Extra Long Factorials

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Problem Submissions Leaderboard Discussions Editorial

You are given an integer N. Print the factorial of this number.

$$N! = N \times (N-1) \times (N-2) \times \cdots \times 3 \times 2 \times 1$$

Input
Input consists of a single integer N, where $1 \leq N \leq 100$.

Output
Print the factorial of N.

Example
For an input of 25, you would print $15511210043330985984000000$.

Note: Factorials of $N > 20$ can't be stored even in a $64-bit$ long long variable. Big integers must be used for such calculations. Languages like Java, Python, Ruby etc. can handle big integers, but we need to write additional code in C/C++ to handle huge values.

We recommend solving this challenge using BigIntegers.

Submissions: 37692

Max Score: 20

Difficulty: Medium

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Current Buffer (saved locally, editable) C#

```
1  using System;
2  using System.Collections.Generic;
3  using System.IO;
4  using System.Linq;
5  using System.Numerics;
6
7  class Solution {
8
9      static void Main(string[] args)
10         {
11             int n = Convert.ToInt32(Console.ReadLine());
12             if ( n <= 1 )
13             {
14                 Console.WriteLine(1);
15                 return;
16             }
17
```

```
            BigInteger factorial = new BigInteger(1);
            for (int i = 2; i < (n + 1); i++)
            {
                factorial *= i;
            }

            Console.WriteLine(factorial);

        }

}

```

Line: 6 Col: 1

Upload Code as File Test against custom input Run Code Submit Code

Congrats, you solved this challenge!

- ✔ Test Case #0
- ✔ Test Case #1
- ✔ Test Case #2
- ✔ Test Case #3
- ✔ Test Case #4
- ✔ Test Case #5
- ✔ Test Case #6
- ✔ Test Case #7
- ✔ Test Case #8
- ✔ Test Case #9
- ✔ Test Case #10
- ✔ Test Case #11

Next Challenge