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## Lab Assignment 2

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### 1.) Subtraction of two 8-bit numbers

Code:

;<8 bit subtraction with borrow>

jmp start

;data

;code

start: nop

LXI H,4000H

MOV A,M

INX H

MOV B,M

MVI C,00H

SUB B

jnc LOOP

INR C

LOOP: INX H

MOV M,A

INX H

MOV M,C

Hlt

### Input:

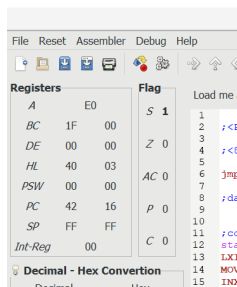
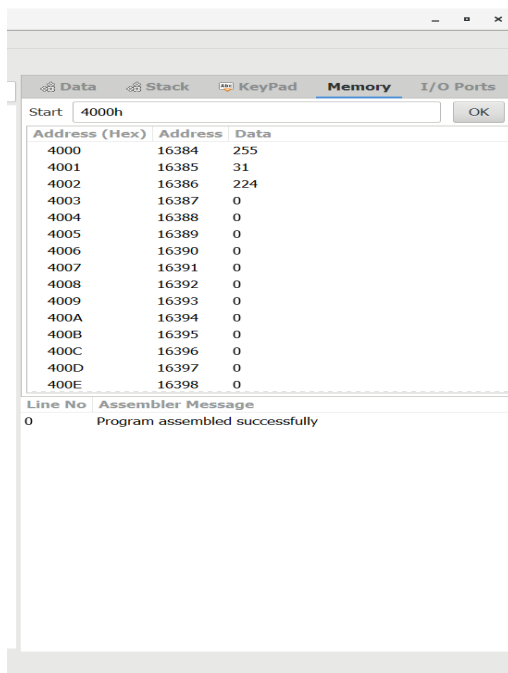
4000H-> 1FFH(255)

4001H-> 1FH(31)

### Output:

4002H-> 224

### Screenshot:



## 2.) Subtraction of 16-bit numbers

Code:

**>16 bit subtraction with borrow<**

**jmp start**

**;data**

**;code**

**start: nop**

**LHLD 4000H**

**XCHG**

**LHLD 4002H**

**MVI C,00H**

**MOV A,E**

**SUB L**

**jnc LOOP**

**INR C**

**LOOP: MOV E,A**

**MOV A,D**

**SUB C**

**SUB H**

**jnc LOOP1**

**INR B**

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LOOP1: MOV D,A
XCHG
SHLD 4004H
MOV A,B
STA 4006H
hlt

```

### Input:

4000H-> 1FFh(255)

4001H-> 1Fh(31)

4002H-> 1Fh(31)

4003H-> 1Fh(31)

### Output:

4004H-> 224

### Screenshot:

