**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.