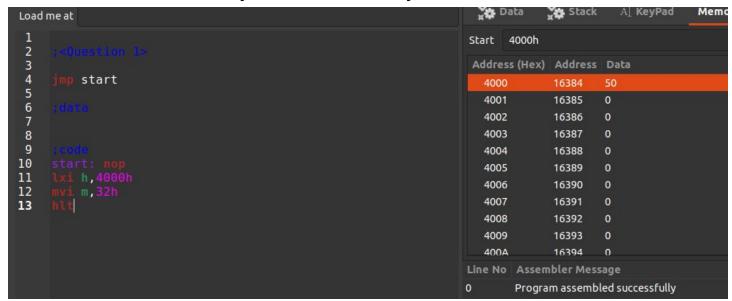
MIT Practicals Assignment 3 Krunal Rank (U18C0081)

Question 1: Store the data byte 32H into memory location 4000H.



Question 2: Exchange the contents of memory location 2000H and 4000H.

```
Start 4000h
 2 3
                                                                                  Address (Hex) Address Data
 4
5
6
        np start
                                                                                                 16384
                                                                                                           32
                                                                                     4001
                                                                                                 16385
                                                                                                           0
                                                                                     4002
                                                                                                 16386
                                                                                                           0
 8
                                                                                     4003
                                                                                                 16387
                                                                                                           0
 9
                                                                                                           0
                                                                                    4004
                                                                                                 16388
10
                                                                                     4005
                                                                                                 16389
                                                                                                           0
11
                                                                                     4006
                                                                                                 16390
                                                                                                           0
12
                                                                                     4007
                                                                                                           0
                                                                                                 16391
13
14
           h,2000h
                                                                                    4008
                                                                                                 16392
                                                                                                           0
15
                                                                                     4009
                                                                                                           0
                                                                                                 16393
16
                                                                                                 16394
                                                                                     400A
                                                                                                           0
17
                                                                                 Line No Assembler Message
18
19
                                                                                          Program assembled successfully
```

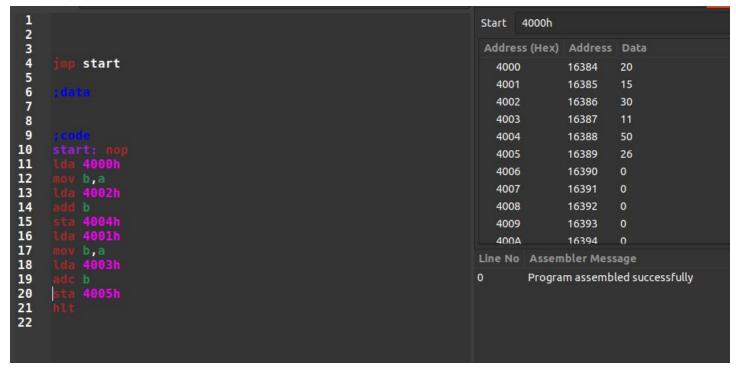
Question 3: Add two 8-bit numbers: Add the contents of memory locations 4000H and 4001H and place the result in memory location 4002H.

```
4000h
                                                                                 Start
 2
 3
                                                                                  Address (Hex) Address Data
 4
           start
                                                                                    4000
                                                                                                16384
                                                                                                          32
 5
                                                                                    4001
                                                                                                16385
                                                                                                          48
 6
                                                                                    4002
                                                                                                16386
                                                                                                          80
 8
                                                                                    4003
                                                                                                16387
                                                                                                          0
 9
                                                                                    4004
                                                                                                16388
                                                                                                          0
10
                                                                                    4005
                                                                                                16389
                                                                                                         0
11
                                                                                                16390
                                                                                                         0
                                                                                    4006
12
                                                                                    4007
                                                                                                16391
                                                                                                          0
13
14
                                                                                    4008
                                                                                                16392
                                                                                                          0
15
                                                                                    4009
                                                                                                16393
                                                                                                          0
16
                                                                                    400A
                                                                                                16394
17
                                                                                 Line No Assembler Message
                                                                                         Program assembled successfully
```

