Simple Program in Several Programming Languages

The program calculates the factorial of a number. Examples in C, C++, Java, C#, Visual Basic, Python.

In mathematics, the factorial of a number (that cannot be negative and must be an integer) n, denoted by n!, is the product of all positive integers less than or equal to n. For example: 5! is 5*4*3*2*1.

Some of these programs assume a variable x exists with the number to be used.

===C/C++===

```c
int factorial ( int x ) {
    int ret = 1;
    for ( int i = 2; i <= x; i++ ) {
        ret = ret * i;
    }
    return ret;
}
```

===Java===

```java
int counter = x;
long factorial = counter;
while (counter > 1)
    factorial *= --counter; // Multiply the decremented number.
    //n! = n*(n-1)!
System.out.println(factorial);
```

=== C# ===

```csharp
int counter = x;
long factorial = counter;
while (counter > 1)
    factorial *= --counter; // Multiply the decremented number.
    //n! = n*(n-1)!
System.Console.WriteLine(factorial);
```
=== Visual Basic ===
Dim counter as Integer : counter = x
Dim factorial as Long : factorial = 1
While (counter > 0)
    factorial = factorial * counter       'Multiply
    counter = counter - 1                'Decrement
WEND
End

=== Python ===
num = int(input("Enter a number: "))
factorial = 1
for i in range(1,num + 1):
    factorial = factorial*i
print("The factorial of",num,"is",factorial)