**CSCI 360-1/PE1 Assignment 5 – Disassembly and Decoding Spring 2022**

**75 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 JCL so that it runs and with the instructions left out:

//KC03nnnA JOB ,*'your first initial and last name*',MSGCLASS=H

//JSTEP01 EXEC PGM=ASSIST

//STEPLIB DD DSN=KC00NIU.ASSIST.LOADLIB,DISP=SHR

//SYSPRINT DD SYSOUT=\*

//SYSIN DD \*

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\* \*

\* CSCI 360-1 or PE1 ASSIGNMENT 5 SPRING 2022 \*

\* DISASSEMBLY & DECODING \*

\* \*

\* DEVELOPER NAME: YOUR NAME GOES HERE \*

\* DUE DATE: 03/11/2022 \*

\* \*

\* Replace KC03nnn above with your KC-ID assigned to you by \*

\* your instructor. DO NOT LEAVE OUT THE CAPITAL LETTER A AT \*

\* THE END OF YOUR KC-ID! Also, put your name in all capital \*

\* letters in the first line where it says 'your name here'. \*

\* Change CSCI 360-1 or PE1 to reflect your own section. \*

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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 F00000B0 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 ASSIGN5,176 and its operation code is E0. You will need to include the 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.