

**PROGRAM:** WAP using recursive function to calculate the factorial of a given number. Also draw the recursion tree for the test values taken in the program

**CODE:**

```
#include<iostream>
using namespace std;

int factorial(int n);

int main()
{
    int n;

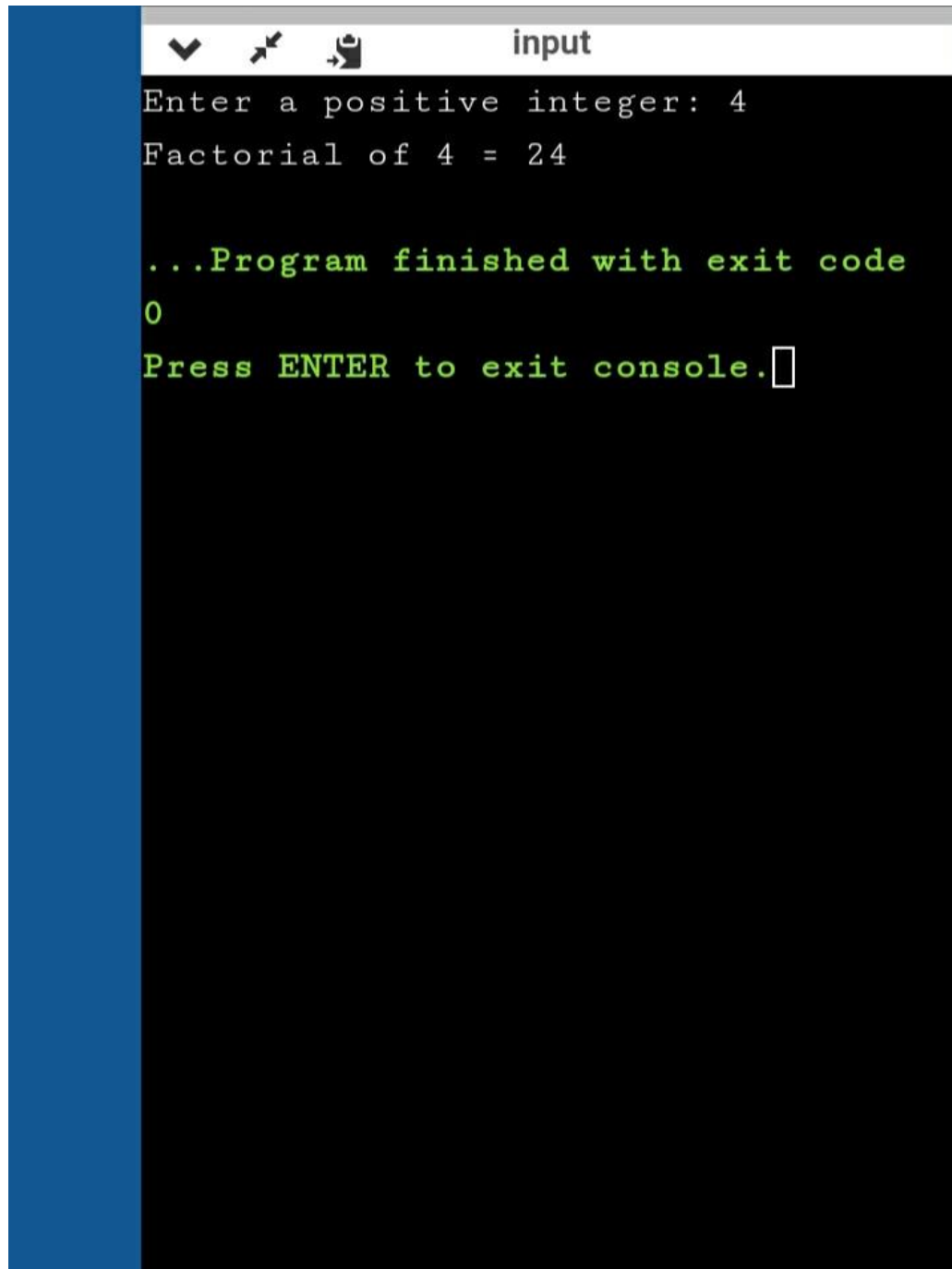
    cout << "Enter a positive integer: ";
    cin >> n;

    cout << "Factorial of " << n << " = " <<
factorial(n);

    return 0;
}

int factorial(int n)
{
    if(n > 1)
        return n * factorial(n - 1);
    else
        return 1;
}
```

## OUTPUT

A screenshot of a terminal window with a title bar that says "input". The terminal has a black background with white and green text. The output shows a prompt for a positive integer, the calculation of its factorial, and a completion message.

```
Enter a positive integer: 4
Factorial of 4 = 24

...Program finished with exit code
0
Press ENTER to exit console. 
```