

WORKSHEET-10

Student Name:- Ritika Rana

Branch:- BCA

Semester:- 6th

Subject Name:- Microprocessor And Interfacing Lab

Subject Code:- CAP-356

UID:- 19BCA1126

Section/Group:- A/B

Date of Performance:- 12-05-2022

1. Overview of the practical:

Write a program to arrange an array of data in ascending order and execute it on simulink.

2. Task to be done:

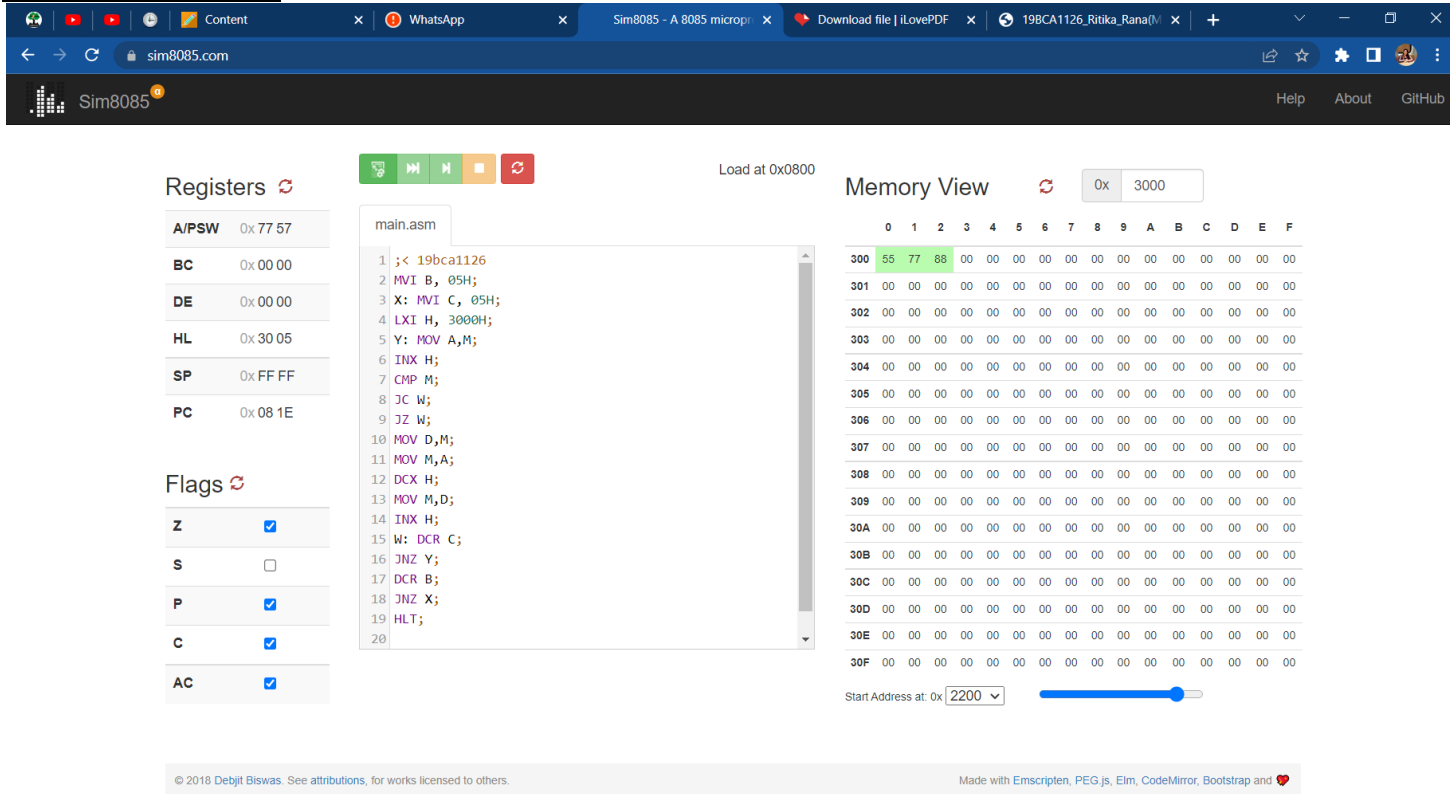
```
MVI B, 05H;  
X: MVI C, 05H;  
LXI H, 3000H;  
Y: MOV A,M;  
INX H;  
CMP M;  
JC W;  
JZ W;  
MOV D,M;  
MOV M,A;  
DCX H;  
MOV M,D;  
INX H;  
W: DCR C;  
JNZ Y;  
DCR B;  
JNZ X;  
HLT;
```

3. Tools Used:

SIM 8055 (<https://www.sim8085.com/>)

4. Output:

Before execution:



The screenshot shows the Sim8085 web simulator interface. The browser tabs include 'Content', 'WhatsApp', 'Sim8085 - A 8085 micropr...', 'Download file | iLovePDF', and '19BCA1126.Ritika_Rana[M...'. The address bar shows 'sim8085.com'. The simulator interface includes a 'Registers' panel on the left, a central assembly code editor, and a 'Memory View' panel on the right.

