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
```

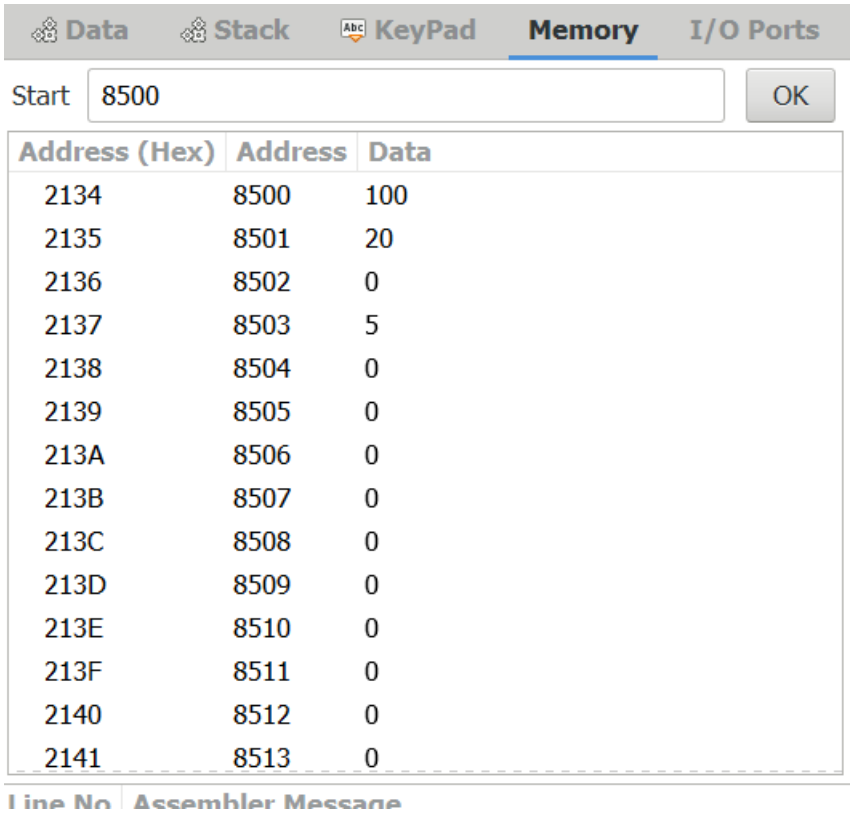
DCR C

MOV A,C

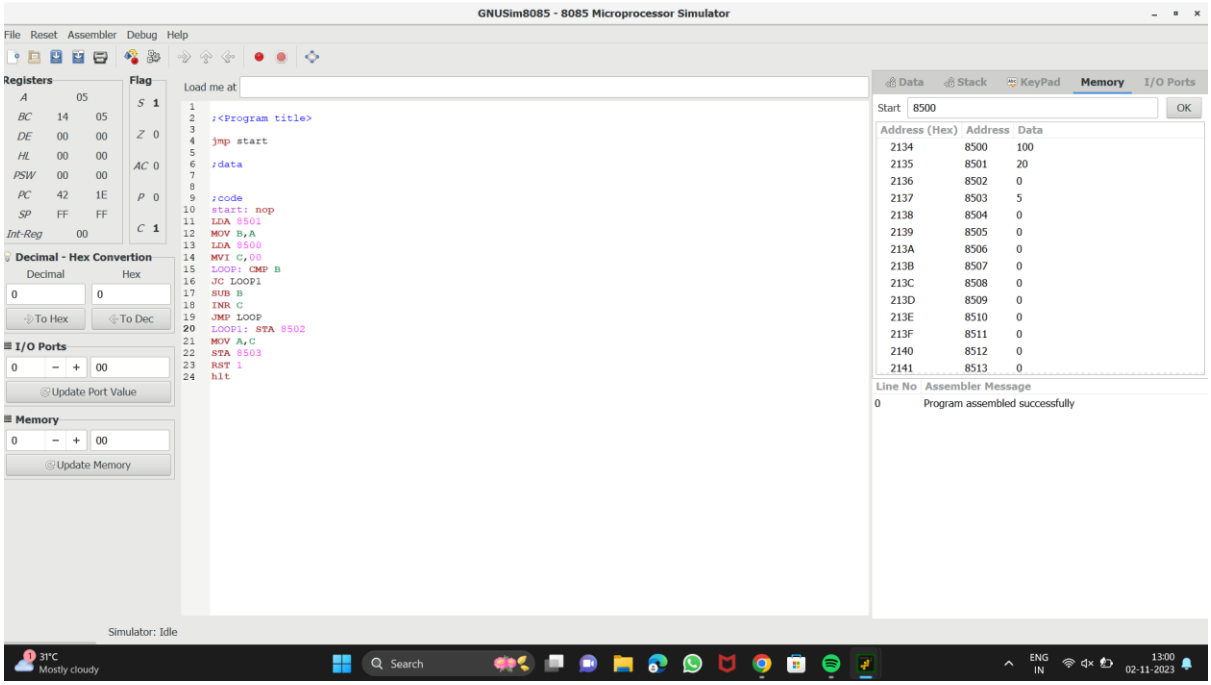
LOOP1: STA 8502

RST 1

INPUT:



OUTPUT:



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