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

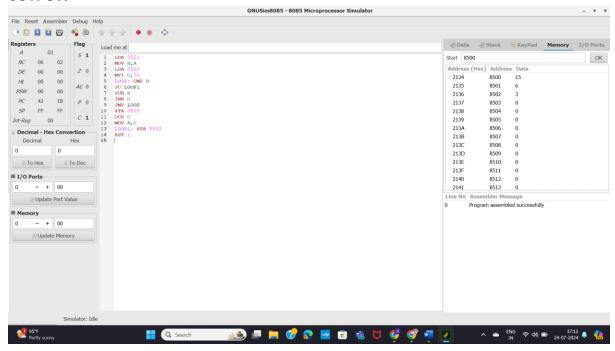
LOOP1: STA 8502

RST 1

INPUT:

Address (Hex)	Address	Data
2134	8500	15
2135	8501	6
2136	8502	3
2137	8503	0

OUTPUT:



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