FACTORIAL OF 8-BIT

AIM

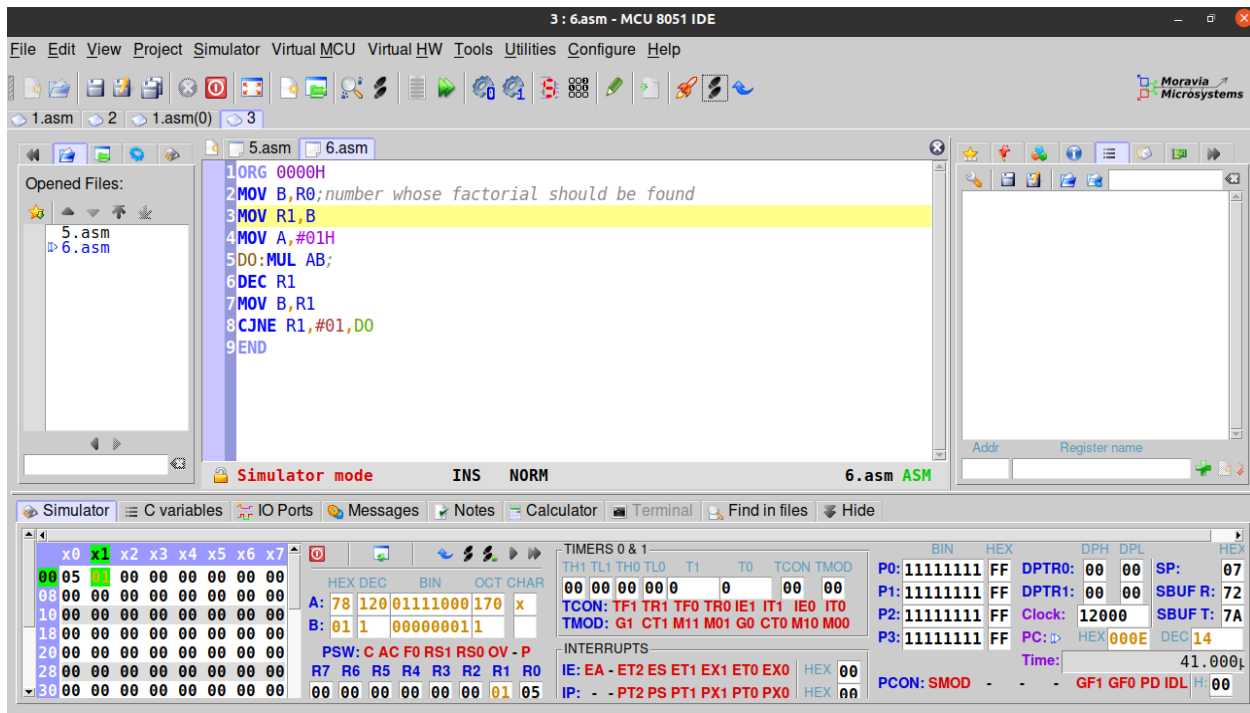To develop an assembly language program to find the factorial of an 8-bit number.

ALGORITHM

Algorithm 1 Factorial of an 8-bit number
1: Start
2: Read the number (n).
3: fact = 1
4: for i = 1 to n do
5:     fact = fact* i
6: end for
7: Print the result (fact).
8: Stop

SOURCE CODE

```
ORG 0000H
MOV B,R0;number whose factorial should be found
MOV R1,B
MOV A,#01H
DO:MUL AB;
DEC R1
MOV B,R1
CJNE R1,#01,DO
END
```

OUTPUT:

Output at A for input in R0

RESULT:

Assembly language program for finding the factorial of an 8-bit number has been developed and verified using MCU-8051-IDE.

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