8-BIT DIVISION

EXP NO: 4

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

ALGORITHM:

1) Start
the program by loading a register pair with the address of memory location.

2) Move
the data to a register.

3) Get
the second data and load it into the accumulator.

4) Subtract
the two register contents.

5) Increment
the value of the carry.

6) Check
whether the repeated subtraction is over.

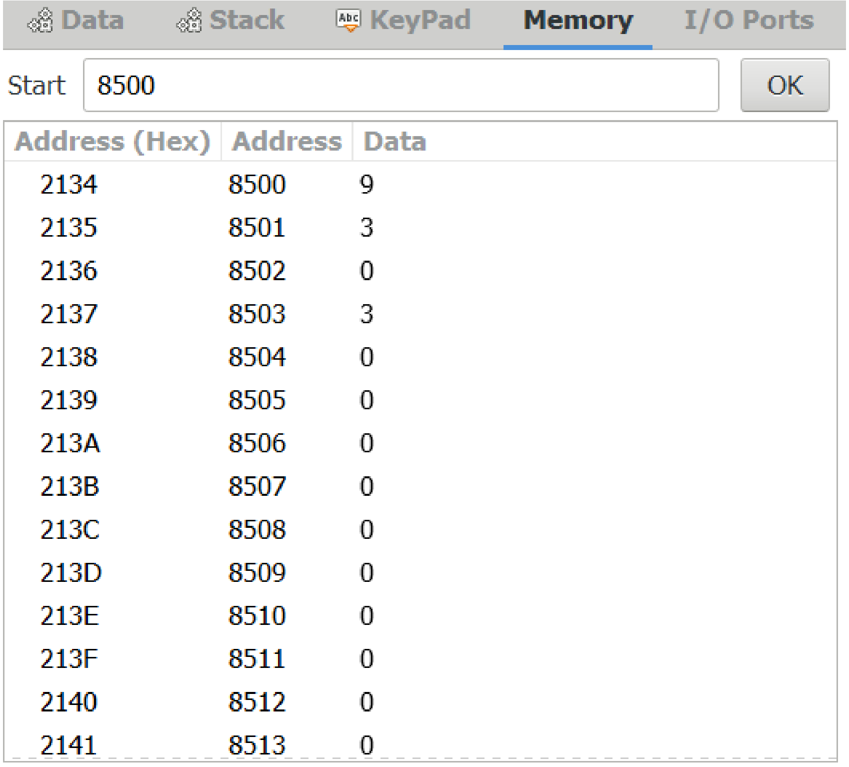
7) Store
the value of quotient and the reminder in the memory location.

8) Halt.

PROGRAM:

```
         LDA 8501
        MOV B, A
        LDA 8500
        MVI C,00
LOOP:   CMP B
        JC LOOP1
        SUB B
        INR C
        JMP LOOP
LOOP1:  STA 8502
        MOV A, C
        STA 8503
        RST 1
```

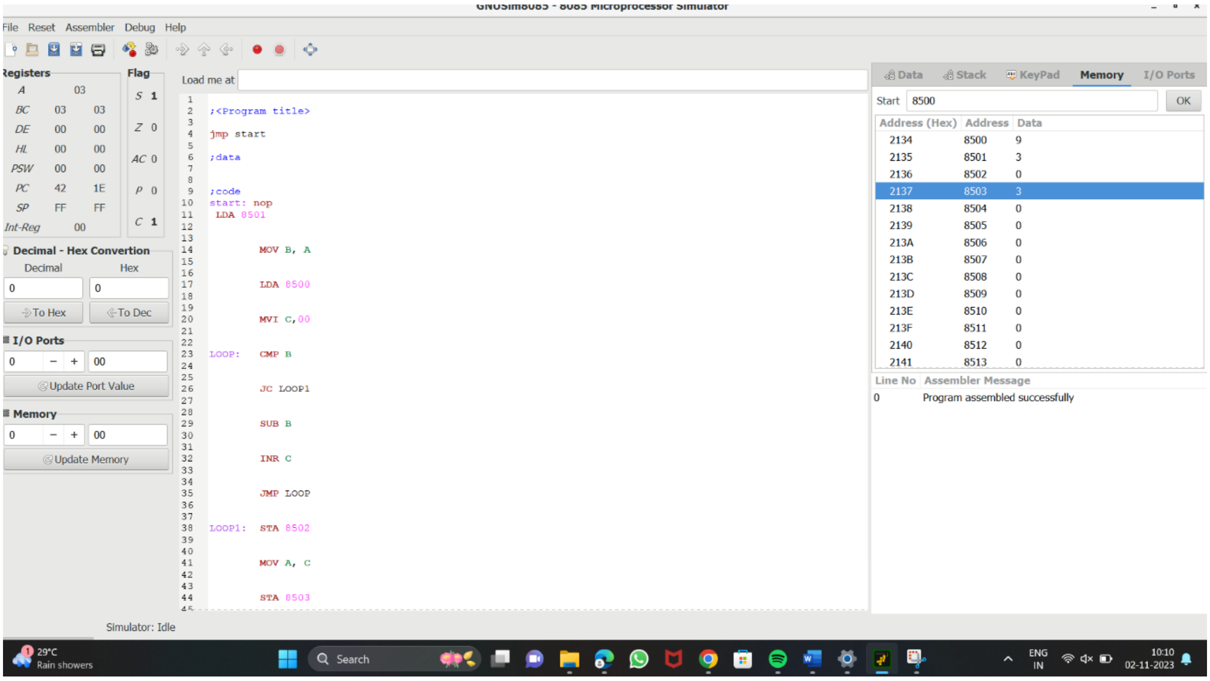
INPUT:



Start 8500

Address (Hex)	Address	Data
2134	8500	9
2135	8501	3
2136	8502	0
2137	8503	3
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

OUTPUT:



Registers		
A	03	
BC	03	03
DE	00	00
HL	00	00
PSW	00	00
PC	42	1E
SP	FF	FF
Int-Reg	00	

Flag	
S	1
Z	0
AC	0
P	0
C	1

Decimal 0 Hex 0

I/O Ports 0 00

Memory 0 00

Load me at

```

;<Program title>

jmp start

;data


;code
start: nop
 LDA 8501


        MOV B, A


        LDA 8500


        MVI C,00


LOOP:   CMP B


        JC LOOP1


        SUB B


        INR C


        JMP LOOP


LOOP1:  STA 8502


        MOV A, C


        STA 8503
```

Start 8500

Address (Hex)	Address	Data
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213F	8511	0
2140	8512	0
2141	8513	0

Line No	Assembler Message
0	Program assembled successfully

Simulator: Idle

29°C
Rain showers

10:10
02-11-2023

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