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CSE

Lab Assignment 6

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Problem: Write a Program to Arrange Numbers in Ascending Order Using 8085 & Verify

Code:

```
;<Program title>
jmp start
;data
;code
start: nop
START: LXI H,000BH;size of elements
MVI D,00H
MOV C,M
DCR C
INX H
CHECK: MOV A,M
INX H
CMP M
JC NEXTBYT
MOV B,M
MOV M,A
DCX H
MOV M,B
INX H
```

```
MVI D,01H
NEXTBYT: DCR C
JNZ CHECK
MOV A,D
RRC
JC START
hlt
```

Input:(address in Hex format)

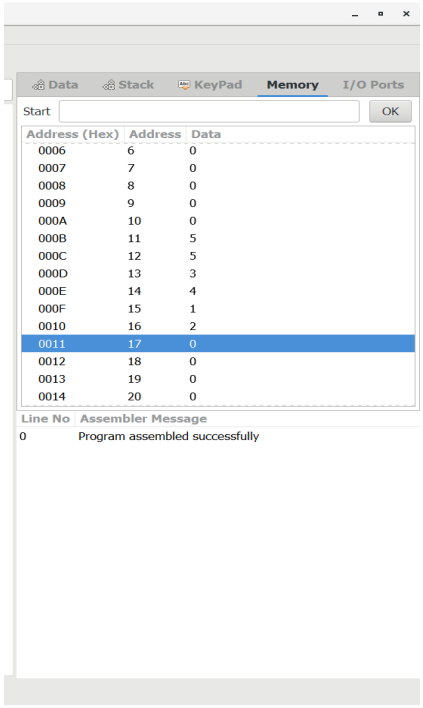
000B -> 5
000C -> 5
000D -> 3
000E -> 4
000F -> 1
0010 -> 2

Output:

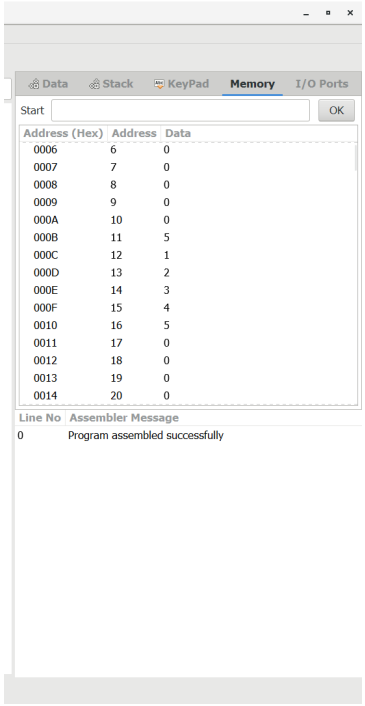
000B -> 5
000C -> 1
000D -> 2
000E -> 3
000F -> 4
0010 -> 5

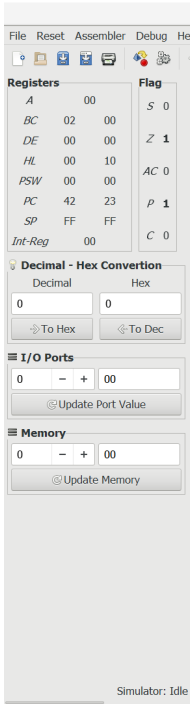
Screenshot output:

Before execution:



After execution:





Verification:

In address 000B we have stored 5 which denoted 5 elements are to be sorted. The given elements are :

5,3,4,1,2

After sorting in ascending order we get :

1, 2, 3 ,4 ,5

Through the output, we see we have got the sorted order as 1, 2, 3,4,5 which is the same as the desired ascending order. Hence verified that the elements are arranged in ascending order;