Registers:

A/PSW	0x 77 57
BC	0x 00 00
DE	0x 00 00
HL	0x 30 05
SP	0x FF FF
PC	0x 08 1E

Flags:

Z	<input checked="" type="checkbox"/>
S	<input type="checkbox"/>
P	<input checked="" type="checkbox"/>
C	<input checked="" type="checkbox"/>
AC	<input checked="" type="checkbox"/>

Assembly Code (main.asm):

```

1 ;< 19bca1126
2 MVI B, 05H;
3 X: MVI C, 05H;
4 LXI H, 3000H;
5 Y: MOV A,M;
6 INX H;
7 CMP M;
8 JC W;
9 JZ W;
10 MOV D,M;
11 MOV M,A;
12 DCX H;
13 MOV M,D;
14 INX H;
15 W: DCR C;
16 JNZ Y;
17 DCR B;
18 JNZ X;
19 HLT;

```

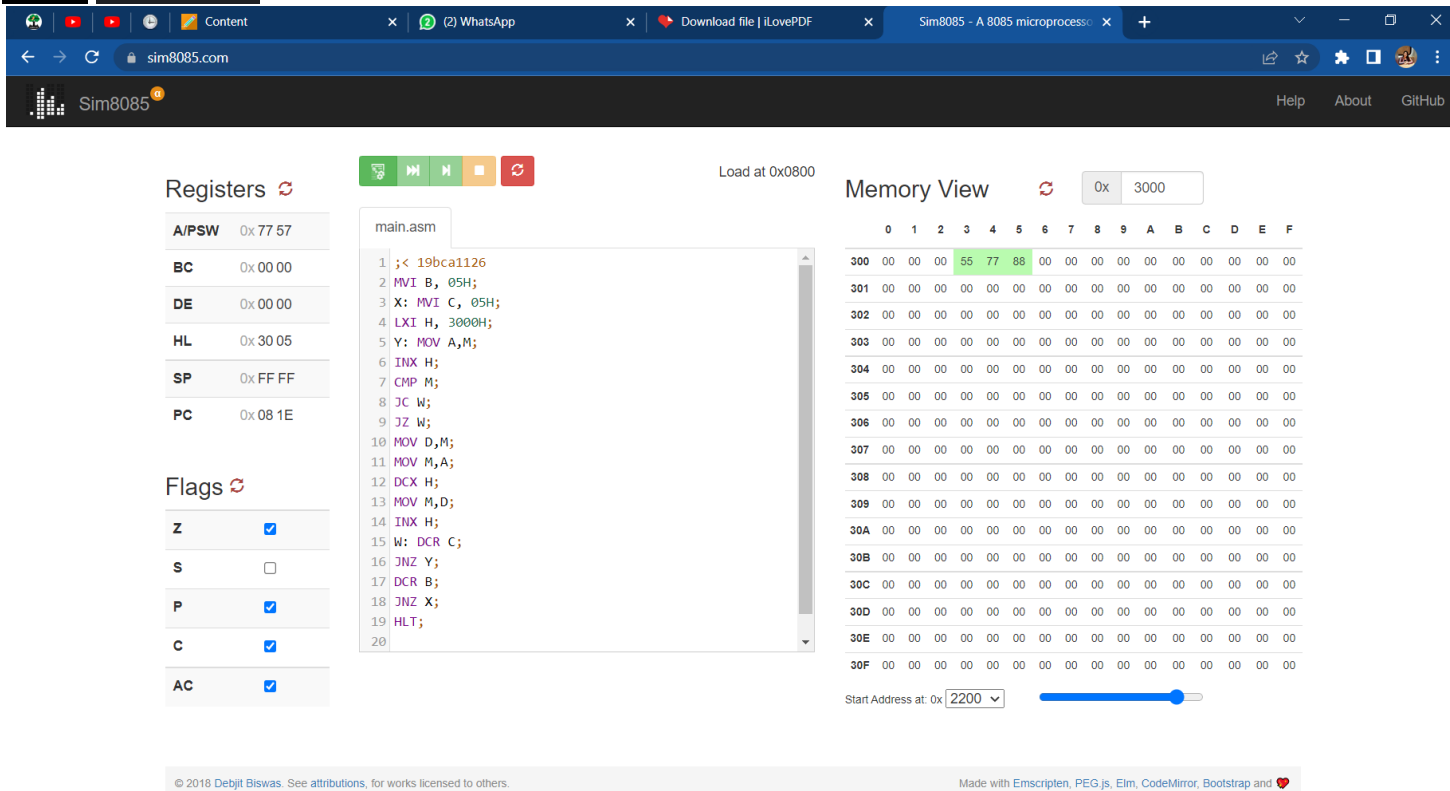
Memory View:

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
300	55	77	88	00	00	00	00	00	00	00	00	00	00	00	00	00
301	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
302	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
303	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
304	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
305	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
306	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
307	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
308	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
309	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30A	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30B	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30C	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30D	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30E	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30F	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

Start Address at: 0x 2200

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After execution:



The screenshot shows the Sim8085 web simulator interface after execution. The browser tabs include 'Content', '(2) WhatsApp', 'Download file | iLovePDF', and 'Sim8085 - A 8085 microprocess...'. The address bar shows 'sim8085.com'. The simulator interface includes a 'Registers' panel on the left, a central assembly code editor, and a 'Memory View' panel on the right.

Registers:

A/PSW	0x 77 57
BC	0x 00 00
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8 JC W;
9 JZ W;
10 MOV D,M;
11 MOV M,A;
12 DCX H;
13 MOV M,D;
14 INX H;
15 W: DCR C;
16 JNZ Y;
17 DCR B;
18 JNZ X;
19 HLT;

```

Memory View:

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
300	00	00	00	55	77	88	00	00	00	00	00	00	00	00	00	00
301	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
302	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
303	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
304	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
305	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
306	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
307	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
308	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
309	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30A	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30B	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30C	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30D	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30E	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30F	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

Start Address at: 0x 2200

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5. Learning outcomes (What I have learnt):



1. Sort Array ascending order.
2. Sort Array in descending order.
3. Bubble Sort.
4. HLT (Used to end the program).

6. Evaluation Grid:

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1	Demonstration/Performance/Pre Lab Quiz		5
2	Worksheet		10
3	Post Lab Quiz		5