

## Assignment 3 Intro to C++

**Value: 5pts**

**Due at the beginning of the next session.**

This assignment is to stop writing C programs and write in C++: so that automatically implies multiple source files, structures (or classes), and pointers. Hand in the files you write, and console output to demonstrate correct operation of your program.

The difference between this assignment and assignment 2, is it must be C++. No printf, no scanf, etc. Use overloaded constructors to create the coin definitions. Otherwise the assignment is the same.

Use the type “string” to hold the coin type name. Create an array of 5 coins. Initialize each member of the array with a compound initialize.

Create a class (with associated source file and header) named “CoinChanger”. This class will use the Coin definition to do its internal work.

“main.cpp” will contain only the code necessary to get input, call the coin functions and print messages. Don’t do the work in “main.cpp”.

Main may have code that looks like:

```
CoinChanger Changer;

Changer.SetStock(1, 46); // set pennies on hand to 46
Changer.SetStock(5, 3); // set nickels on hand to 3
Changer.SetStock(25, 3); // set quarters on hand to 3

Changer.Receive(25, 2); // increment the number of quarters by 2 (->5)

int Nickels = Changer.HowMany(5); // query the number of nickles
int Dimes = Changer.HowMany(10); // query the number of nickles

// print the result in integer cents
cout << Changer.CashOnHand() << endl;

// print the results (or out of change msg) in the member function
Changer.MakeChange(125); // one dollar twenty five cents in change
```

In main, get input in the same form as Assignment 2. Check all test cases given in Assignment 2.