

FACTORIAL.CPP source

```
/*  
 * Write a program to find the factorial  
 * of a number using a user defined function  
 * and recursion  
 */  
  
#include <iostream>  
using namespace std;  
  
/* this is the recursive factorial function  
 * which repeatedly calls itself  
 * until n is not greater than 1  
 */  
int factorial(int n) {  
    if(n>1) return n*factorial(n-1);  
    else return n;  
}  
  
int main() {  
  
    int num;  
  
    cout<<"Enter the number to find factorial:";  
    cin>>num;  
  
    int fact=factorial(num);  
  
    cout<<num<<"! = "<<fact<<endl;  
  
    //Tell OS everything's OK  
    return 0;  
}
```

FACTORIAL.CPP output

Enter the number to find factorial:5

5! = 120