Lab 15 - wb 24/02/14

This week we are looking at reading external files and how to save to external files. This is useful for many applications, especially all the “phonebook” style programs you have been writing that forget entries when the program is closed.

To start working with files we need to include a new file called File stream, which we do using “#include <fstream>” much like wo do with the iostream.

Writing

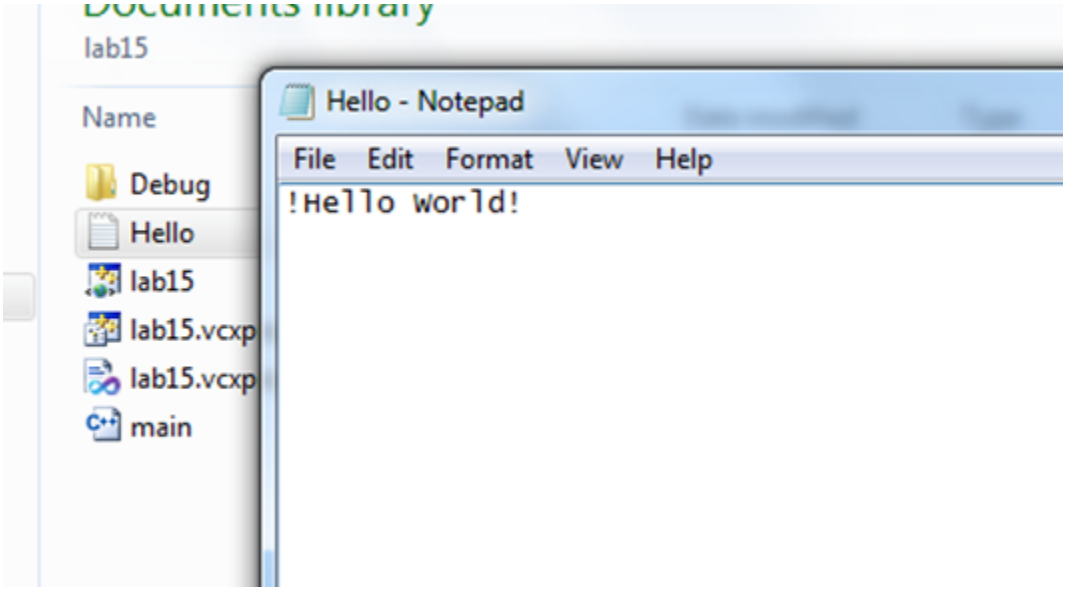
```
#include <iostream>
#include <fstream>

using namespace std;

int main()
{
    fstream File; //declair a file
    File.open("Hello.txt", ios::out | ios::app); //give it the file name and tell it we are outputting
    File<<"!Hello World!"<<endl;// output to the file much like we do to the screen
    File.close(); // finally close the file


    return 0;
}
```

Open your project folder and have a look at the file you just created. You can output more lines like you do when outputting to the screen, by using “endl”. Always remember to close the file!



Reading

Reading a file is a little different. We want to loop the program until we have all the lines. We might not know how many lines are in the file.

```
#include <iostream>
#include <fstream>
#include <string> //dont forget to add strings

using namespace std;

int main()
{
    fstream File; //declare a file
    File.open("Hello.txt", ios::in); //give it the file name and tell it we are inputting
    string inputText; // somewhere to store the input temporarily

    if(File)
    {
        while( !File.eof()) //while not the end of the file keep looping
        {
            getline(File,inputText); //read the line from the file
            cout<< inputText<<endl; //output the line you just read

        }
    }
    else cout<<"No File Found!"; //oh dear, no file exists in the project folder

    cin.get();
    return 0;
}
```

Now try changing the file in the projects folder and see the extra lines come up in your program.