```cpp
1 /************************************************************
2 * AUTHOR     : Ali Eshghi
3 * STUDENT ID    : 1112261
4 * ASSIGNMENT #4 : Assessing Recursion Performance
5 * CLASS        : CS 1B
6 * SECTION       : MW - 7:30 pm - 9:50 pm
7 * DUE DATE      : 11/26/2019
8 ************************************************************/
9
10 #include "MyHeader.h"
11
12 /************************************************************
13  * CheckInpFact
14  *    This function gets the user's input and pass
15  *     it back to the main.
16  *
17  *    returns  integer -> target number for fib/fact
18  ************************************************************/
19
20 int CheckInpFact()
21 {
22     /*************
23      *  VARIABLE *
24      *************/
25
26     int factInp;   //IN - user's target number
27
28     bool checkInput;   //PROCESS - input checking
29
30     /****************
31      *  INITIALIZE  *
32      ****************/
33
34     checkInput = false;
35
36
37     /*************
38      *   INPUT   *
39      *************/
40
41     //do while loop for error checking
42     do
43     {
44
45         cout << "Enter the target number: ";
46
47         //CHECK INPUT
48
49         if (!(cin >> factInp))
50         {
51             cin.clear(); cin.ignore(numeric_limits<streamsize>::max(), '\n');
52
53             cout << "\n**** Please input a NUMBER ****\n";
54
55             checkInput = false;
```

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56
57            }
58
59            //CHECK FOR RANGE
60            else if (factInp < 0)
61            {
62                cout << "\n****   The number " << factInp
63                     << " is an invalid entry   ****\n"
64                     << "**** Please input a positive ****\n";
65
66                checkInput = false;
67            }
68
69            else
70            {
71                cin.ignore(numeric_limits<streamsize>::max(), '\n');
72
73                checkInput = true;
74            }
75
76    } while (!checkInput);
77
78    //returns integer to the main
79    return factInp;
80 }
81
82
```