

CSCI 2010 Assignment 1

OBJECTIVES

This assignment will ensure that you have installed Visual Studio (or only Visual C++), and can submit assignments correctly in D2L. It will also help you review C++ from CSCI 1010.

Please start early. Let me know as soon as possible if you have problems installing or using Visual C++ 2010 Express, or trouble finding your .cpp files for submission.

Q1: Hello [40 points]

This is a step-by-step set of instructions for creating a project in Visual C++ 2010 Express.

The **online sections** of this class should also watch the videos in D2L. In this part, you are basically recreating what happens in the videos.

1. Start Visual C++ 2010 Express
2. Select **File -> New -> Project**
3. Under **Installed Templates** in the left column in the window that opens, make sure **Visual C++** is selected
4. In the middle column, select **Empty Project**
5. Down in the bottom of the window, fill in the **Name** with the name of the project. Let's call this one **<my name>Hello**. (For example, my project would be named: **LeongLeeHello**.)
6. Pay attention to the **Location** field, it will tell you where the project will be saved. You can change it if you want by pressing the **Browse** button to the right.
7. When you are ready, press the **OK** button to create the new project.
8. In the left column of the main window, you should see your project in the **Solution Explorer**.
9. Find the folder named **Source Files** and right-click on it. In the menu that pops up, select **Add -> New Item**
10. Under **Installed Templates** in the left column in the window that opens, make sure **Visual C++** is selected.
11. In the middle column, select **C++ File (.cpp)**
12. Down in the bottom of the window, find the **Name** field and name the file **<my name>hello.cpp**
13. Pay attention to the **Location** field, it will tell you where the project will be saved. Do not change this location.
14. When you are ready, press the **Add** button to create the file.
15. In the file, write the simple Hello **<my name>** program (to print "Hello **<my name>**", for example print "Hello Leong Lee").
16. Make sure that the program runs and that the window stays open.
 - a. You'll need that `system("pause");` line in your code.
17. When done, find the file **<my name>hello.cpp** (you paid attention to where you saved the project and **<my name>hello.cpp** at back in steps 6 and 13, right?)
18. You need to submit the file **<my name>hello.cpp**.

Important: If you do not put **<my name>** to the above mentioned fields (filename, and hello name), you will get 0 point for the question.

Estimated time: 30 minutes

Q2: Textbook Page 372, Chapter 6, Programming Challenges 12, **Days Out Problem** [60 points]

Now that you know how to create a project and upload it, you will create a real program. This is a review of material covered in CSCI 1010.

1. Create a new Visual C++ project named **<my name>Assignment01** (e.g. LeongLeeAssignment01)
2. Create a .cpp file in Source Files named **<my name>pass1.cpp**
3. On page 372 in the book, do problem **12 Days Out**. Put your solution in **<my name>pass1.cpp**
 - a. Make sure **main()** prints the overall results.
4. You need to submit the file **<myname>pass1.cpp**.

Estimated time: 2 hours

Submission instructions:

You need to compile the above programs (questions) separately, and provide **two test cases** (if applicable) for each program (question). Do a screen capture of the input and related output for each test case. Use any graphic editing software (e.g. Microsoft Paint, Adobe Fireworks) to cut out the program input and output (from the screen capture), paste them into a word document under a related question number, save the document as a pdf file. A sample input/output (screen capture) can be found at the end of this document.

You need to submit the following:

1. A pdf file containing the screen captures of program input and output of all test cases, name the file **lastname_firstname_assignment01.pdf**.
2. All .cpp files. Zip your .cpp files into a single zip file (or rar file) **lastname_firstname_assignment01.zip**.
 - 2.1 For this assignment, the zip file should contain **<my name>hello.cpp**, **<myname>pass1.cpp**.

Please submit electronic copy (the above mentioned **two files**) to D2L digital dropbox.

If you cannot follow the above instructions, points would be deducted.

