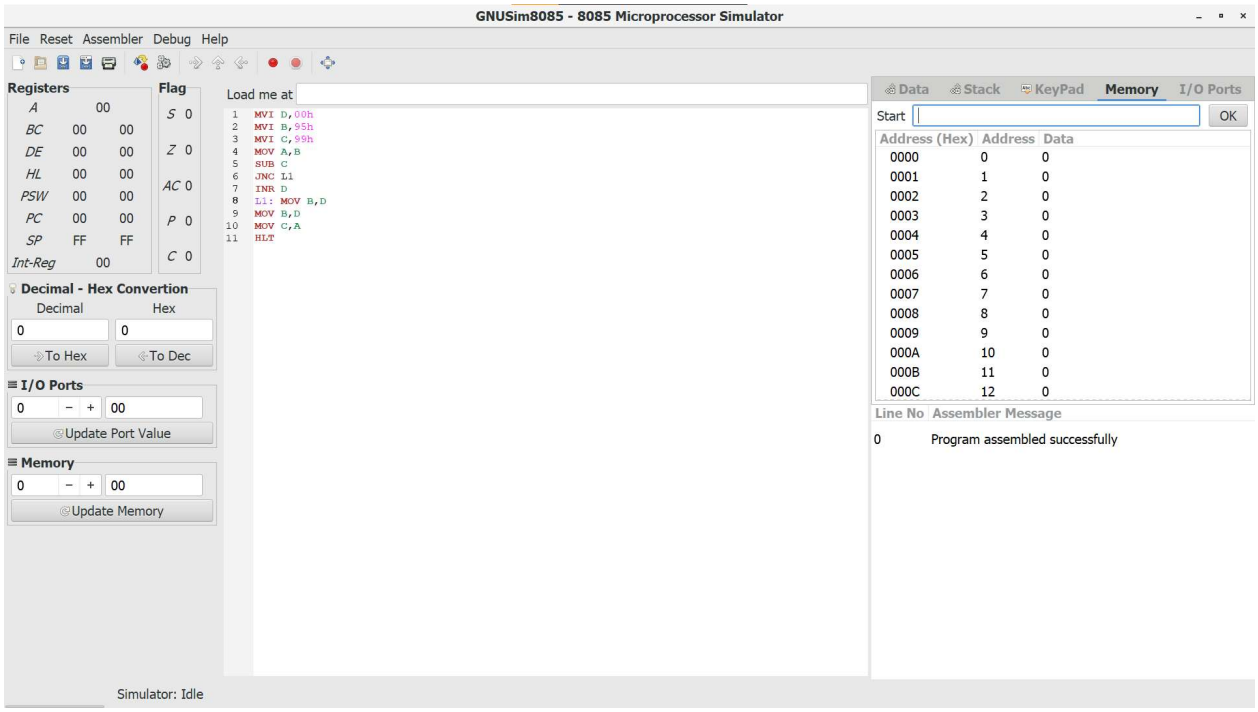
NAME : MD WASIF || ENROLL : 19UICS002
SUB : CAO LAB || ASSIGNMENT : 3

1. Subtraction of two 8 bit numbers (using borrow)

Aim : Subtract two 8-bit numbers with borrow

Algorithm:

1) **Initialize a register(say D) to 0 to store borrow**
2) **Load the register on memory location with data**
3) **Move the first data to the accumulator**
4) **Check the borrowings using JNC . if the borrow is generated then increment the value of D register.**
5) **Move the result to desired register/location**
6) **Terminate**



Observation :

