

16-BIT DIVISION

EXP NO: 8

AIM: To write an assembly language program to implement 16-bit divided by 8-bit using 8085 processor.

ALGORITHM:

- 1) Read dividend (16 bit)
- 2) Read divisor
- 3) count <- 8
- 4) Left shift dividend
- 5) Subtract divisor from upper 8-bits of dividend
- 6) If CS = 1 go to 9
- 7) Restore dividend
- 8) Increment lower 8-bits of dividend
- 9) count <- count - 1
- 10) If count = 0 go to 5
- 11) Store upper 8-bit dividend as remainder and lower 8-bit as quotient
- 12) Stop

PROGRAM:

```
LDA 8501
MOV B,A
LDA 8500
MVI C,00
LOOP: CMP B
JC LOOP1
SUB B
```

INR C

JMP LOOP

STA 8503

DCR C

MOV A,C

LOOP1: STA 8502

RST 1

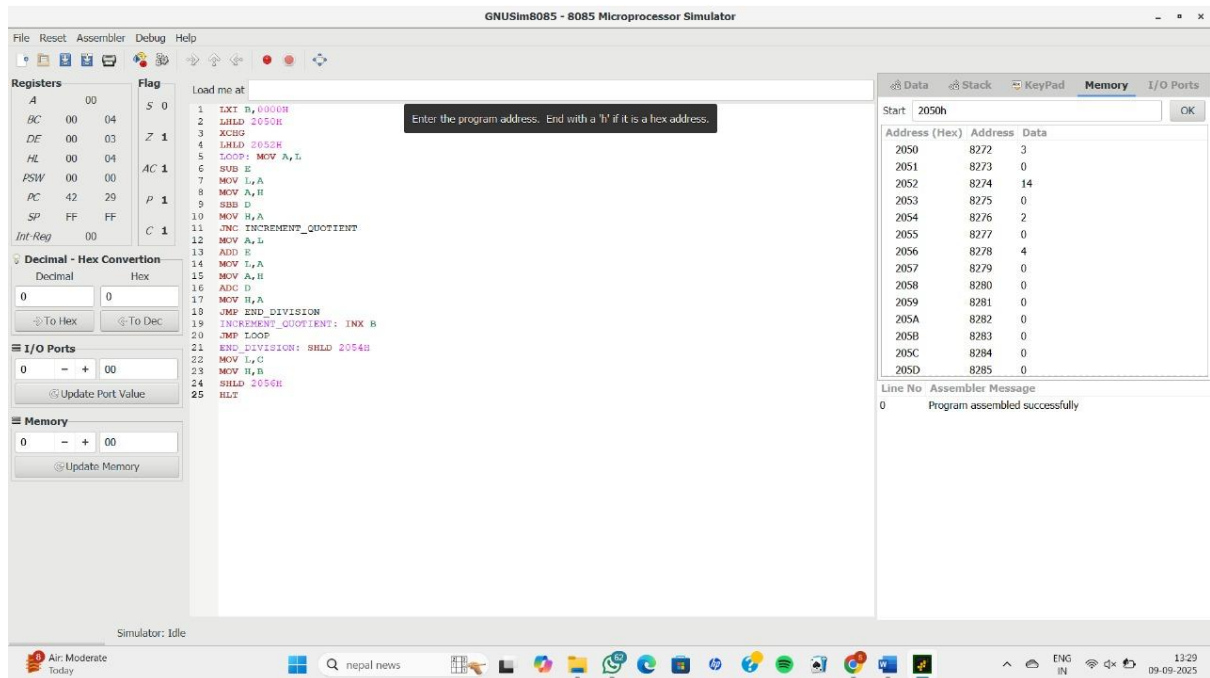
INPUT:

3

0

14

OUTPUT:



RESULT: Thus the program was executed successfully using 8085 processor simulator.