

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

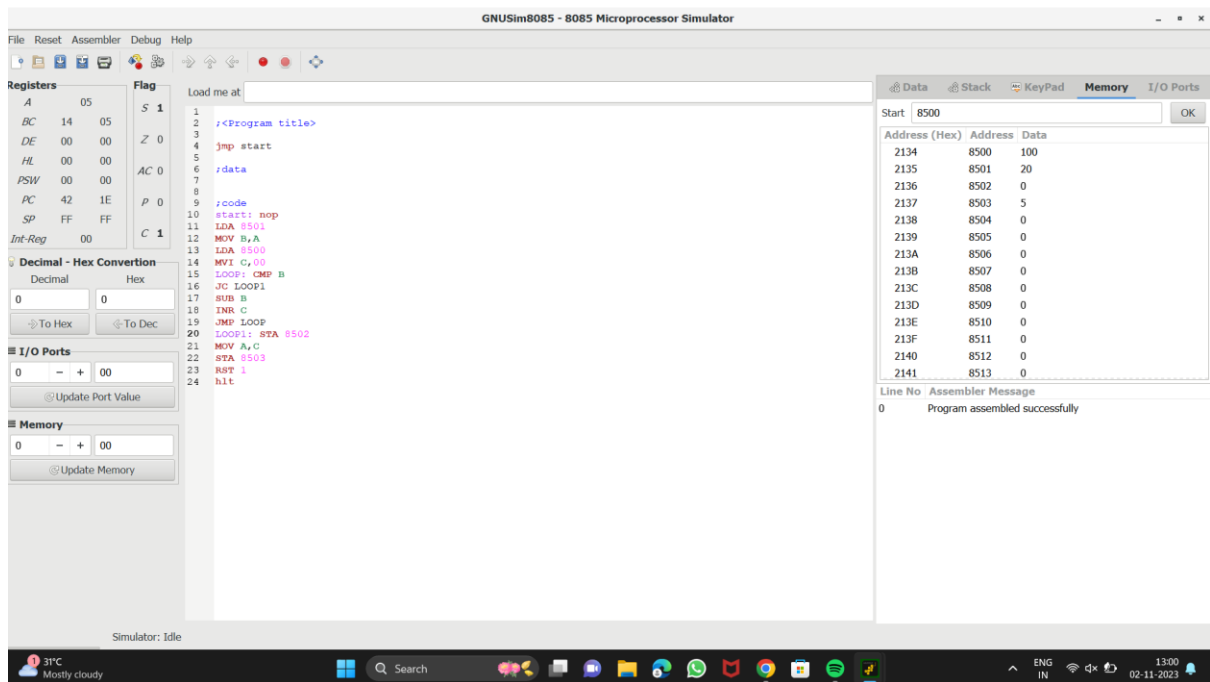
RST 1

INPUT:

 Data	 Stack	 Keypad	Memory	I/O Ports
Start	8500			OK
Address (Hex)	Address	Data		
2134	8500	100		
2135	8501	20		
2136	8502	0		
2137	8503	5		
2138	8504	0		
2139	8505	0		
213A	8506	0		
213B	8507	0		
213C	8508	0		
213D	8509	0		
213E	8510	0		
213F	8511	0		
2140	8512	0		
2141	8513	0		

Line No	Assembler Message
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OUTPUT:



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