CS150 Assignment 1
Currency Converter

Date Assigned: Friday, September 8, 2006
Date Due: Friday, September 15, 2006
Points: 30 pts

The purpose of this assignment is to get you writing your first complete program with Visual Studio. If you run into any problems with this assignment, it is important that you come and see me early so I can help. Also, it is very important for you to do this assignment on your own. Every assignment you will be doing from now on will require the techniques you learned in class and in the lab, so it's very important for you to get the hang of them.

Here is the problem that you are to solve

You have just been hired by a European travel agency to write a currency conversion program. They have many European travelers going to the US who would like to know how many American dollars they should expect to get for their European Euros.

Further, they want you to explain how the American dollar amount will translate to the number of different bills and coins. Now, there are many different ways to split a particular dollar amount into bills and coins, but they want to have as many high denomination bills and coins as possible.

Assume that the highest denomination bill that they would receive is a $20 dollar bill and that they will not receive any half dollar coins. For example, $62.30 would be split into 3-$20 bill, 0-$10 dollar bills, 0-$5 bill, 2-$1 bill, 1-quarters, 0 dimes, 1-nickel and 0-pennies. It would NOT be 0-$20 bills, 6-$10 bills, 0-$5 bills, 2-$1 bills, 0-quarters, 3-dimes, 0-nickels and 0-pennies.

The exchange rate that the travel agency has provided you is 1 Euro is equal to 1.276 US dollars.

They want the program interface to look as follows. Sample input is given in bold.

```
**********************************************************************
*                        Currency Converter                          *
**********************************************************************

Hello, traveler. Please enter your name: Claude

Welcome Claude!

Please enter the number of Euros that you wish to convert to US
dollars: 35

35 Euros are equal to $44.66, 44$ in notes, and 66 cents in
change.

That is:
2 $20 bills
0 $10 bills
0 $5 bills
4 $1 bills
2 quarters
1 dimes
1 nickels
1 pennies
```

To complete this assignment you must

1. Create a new C++ project in Visual Studio. You should follow the same steps that you did during the lab to create the project. Name your project "01Currencyxxxxxxxx", where xxxxxxxx should be replaced by your PU Net Id. As an example, my project would be called "01currencykhoj0332". It is vital that you name your project correctly!

2. Type the solution (fully documented/commented) to the problem into your project.

3. Remember to enter in your name as the author of the program.

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. 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!

To receive full credit for this assignment, your project must be in the drop box by 1pm on the day that it is due. Anything later will be considered late. Further, you must bring a hard copy of your program to class and place it on the instructor’s desk by 1pm.

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