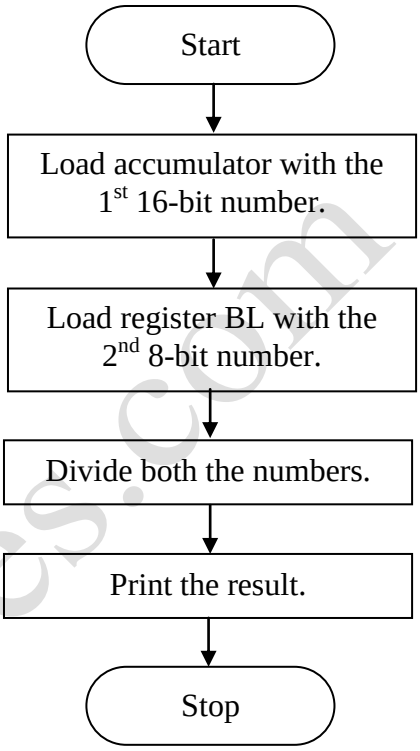
Program 18: Divide 16-bit signed number by an 8-bit signed number.

Program:

Instructions	Comments
include "emu8086.inc"	
ORG 100h	
MOV AX, 0008H	Move 1st 16-bit number to AX.
MOV BL, FEH	Move 2nd 8-bit number to BL.
IDIV BL	Divide AX with BL and the result will be in AX.
CALL PRINT_NUM	Print the result.
RET	Return.
DEFINE_PRINT_NUM	Declare function.
END	

Flowchart:



Explanation:

- This program divides a 16-bit signed number by an 8-bit signed number.
- The program has been developed using ***emu8086*** emulator available at: www.emu8086.com.
- ORG 100h is a compiler directive. It tells compiler how to handle the source code.
- It tells compiler that the executable file will be loaded at the offset of 100h (256 bytes).
- The 1st 16-bit number 0008H, i.e. dividend, is moved to accumulator AX.
- The 2nd 8-bit number FEH (-2 in decimal), i.e. divisor, is moved to register BL.
- Then, both the numbers are divided.
- The result of division is stored in AX. AL contains the quotient and AH contains the remainder.
- The result is printed on the screen.

Output:

Before Execution:	**After Execution:**	
AX = 0008H	AL = FCH (-4 in decimal)	(Quotient)
BL = FEH (-2 in decimal)	AH = 00H	(Remainder)