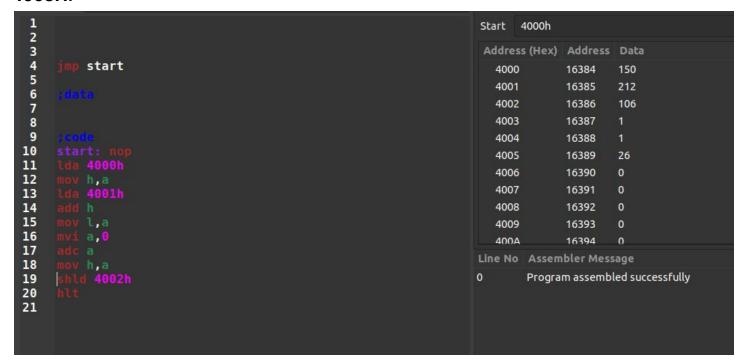
Question 4:Subtract two 8-bit numbers: Subtract the contents of memory location 4001H from the memory location 2000H and place the result in memory location 4002H.

```
1
                                                                                Start
                                                                                      4000h
 2
                                                                                Address (Hex) Address Data
 3
 4
           start
                                                                                  4000
                                                                                               16384
                                                                                                        20
 5
                                                                                  4001
                                                                                               16385
                                                                                                        0
 6
                                                                                  4002
                                                                                                        30
                                                                                               16386
 7
                                                                                  4003
                                                                                               16387
                                                                                                        0
 8
 9
                                                                                  4004
                                                                                               16388
                                                                                                        0
10
                                                                                  4005
                                                                                               16389
                                                                                                        0
11
           h,4000h
                                                                                  4006
                                                                                               16390
                                                                                                        0
12
                                                                                  4007
                                                                                               16391
                                                                                                        0
13
14
                                                                                  4008
                                                                                               16392
                                                                                                        0
15
                                                                                  4009
                                                                                               16393
                                                                                                        0
16
                                                                                  400A
                                                                                               16394
                                                                                                        0
17
                                                                               Line No Assembler Message
18
                                                                                        Program assembled successfully
```

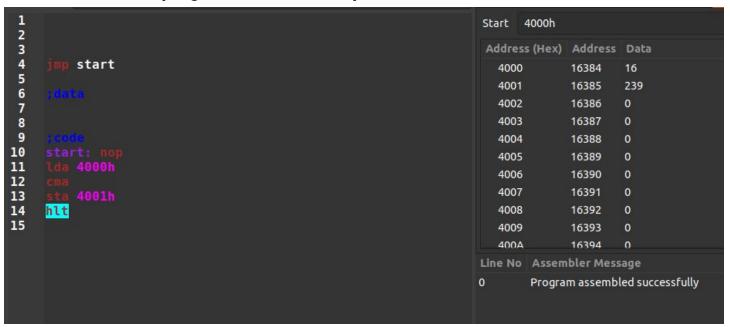
Question 5:Add the 16-bit number in memory locations 4000H and 4001H to the 16-bit number in memory locations 4002H and 4003H. The most significant eight bits of the two numbers to be added are in memory locations 4001H and 4003H. Store the result in memory locations 4004H and 4005H with the most significant byte in memory location 4005H.



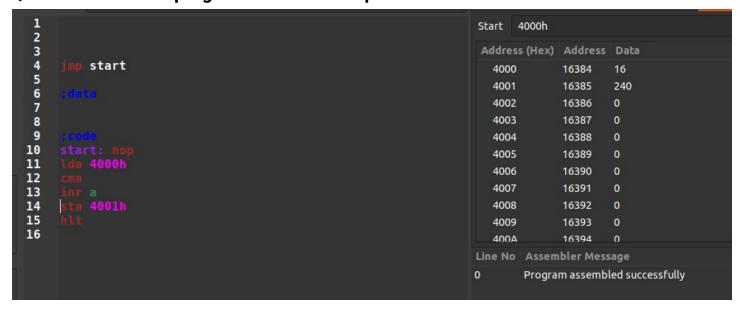
Question 6: Add contents of two memory locations: Add the contents of memory locations 4000H and 4001H and place the result in the memory locations 4002H and 4003H.



