
8. Explain why the program ABENDed.
    1. The program incremented past storage into protected storage which threw up a protection exception
9. Documentation was omitted from the program.
   How much difficulty did that add to understanding
   the program logic in this assignment?
   None at all. A little. Quite a bit. **A whole lot.**