

**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 1<sup>st</sup> 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 1<sup>st</sup> 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:

8085 Simulator

File Edit Tools Settings Simulation Subroutine View Load Sample Program Help

Editor Assembler Registers Memory Devices

**Assembler**

Address	Label	Mnemonics	Hexcode	Bytes	M-Cycles	T-States
✓ 0000		LXI H,2050	21	3	3	10
0001			50			
0002			20			
✓ 0003		MOV C,M	4E	1	2	7
✓ 0004		INX H	23	1	1	6
✓ 0005		MOV B,M	46	1	2	7
✓ 0006		DCR C	0D	1	1	4
✓ 0007	LOOP	INX H	23	1	1	6
✓ 0008		MOV A,M	7E	1	2	7
✓ 0009		CMP B	8B	1	1	4
✓ 000A		JC 000E	DA	3	3	10
000B			0E			
000C			00			
✓ 000D		MOV B,A	47	1	1	4
✓ 000E	SKIP	DCR C	0D	1	1	4
✓ 000F		JNZ 0007	C2	3	3	10
0010			07			
0011			00			
✓ 0012		INX H	23	1	1	6

**Simulate**

Start From → 0000

Run All At a Time Step By Step

**Registers**

**Memory Editor**

Memory Range: 0000 --- FFFF

Memory Address	Value
0000	21
0001	50
0002	20
0003	4E
0004	23
0005	46
0006	0D
0007	23
0008	7E
0009	8B
000A	DA
000B	0E
000C	00
000D	47
000E	0D
000F	C2
0010	07
0012	23
0013	70
0014	76
2050	05
2051	03
2052	10
2053	59
2054	16
2055	51
2056	59

☐ Show entire memory content  
☒ Show only loaded memory location  
☐ Store directly to specified memory location

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