##
##
INDEX   EXP : 4
##
##

Name   : Rishabh Sarswa
Rollno   : 19UELE8030

Experiment : 4

Aim :   ADD the content of memory location 1000H and 1001H
        place result in memory location 1002H carry in 1003H

Software Use : GNUSim8085

Program :

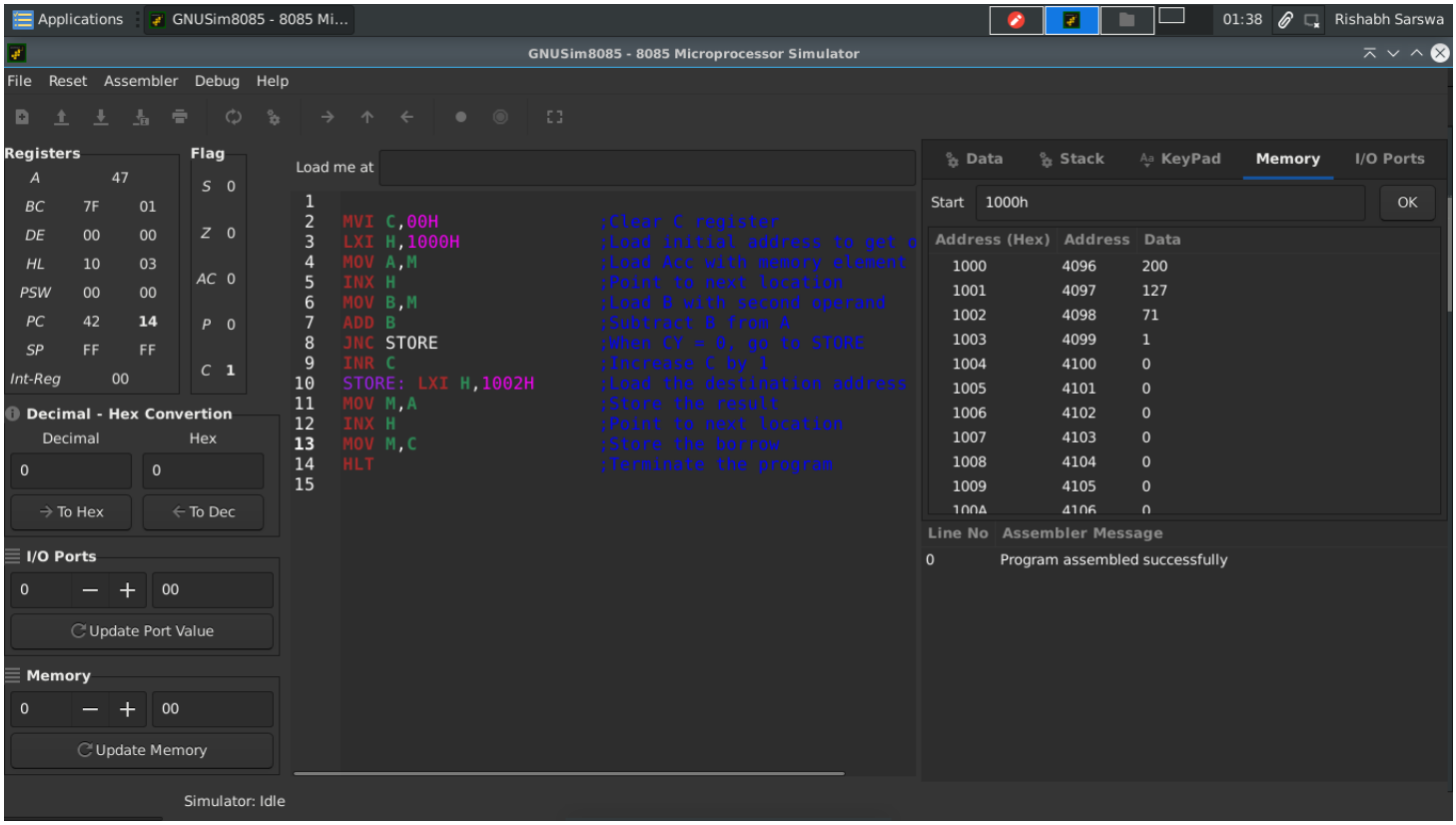
        ------ Program Table ------

Address	HEX Codes	Labels	Mnemonics	Comments
F000	0E, 00		MVI C,00H	Clear C register
F002	21, 00, 10		LXI H,1000H	Load initial address to get operand
F005	7E		MOV A,M	Load Acc with memory element
F006	23		INX H	Point to next location
F007	46		MOV B,M	Load B with second operand
F008	90		ADD B	ADD A and B
F009	D2, 0D, F0		JNC STORE	When CY = 0, go to STORE
F00C	0C		INR C	Increase C by 1
F00D	21, 20, 10	STORE	LXI H,1002H	Load the destination address
F010	77		MOV M,A	Store the result
F011	23		INX H	Point to next location
F012	71		MOV M,C	Store the borrow
F013	76		HLT	Terminate the program

        -------- program in asm ------

```
MVI C,00H                ;Clear C register
LXI H,1000H              ;Load initial address to get operand
MOV A,M                  ;Load Acc with memory element
INX H                    ;Point to next location
MOV B,M                  ;Load B with second operand
ADD B                    ;ADD A and B
JNC STORE                ;When CY = 0, go to STORE
INR C                    ;Increase C by 1
STORE:LXI H,1002H        ;Load the destination address
MOV M,A                  ;Store the result
INX H                    ;Point to next location
MOV M,C                  ;Store the borrow
HLT                      ;Terminate the program
```

        ------- end program -------


Applications
GNUSim8085 - 8085 Mi...
01:38
Rishabh Sarswa
GNUSim8085 - 8085 Microprocessor Simulator
File Reset Assembler Debug Help
Registers
A 47
BC 7F 01
DE 00 00
HL 10 03
PSW 00 00
PC 42 14
SP FF FF
Int-Reg 00
Flag
S 0
Z 0
AC 0
P 0
C 1
Decimal - Hex Convertion
Decimal
Hex
0
0
To Hex
To Dec
I/O Ports
0
00
Update Port Value
Memory
0
00
Update Memory
Load me at
1
2 MVI C,00H ;Clear C register
3 LXI H,1000H ;Load initial address to get d
4 MOV A,M ;Load Acc with memory element
5 INX H ;Point to next location
6 MOV B,M ;Load B with second operand
7 ADD B ;Subtract B from A
8 JNC STORE ;When CY = 0, go to STORE
9 INR C ;Increase C by 1
10 STORE: LXI H,1002H ;Load the destination address
11 MOV M,A ;Store the result
12 INX H ;Point to next location
13 MOV M,C ;Store the borrow
14 HLT ;Terminate the program
15
Data
Stack
KeyPad
Memory
I/O Ports
Start
1000h
OK
Address (Hex) Address Data
1000 4096 200
1001 4097 127
1002 4098 71
1003 4099 1
1004 4100 0
1005 4101 0
1006 4102 0
1007 4103 0
1008 4104 0
1009 4105 0
Line No Assembler Message
0 Program assembled successfully
Simulator: Idle