Input : 95 B **Output : 01 B -> Carry**

99 C **FC C -> Result**
00D **01 D**

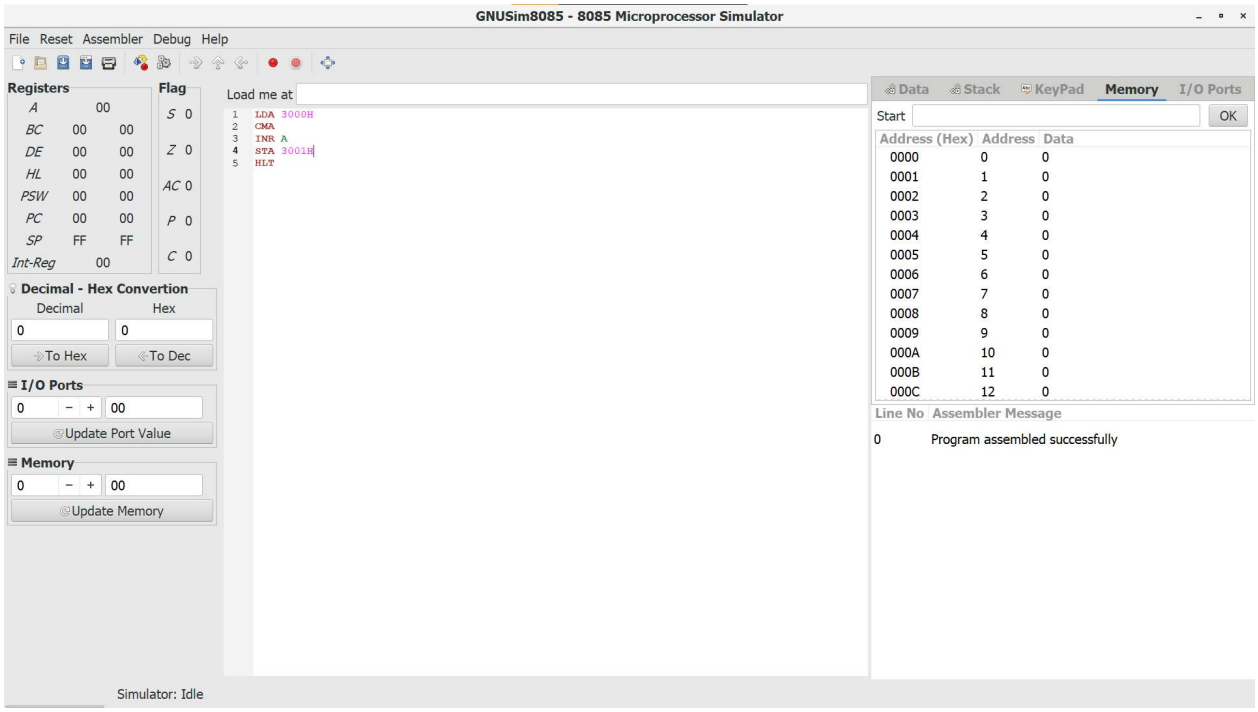
Result:
The result of subtraction using borrow can be seen in the BC register pair. Thus, the program executed correctly.

2. Write a program to find 2'complement of a 8-bit numbers

Aim: find 2'complement of a 8-bit numbers

Algorithm:

1) Load the data from memory 3000 into A (accumulator)
2) Complement content of accumulator
3) Store content of accumulator in memory 3001 (1's complement
4) Add 01 to Accumulator content
5) Store content of accumulator in memory 3002 (2's complement)
6) Terminate



Observation:

Input : **output :**

3000H : 85H **3001H : 7BH**

Result:

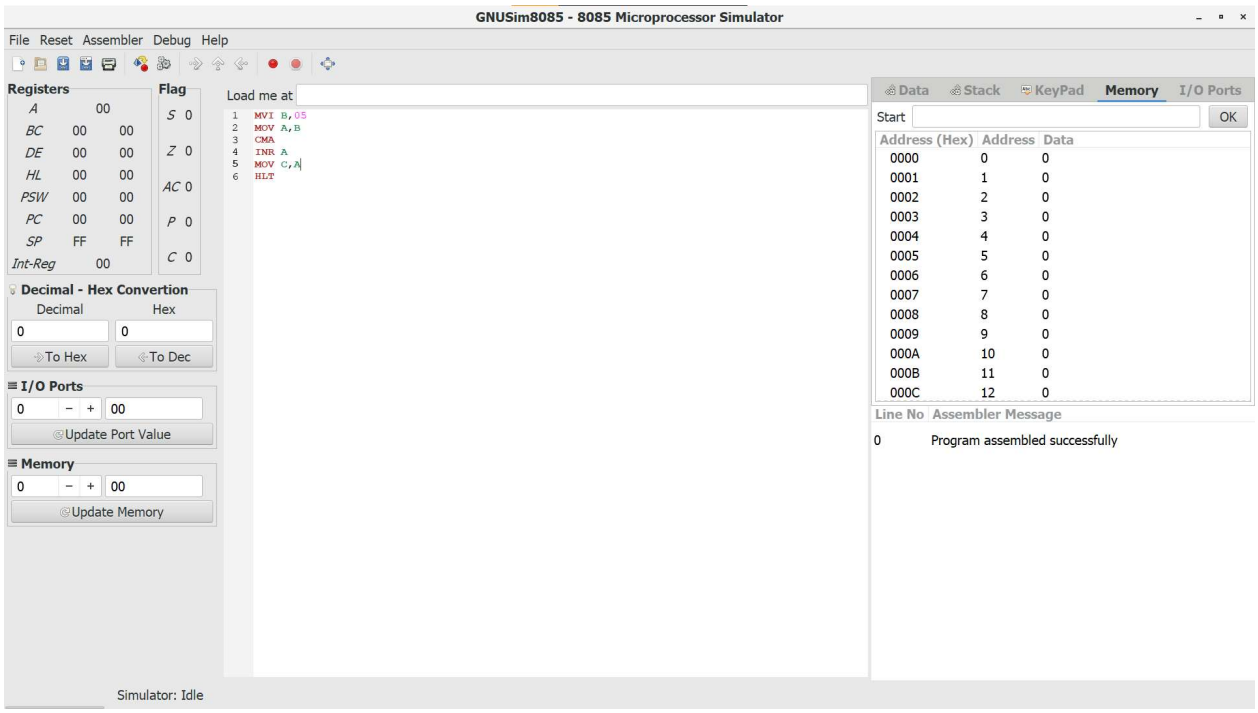
Thus, the program to find the 2's complement of a 8-bit number was successfully executed and the correct result was given.

