

Write a program to find maximum of n numbers stored at consecutive memory locations starting from 2050H and store that at following address.

Memory Address	Assembly code	Hex Code	Comments
0000	LXI H,2050H	21 50 20	Point to get count of numbers.
0003	MOV C,M	4E	Moves count to c
0004	INX H	23	Increase value of H
0005	MOV B,M	46	Move value in memory to B
0006	DCR C	0D	Decrease value of C by one
0007	LOOP: INX H	23	Increase value of H by 1
0008	MOV A,M	7E	Move value in memory to Acc
0009	CMP B	B8	Compare value in B with that in A
000A	JC SKIP	DA 0E 00	Jump to label skip if B>A
000D	MOV B,A	47	Move value in Acc to B
000E	SKIP: DCR C	0D	Decrease value of C
000F	JNZ LOOP	C2 07 00	Jumps to label LOOP if value in C is not 0
0012	INX H	23	Increase value of H
0013	MOV M,B	70	Move value in B to memory
0014	HLT	76	Stop the program.

Procedure:

Step – 1: Writing program in memory.

1. Press Reset
2. Press SET/MEM
3. Type in Address 0000
4. Press Enter
5. Type 1st Hex Code (Here 21)
6. Press Enter
7. Follow step 5 and 6 to type in all Hex Code

Step – 2: Assigning Value to the Address Location

1. Press Reset
2. Press SET/MEM
3. Type in Address of 1st Location (Here 2050)
4. Press Enter
5. Enter value of N (total count of number)
6. Press Enter
7. Enter a Number

8. Press Enter
9. Repeat Step 7 and 8 N-1 times

Step – 3: Executing the program

1. Press Reset to clear Buffer
2. Press Go
3. Enter Starting Address of Program (Here 0000)
4. Press Execute

Step – 4: Checking output

1. Press reset and Clear the Buffer
2. Press Go
3. Enter Result Location (Here 2050+ value of N+1)
4. You will find the maximum of N digits

Output:

The screenshot shows the 8085 Simulator interface. On the left, the Assembler window displays the assembly code for the program. On the right, the Memory Editor window shows the memory contents starting from address 0000 up to FFFF. The memory dump shows the values corresponding to the assembly code execution.

Memory Address	Value
0000	21
0001	50
0002	20
0003	4E
0004	23
0005	46
0006	0D
0007	23
0008	7E
0009	B8
000A	DA
000B	0E
000C	00
000D	47
000E	0D
000F	C2
0010	07
0011	00
0012	23
0013	10
0014	46
0015	00
0016	00
0017	00
0018	00
0019	00
001A	00
001B	00
001C	00
001D	00
001E	00
001F	00
0020	00
0021	00
0022	00
0023	00
0024	00
0025	00
0026	00
0027	00
0028	00
0029	00
002A	00
002B	00
002C	00
002D	00
002E	00
002F	00
0030	00
0031	00
0032	00
0033	00
0034	00
0035	00
0036	00
0037	00
0038	00
0039	00
003A	00
003B	00
003C	00
003D	00
003E	00
003F	00
0040	00
0041	00
0042	00
0043	00
0044	00
0045	00
0046	00
0047	00
0048	00
0049	00
004A	00
004B	00
004C	00
004D	00
004E	00
004F	00
0050	05
0051	03
0052	10
0053	59
0054	16
0055	51
0056	59





