

NAME : MD WASIF || ENROL: 19UICS002
SUBJECT : CAO Lab

Experiment -1

Write a program for addition of two 8 bit numbers.

A) Aim: Addition using registers and storing result in registers.

The screenshot displays the GNUSim8085 - 8085 Microprocessor Simulator interface. The main window shows the assembly code for adding two 8-bit numbers. The registers section on the left shows the current state of the 8085 registers. The memory dump on the right shows the memory contents at addresses 0000 to 000B. The assembler message at the bottom indicates that the program was assembled successfully.

Registers:

Register	Value
A	07
BC	02 07
DE	00 00
HL	00 00
PSW	00 00
PC	42 07
SP	FF FF
Int-Reg	00

Flag:

Flag	Value
S	0
Z	0
AC	0
P	0
C	0

Assembly Code:

```
1  
2  
3  
4 MVI A, 05  
5 MVI B, 02  
6 ADD B  
7 MOV C, A  
8 HLT
```

Memory Dump:

Address (Hex)	Address	Data
0000	0	0
0001	1	0
0002	2	0
0003	3	0
0004	4	0
0005	5	0
0006	6	0
0007	7	0
0008	8	0
0009	9	0
000A	10	0
000B	11	0

Assembler Message:

Line No	Assembler Message
0	Program assembled successfully

Simulator: Idle

B) Aim: Addition of numbers stored in memory and storing result in Memory.

The screenshot displays the GNUSim8085 - 8085 Microprocessor Simulator interface. The main window is titled "GNUSim8085 - 8085 Microprocessor Simulator". The menu bar includes File, Reset, Assembler, Debug, and Help. The toolbar contains icons for file operations, execution, and debugging.

Registers:

Register	Value
A	0F
BC	00 00
DE	00 00
HL	00 02
PSW	00 00
PC	42 0A
SP	FF FF
Int-Reg	00

Flag:

Flag	Value
S	0
Z	0
AC	0
P	1
C	0

Assembly Code:

```
1  
2  
3  
4 LXI H,0001H  
5 MOV A,M  
6 INX H  
7 ADD M  
8 STA 00003H  
9 hlt
```

Memory:

Address (Hex)	Address	Data
0001	1	10
0002	2	5
0003	3	15
0004	4	0
0005	5	0
0006	6	0
0007	7	0
0008	8	0
0009	9	0
000A	10	1
000B	11	0
000C	12	0

I/O Ports:

Port	Value
0	00

Assembler Message:

Line No	Assembler Message
0	Program assembled successfully

C) Aim: Addition of numbers stored in memory and storing result in register.

