Assignment 2

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Problem 1.

1.1

```cpp
#include <iostream>          //include files with the required definition
using namespace std;          // namespace
int main(int argc, char *argv[])   // main
{                                // begin of main
   int p = myFunction(10);            // call function myFunction
   cout << p << endl;                 // output
}                                     // end of main
double myFunction(int n)           // define a new function myFunction
{                                    // with input n
   unsigned int i = 0, j = 1, t, k;       // declaration of variables
   for (k=0; k <= n; ++k)            // loop
      {
      t = i + j;                          // give the value of i+j to t
      i = j;                              // give the value of j to i
         j = t;                           // give the value of t to j
   }
      return j;                        // store the value of j
}
```

1.2 This code causes an error when one try to compile / link it. What is wrong? Correct the mistake and add the information into your report.

The error can be associated with the functions declaration rule in C++. Functions cannot be called before they are declared. In this code, the function "myFunction" was declared after the main function, which breaks the rule. To correct this error, we can either move the entire code of "myFunction" to somewhere before the main function or declare "myFunction" at the beginning of the code.

1.3 What is the overall functionality? Can you rename the function and find a name that identifies the functionality.

This code is to calculate the Fibonacci sequence. Rename this function as "fibonacciCalculate" function in C++.

1.4 Which value is stored in p after the function jumps back into the main function.

p would be stored by the return value j from myFunction when it jumps to the main function, which is 144.