CS150-01 Assignment 1

Calculating a Loan Payment

Date assigned: Wednesday, September 1, 2004
Date due: Wednesday, September 8, 2004
Points: 20 pts

The purpose of this assignment is to get you up and running with Visual Studio .NET. If you run into any problems with this assignment, it is important that you come and see me so that I can help. Also, it is very important that you do this assignment on your own. Every assignment that you will be doing from now on will require the techniques that you will be using here, so it's very important that you get the hang of them. Once you have completed this assignment you will be familiar with the development environment.

Here is the problem that you are to solve

You are applying for a loan to buy a new car. Luckily for you, you managed to get a simple, indicated interest loan. The monthly payment for the loan can be calculated using the following formula:

$$payment = (p(1 + i) + 25)/N$$

where

p = principal (i.e. amount of loan)
i = interest rate
N = number of pay periods (i.e. 12 months, 24 months)
25$ = annual service charge

Write a complete C++ program that will compute the monthly payment for a loan of $2,000 at an interest rate of 10.5%

I have provided you with the code that solves the problem on the last page of this assignment.

To complete this assignment you must

1. Create a new C++ project in Visual Studio .NET. You should follow the same steps that you did during the lab to create the project. Name your project "01loanPUNet". As an example, my project would be called "01loankhoj0332". It is vital that you name your project correctly!

2. Type the solution to the problem into your project. You should replace any existing code that Visual Studio .NET creates for you. Remember, the solution to the problem is on the back of this assignment.

3. Remember to enter in you name as the author of the program (my name is currently the author), and enter the correct date.

4. Make sure that your program compiles and runs correctly. If you get any errors, double check that you typed everything correctly. Be aware that C++ is case-sensitive.

5. Now it is time for you to modify the program a little. Change the loan value to $7,000 at 12% interest with the number of payment periods double what they currently are. Again, compile and run your program to verify that it is correct.

6. Once you are sure that the program works correctly it is time to submit your program. You do this by logging on to turing and placing your complete project folder in the CS150-01 drop folder. Make sure that you copy your program folder and don't move it. If you move it, then you will not have your own copy! Do not submit a hard copy of this assignment.

To receive full credit for this assignment, your project should be in the drop box by 1pm on the day that it is due. Anything later will be considered late.

Good luck! And remember, if you have any problems, come and see me straight away.