Program 8: 2's complement of a 16-bit number.

Program:

Instructions	Comments
include "emu8086.inc"	
ORG 100h	
MOV AX, 0005H	Move 16-bit data to AX.
NOT AX	Complement AX.
INC AX	Increment AX.
CALL PRINT_NUM	Print the result.
RET	Return.
DEFINE_PRINT_NUM	Declare function.
END	

Flowchart:

Start

↓

Load accumulator with the 16-bit operand.

↓

Complement accumulator.

↓

Increment accumulator.

↓

Print the result.

↓

Stop
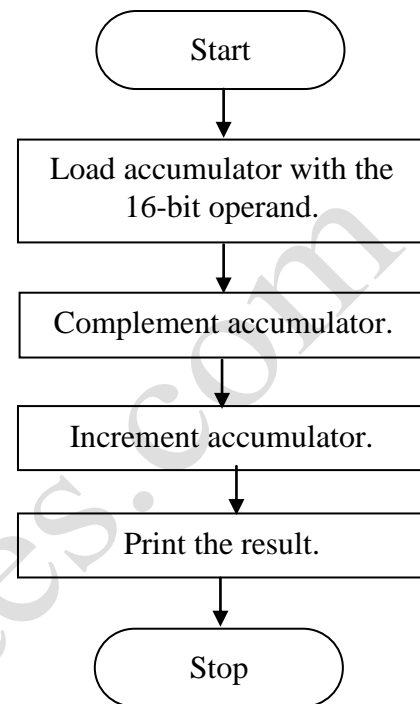
Explanation:

- This program finds the 2's complement of a 16-bit 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 16-bit operand 0005H is moved to accumulator AX.

- It is complemented by using NOT instruction.

- Then, it is incremented by using INC instruction.

- The result is printed on the screen.

Output:

Before Execution:	After Execution:
AX = 0005H	AX = FFFBH