

**This assignment has three parts:**

**Part A:**

Create a new member of your ASSIGNS PDSE named ASSIGN3A (you may also simply copy the ASSIGN1 member and use it to start this assignment). 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 using Retrieve Jobs and save it as ASSIGN3A.txt.

**Part B:**

Now, copy the member named ASSIGN3A from Part A above and name it 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 a run of your program using Retrieve Jobs and save it as ASSIGN3B.txt.

**Part C:**

Finally, copy the member named ASSIGN3B from Part B above and name it ASSIGN3C. 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 a run of your program using Retrieve Jobs and save it as ASSIGN3C.txt.

**Programming Notes**

You may leave the name of the actual program in each part named MAIN or change both the CSECT and END statements in each respective program to ASSIGN3A, ASSIGN3B and ASSIGN3C.

Be sure to follow the **360 Coding and Documentation Guidelines** found in Blackboard's *Course Documents* and, if you copied ASSIGN1 to begin this assignment, be sure you replace the Assignment 1 doc box with that found in the **360 Coding and Documentation Guidelines**. Be sure to fill it in correctly. Note that this will be the doc box you will use for each future assignment.

Submit the only .txt files for Parts B and C representing your successful runs of your jobs for those parts on Blackboard.