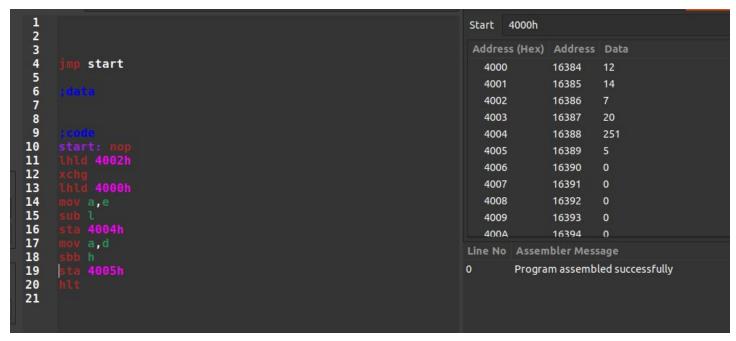
Question7: Write a program for one's complement of an 8 bit number.



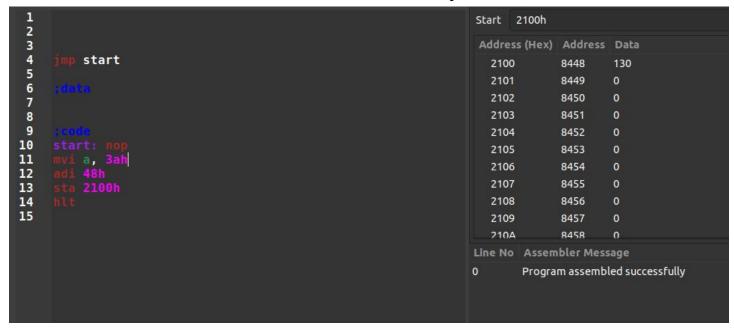
Question 8: Write a program for two's complement of an 8 bit number.



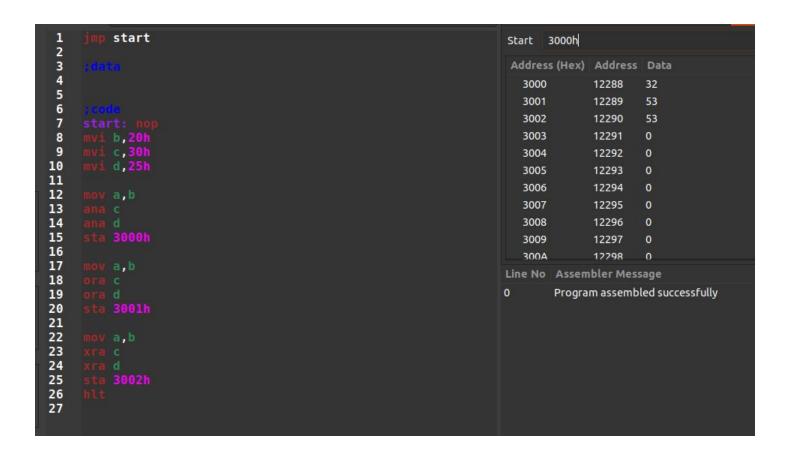
Question 9: Subtract the 16-bit number in memory locations 4002H and 4003H from the 16-bit number in memory locations 4000H and 4001H. The most significant eight bits of the two numbers are in memory locations 4001H and 4003H. Store the result in memory locations 4004H and 4005H with the most significant byte in memory location 4005H.



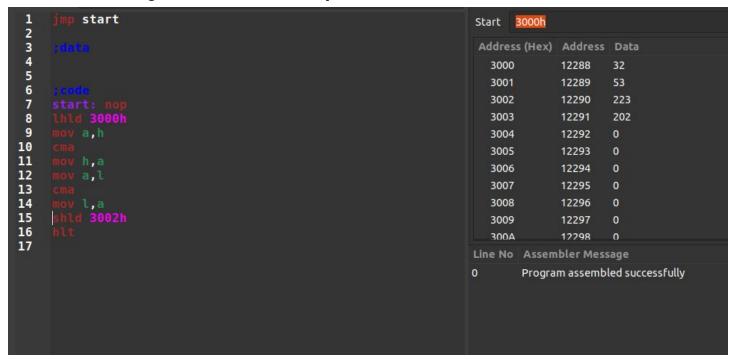
Question 10: Write a program using the ADI instruction to add the two hexadecimal numbers 3AH and 48H and store the result in memory location 2100H.



Question 11: Write an assembly language program that AND, OR and XOR together the contents of register B, C and E and place the result into memory location 3000H, 3001H and 3002H.



Question 12: Program to Find 1's Complement of 16-bit Number.



Question 13: Program to Find 2's Complement of 16-bit Number.

