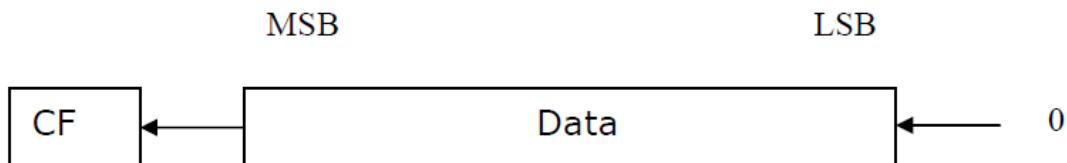


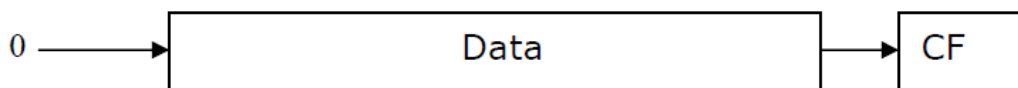
Microprocessors – Laboratory 04

#	Student ID	Student Name	Grade (10)
-			

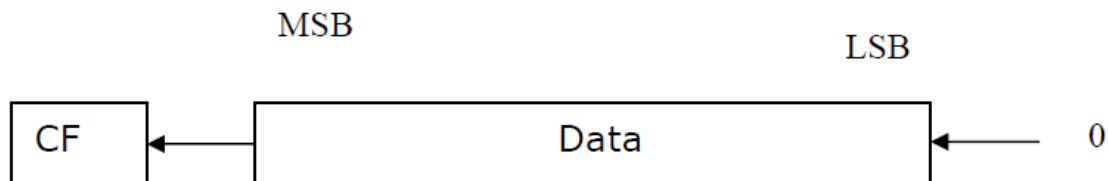
Introduction:
Shift and Rotate command



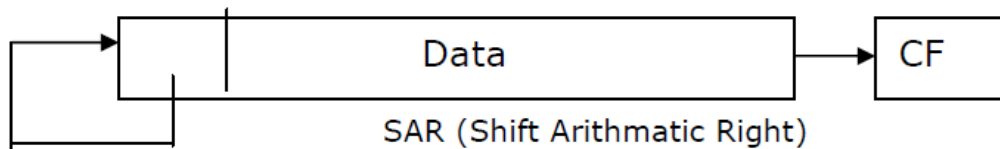
SHL (Shift Logical Left)



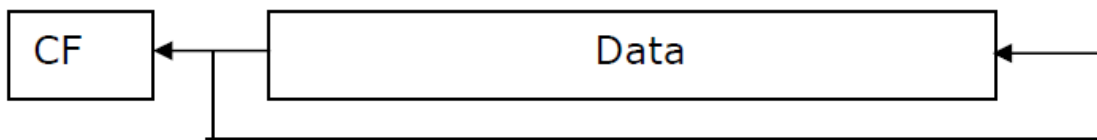
SHR (Shift Logical Right)



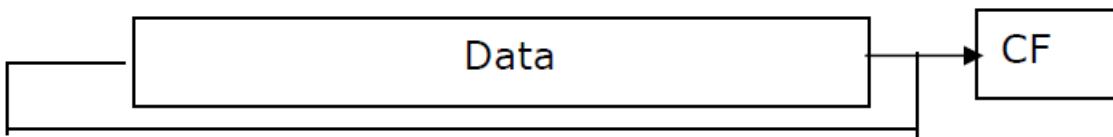
SAL (Shift Arithmetic Left)



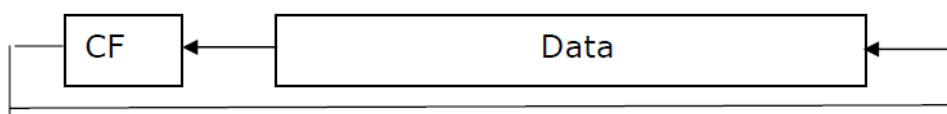
SAR (Shift Arithmetic Right)



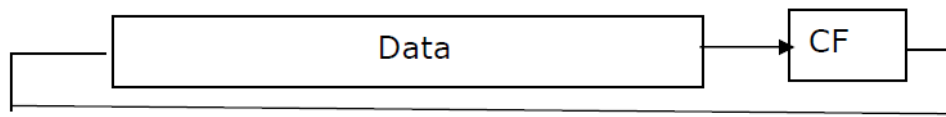
ROL (Rotate Left)



ROR (Rotate Right)



RCL (Rotate Through Carry Left)



RCR (Rotate Through Carry Right)

1. Write following codes

```
MOV CL,02H  
MOV AX,105AH  
SHL AX,CL  
HLT
```

Obtain AX register value in write the previous value and present value in binary form. What type of operation is this?

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2. Write following codes

```
MOV CL,04H  
MOV AX,564AH  
SAL AX,CL  
HLT
```

Obtain AX register value in write the previous value and present value in binary form. What type of operation is this?

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3. Perform for similar values of AX and CL with ROL, ROR, RCL, RCR command.t

A series of horizontal dotted lines provided for writing the answer to question 3.



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A large area of the page is filled with horizontal dotted lines, providing a template for writing or drawing.



5. Write following codes

```
MOV AX,5H  
MOV BX,3H  
Lev: XOR DX,DX  
DIV BX  
MOV AX,BX  
MOV BX,DX  
TEST DX,0H  
JNZ Lev  
HLT
```

Here GCD of 5 and 3 are found. You can change the values of AX and BX and obtain the result for any other values. Find GCD of 08D4H and 235H.

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