FACTORIAL.CPP source

```cpp
01: /*
02:  * Write a program to find the factorial
03:  * of a number using a user defined function
04:  * and recursion
05:  */
06:
07: #include <iostream>
08: using namespace std;
09:
10: /* this is the recursive factorial function
11:  * which repeatedly calls itself
12:  * until n is not greater than 1
13:  */
14: int factorial(int n) {
15:    if(n>1) return n*factorial(n-1);
16:    else return n;
17: }
18:
19: int main() {
20:
21:    int num;
22:
23:    cout<<"Enter the number to find factorial:";
24:    cin>>num;
25:
26:    int fact=factorial(num);
27:
28:    cout<<num<<"! = "<<fact<<endl;
29:
30:    //Tell OS everything's OK
31:    return 0;
32: }
33:
34:
35:
36:
```

FACTORIAL.CPP output

```
1: Enter the number to find factorial:5
2: 5! = 120
3:
```