CSCI 360-1 **Assignment 3 – Basic Assembly Program** **Fall 2017**
75 points (25 each part)

This assignment has three parts:

Part A:

Create a new member of your ASSIGNS PDSE named ASSIGN3A. In that member, write a program named ASSIGN3A that subtracts NUM2 from NUM1. NUM1 is a fullword of 15 in storage. NUM2 is a fullword of 7 in storage. Simply load these numbers into registers 2 and 3, respectively, and then use an SR to subtract register 3 from 2. To see your numbers, use an XDUMP to dump out your registers and look at the registers to verify your answer. At this point, download a run of your program from SDSF (output queue) and save it as ASSIGN3A.txt.

Part B:

Now, use Utilities in ISPF to copy the member named ASSIGN3A from Part A above and save it as ASSIGN3B. In this program, store (ST) your answer into a new fullword of storage labeled ANSWER. XDUMP just that area of storage using XDUMP. You XDUMP storage by putting the label followed by the length of the field like XDUMP ANSWER,4. Go into the XDUMP and verify that your math is correct. At this point, download this run of your program from SDSF and save it as ASSIGN3B.txt.

Part C:

Finally, use Utilities in ISPF to copy the member named ASSIGN3B from Part B above and rewrite your program using explicit addressing. This means on the L and ST, take out your labels and fill in the left object code for the addresses. Remember that your base register is 15 because of the USING statement that immediately follows the CSECT statement. (You do not have to worry about converting the XDUMP to explicit form). Once again, at this point, download this final run of your program from SDSF and save it as ASSIGN3C.txt.

Be sure to follow the documentation standards described beginning on page 9 of the CSCI 360 Course Notes. Submit all three .txt files representing your successful runs of your jobs for Parts A, B and C on Blackboard.

Note that you are encouraged to complete Part A as a PDS member named ASSIGN3A. Then, for Part B, create an entirely new PDS member named ASSIGN3B and, when you're ready, create an entirely new PDS member named ASSIGN3C. Remember that you can copy a member of your PDS thus creating a new member. Copying PDS members can be done in ISPF Option 3 – Utilities.