**CSE 232 Systems Programming**

**2022 Spring**

**Assignment 1**

|  |
| --- |
| **Purpose:** The purpose of this assignment is to practice arithmetic operations and conditional branch instructions in M6800 assembly language programming. |

Write an assembly language program which implements the following C code:

int x = 4;

int y = 7;

x = (x \* 6) – (y \* 5);

if (x >= 3)

if (y > 7)

y = y \* 4;

else

y = y / 2;

else

x = x / 4;

y = x + y;

Your solution should be able to handle all positive results for any value of x and y, that would be adequate. You may use LDA**X #NUM (i.e.** LDA**B #4)** notation for initializing variables. Just make sure your code works with different variables that would lead to different paths within the conditional branches.

Normally, your code works with negative values even without you managing it thanks to N flag. However, you may ignore those cases and only code considering your numbers would be positive and smaller than 127.

You should store x in the address 50H and y in the address 60H.

***Note:*** You must use Shift operations for division and multiplications.

***Note:*** Please name your submission as Student\_Name\_Surname\_ID.txt. If your name is too long, you may shorten it in a unique way as your preference.