Grading guidelines (programming questions):

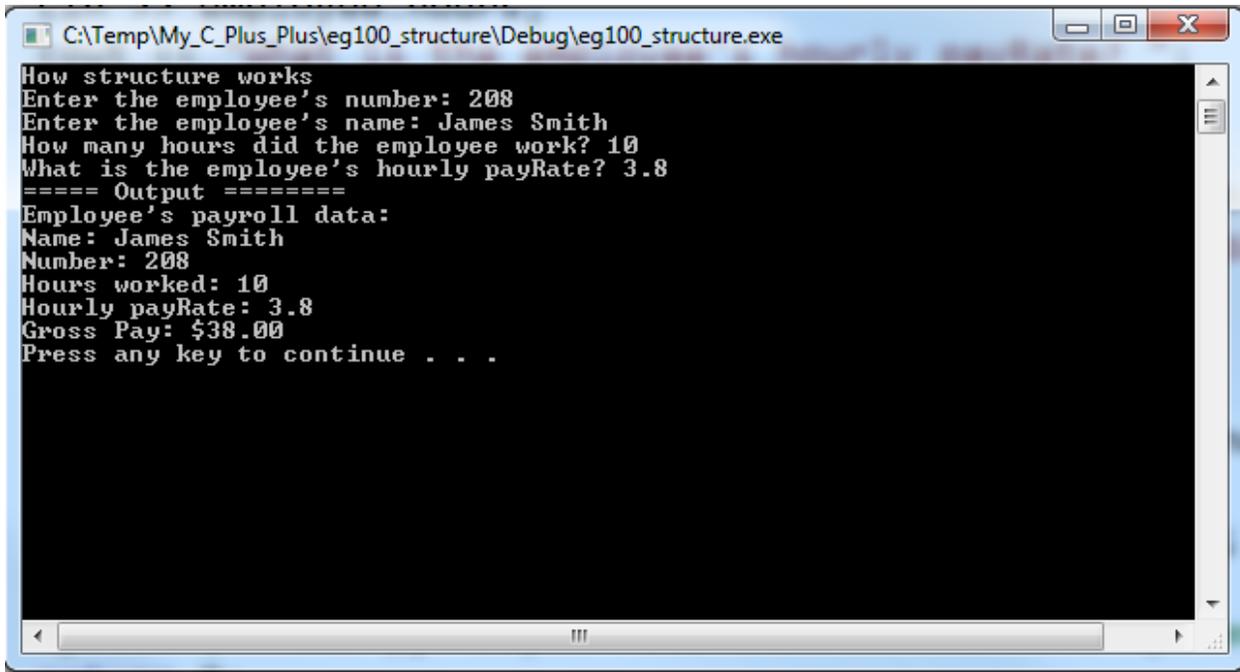
Your programs will be judged on several criteria, which are shown below.

- Correctness (50%): Does the program compile correctly? Does the program do what it's supposed to do?
- Design (20%): Are operations broken down in a reasonable way (e.g. classes and methods)?
- Style (10%): Is the program **indented** properly? Do variables have **meaningful names**?
- Robustness (10%): Does the program handle erroneous or unexpected input gracefully?
- Documentation (10%): Do all program files begin with a **comment** that identifies the author, the course code, and the program date? Are all the classes, methods and data fields clearly **documented (comments)**? Are unclear parts of code **documented (comments)**? (Some items mentioned may not apply to some languages)

A program that does not compile will get at most **50% of the possible points**.

Sample input/output (screen captures)

Question X, test case 1, input/output:



```
C:\Temp\My_C_Plus_Plus\eg100_structure\Debug\eg100_structure.exe
How structure works
Enter the employee's number: 208
Enter the employee's name: James Smith
How many hours did the employee work? 10
What is the employee's hourly payRate? 3.8
===== Output =====
Employee's payroll data:
Name: James Smith
Number: 208
Hours worked: 10
Hourly payRate: 3.8
Gross Pay: $38.00
Press any key to continue . . .
```

Screen capture must be readable by the instructor, or 0 point will be given for the question.

Please note that you can use more than one screen captures for each test case.