3. Subtraction of two 8-bit numbers using 2'complement method using 8085

Aim: Subtraction of two 8-bit numbers using 2'complement

Algorithm:

1) **Load the first data into a register .**
2) **Load the second data value into the accumulator.**
3) **Compliment the value and then add 1 in the result**
4) **Add the first data value to the accumulator**
5) **Move the result to the desired memory location**
6) **Terminate**



Observation:

Input:	output:
95 B	95 B
99 C	99 C
XX D	FC D

Result:

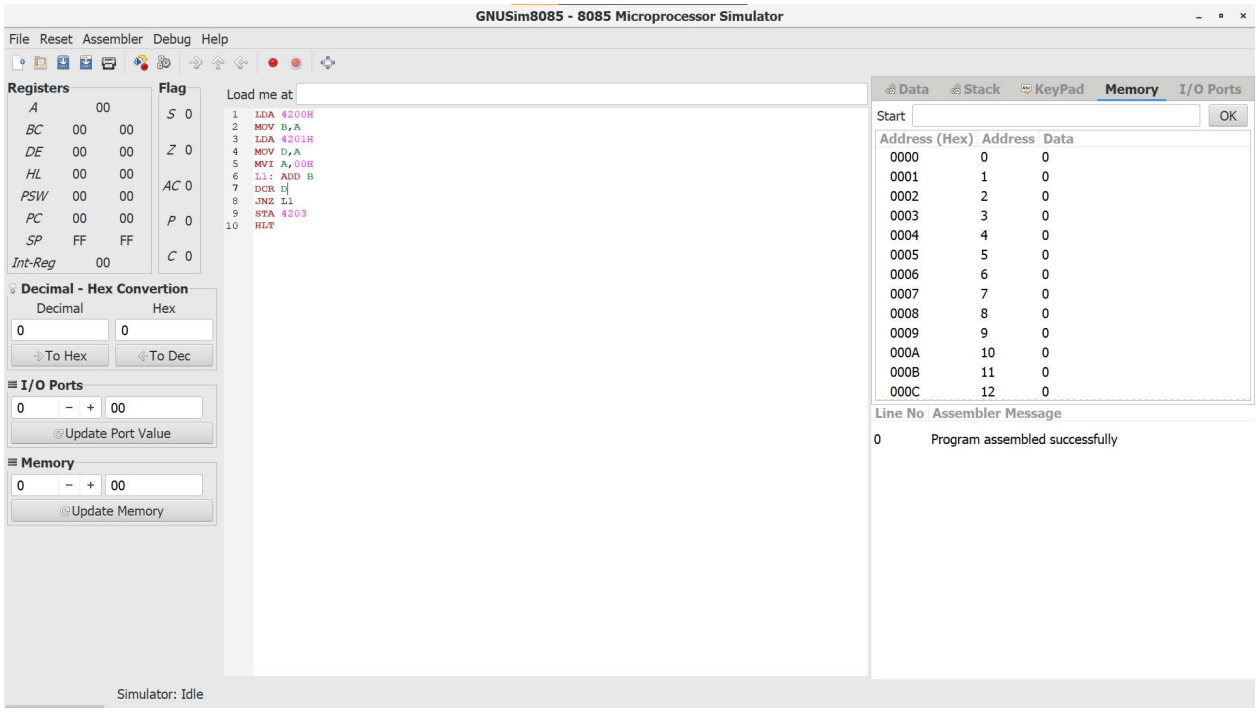
Thus , the program to find Subtraction of two 8-bit numbers using 2'complement was successfully executed correctly.

4. Write a program to multiply 8-bit numbers using 8085

Aim: to find multiple of two 8-bit numbers

Algorithm:

1) **Load the two numbers in separate locations.**
2) **Initialize contents of the accumulator to 0.**
3) **Add either of the number in accumulator the same time, decrement the other the other number**
4) **Keep repeating step 3 until the decremented number becomes 0.**
5) **Move the result from the accumulator to the desired location.**
6) **Terminate the program.**



Observation:

Input:

A	B	C
OO	O2	O3
	D	
	XX	

Output:

A	B	C
06	02	03
	D	
	06	

12

Result:

Thus , the program to find multiple of two 8-bit numbers was successfully executed correctly.