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Rollno : 19UELE8030

Experiment : 8

Aim : Add a 16 bit number stared in memory location 1000H AND 1001H
to another 16 bit number stored in memory location 1002H and 1003H.
Store the result in memory location 1004H and 1005H and
carry (if any) in memory location 1006H

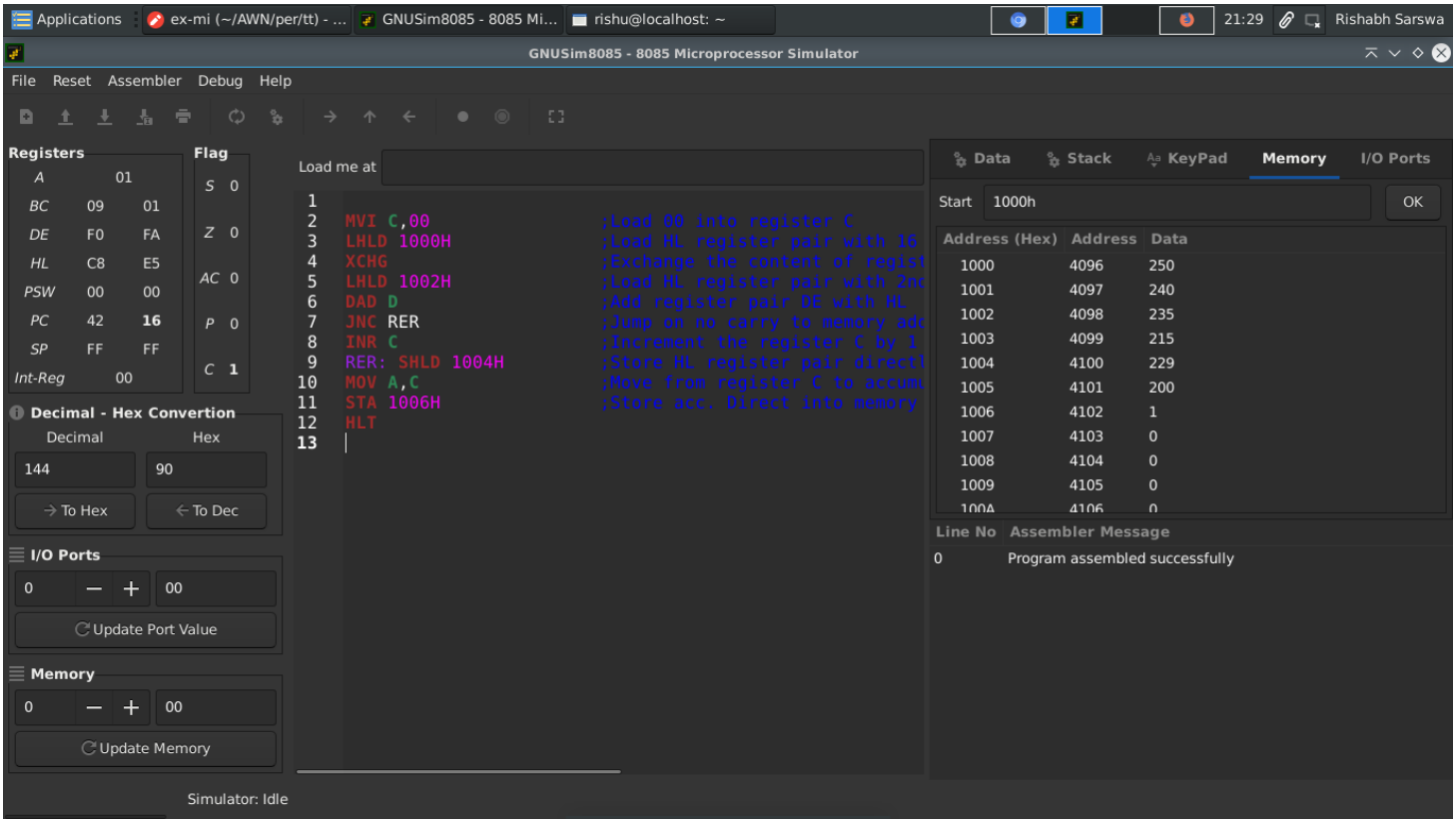
Software Use : GNUSim8085

Program :

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

```
MVI C,00                ;Load 00 into register C
LHLD 1000H              ;Load HL register pair with 16 bit data from memory location 1000H and 1001H
XCHG                    ;Exchange the content of register pair DE and HL
LHLD 1002H              ;Load HL register pair with 2nd 16 bit no. from memory location 1002H and 1003H
DAD D                   ;Add register pair DE with HL
JNC RER                 ;Jump on no carry
INR C                   ;Increment the register C by 1
RER: SHLD 1004H         ;Store HL register pair directly to memory location 1004H and 1005H
MOV A,C                 ;Move from register C to accumulator
STA 1006H               ;Store acc. Direct into memory location 1006H (carry)
HLT                     ;End Program
```

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


Applications
ex-mi (~/AWN/per/tt) - ...
GNUSim8085 - 8085 Mi...
rishu@localhost: ~
21:29
Rishabh Sarswa
GNUSim8085 - 8085 Microprocessor Simulator
File Reset Assembler Debug Help
Registers
A 01
BC 09 01
DE F0 FA
HL C8 E5
PSW 00 00
PC 42 16
SP FF FF
Int-Reg 00
Flag
S 0
Z 0
AC 0
P 0
C 1
Decimal - Hex Convertion
Decimal
Hex
144
90
To Hex
To Dec
I/O Ports
0
00
Update Port Value
Memory
0
00
Update Memory
Load me at
1
2 MVI C,00 ;Load 00 into register C
3 LHLD 1000H ;Load HL register pair with 16
4 XCHG ;Exchange the content of regist
5 LHLD 1002H ;Load HL register pair with 2nd
6 DAD D ;Add register pair DE with HL
7 JNC RER ;Jump on no carry to memory add
8 INR C ;Increment the register C by 1
9 RER: SHLD 1004H ;Store HL register pair directl
10 MOV A,C ;Move from register C to accumu
11 STA 1006H ;Store acc. Direct into memory
12 HLT
13
Data
Stack
KeyPad
Memory
I/O Ports
Start 1000h
OK
Address (Hex) Address Data
1000 4096 250
1001 4097 240
1002 4098 235
1003 4099 215
1004 4100 229
1005 4101 200
1006 4102 1
1007 4103 0
1008 4104 0
1009 4105 0
Line No Assembler Message
0 Program assembled successfully
Simulator: Idle