CSCI 360 **Assignment 5: Disassembly and Decoding**
50 points

Below is an assembled program and its storage. Disassemble the program by decoding the instructions and turning them back into source code. Type what you have disassembled into a member of your PDSE named ASSIGN5 and be sure that it runs successfully and produces the same exact assembled program as shown below under the heading: **Here is the assembled program that you need to disassemble and decode:**

Here is the program with the instructions left out:

```
*****************************************************************
*                                                               *
*  CSCI 360               ASSIGNMENT 5       current semester  *
*                      DISASSEMBLY & DECODING                   *
*                                                               *
*  DEVELOPER NAME: your name goes here                          *
*         DUE DATE: assignment due date goes here               *
*                                                               *
*****************************************************************
*
ASSIGN5  CSECT
         USING ASSIGN5,15  ESTABLISH ADDRESSABILITY ON REG 15
*
      YOUR "DISASSEMBLED" PROGRAM CODE GOES HERE
*
         LTORG             LITERAL ORGANIZATION
*
      YOUR "DISASSEMBLED" STORAGE DECLARATIONS GO HERE
*
         END   ASSIGN5
```

Here is the assembled program that you need to disassemble and decode:

```
000000   41400017 5850F03C 18241A25 5020F040    18751864 1C665070 F0441894 5C40F050
000020   1D495040 F0485050 F04CE060 F0000054    07FEF5F5 F5F5F5F5 F5F5F5F5 00000065
000040   0000007C 00000913 00000009 00000004    00000001 F5F5F5F5 F5F5F5F5 00000000
```

Program Notes

- Note that the next to the last instruction is: `XDUMP ASSIGN5,84` and its operation code is `E0`. You will need to include this `XDUMP` in your own program to check that your program storage is exactly the same as the above assembled program.
- The register contents are not dumped but you should not need them to complete this assignment.
- You will have to decode instructions with explicit addressing as you do not know the names of the variables.
- To clarify, you will disassemble what you see in the assembled program provided above, you will type the decoded instructions into the program shell provided above and then, finally, you will run the program to be sure that it assembles correctly and that your `XDUMP`'d program storage matches the assembled program provided above EXACTLY.

Submit your ASSIGN5.txt output on Blackboard as before.