16-BIT DIVISION

EXP NO: 8

AIM: To write an assembly language program to implement 16-bit divided by 8-bit using 8085 processor.

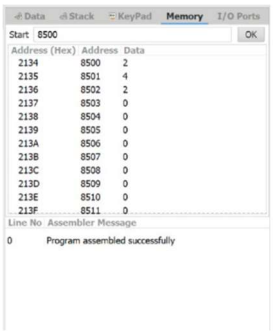
ALGORITHM:

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

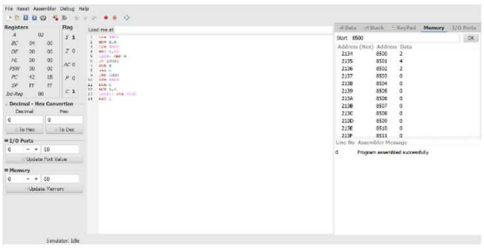
PROGRAM:

```
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.