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

| SUB B |
|-----------------|
| INR C |
| JMP LOOP |
| STA 8503 |
| DCR C |
| MOV A,C |
| LOOP1: STA 8502 |
| RST 1 |
| |
| |
| |
| INPUT: |
| 8500-13 |
| 8501-2 |
| |
| |

PROGRAM:

LDA 8501

MOV B,A

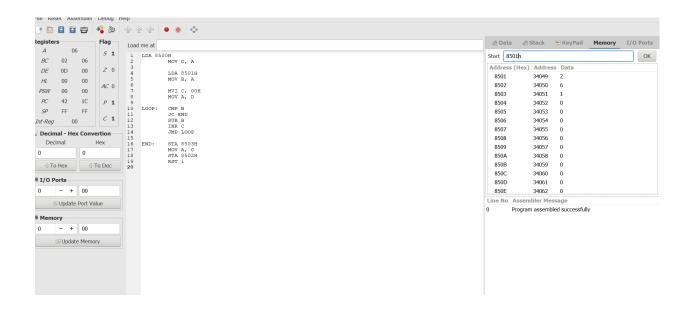
LDA 8500

MVI C,00

JC LOOP1

LOOP:CMP B

OUTPUT:



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