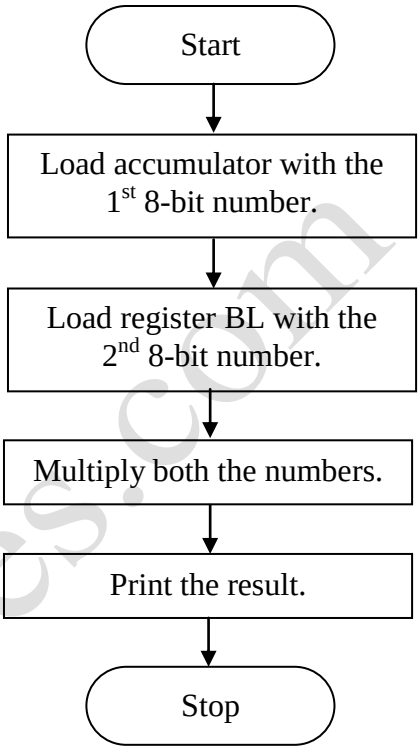
Program 13: Multiply two 8-bit unsigned numbers.

Program:

Instructions	Comments
include "emu8086.inc"	
ORG 100h	
MOV AL, 04H	Move 1st 8-bit number to AL.
MOV BL, 02H	Move 2nd 8-bit number to BL.
MUL BL	Multiply BL with AL 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 multiplies two 8-bit unsigned numbers.
- 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 8-bit number 04H is moved to accumulator AL.
- The 2nd 8-bit number 02H is moved to register BL.
- Then, both the numbers are multiplied.
- The multiplication of two 8-bit numbers may result into 16-bit number. So, the result is stored in AX register.
- The MSB is stored in AH and LSB is stored in AL.
- The result is printed on the screen.

Output:

Before Execution:

AL = 04H

BL = 02H

After Execution:

AX = 0008H