CSCI 101, In-Class Activity #6

For your in-class activity this week, I want you to create the **C++** Programming Exercise #7 beginning at the bottom of page 259 (Malik book) and ending at the top of page 260. Read the problem in the book before beginning.

When I run my version of the program, I first get a prompt which prints **"Enter the values for a, b, and c for a discriminant in the quadratic formula. "** When I entered 1 2 1 and hit enter, I got the following result:

```
Enter the values for a, b, and c for a discriminant in the quadratic formula. 1 2 1

When a = 1, b = 2, and c = 1, there is one real root.
```

Figure A: First result of the program

I ran the program a second time and entered 3 1 6 for a, b, and c, respectively. I got the following result.

```
Enter the values for a, b, and c for a discriminant in the quadratic formula. 3 1 6

When a = 3, b = 1, and c = 6, there are no real roots.
```

Figure B: Second result of the program.

Lastly, I ran the program, entered 1 -1 -2 and got the following:

```
Enter the values for a, b, and c for a discriminant in the quadratic formula. 1 -1 -2

When a = 1, b = -1, and c = -2, there are 2 real roots.
```

Figure C: Third result of the program

Do run the program at least three times. If you use the same input I did and get the same results, you're correct.

Variables: I created four **double** variables and named them **a**, **b**, **c**, and **discriminant**. This is one time where you may use single character variable names since we're taking them straight from the quadratic formula.

When you're finished, name the file **whatEverYouWant.cpp**. You need to turn it in *before* the 26th if you're in the Monday evening class or *before* the 28th if you're in the Wednesday morning class.

```cpp
//*************************************************************
//
// Author: Your Name Here
//
// February 11, 2019
//
// This Lecture Activity (inClassActivity5.cpp)
// utilizes setw, fixed, showpoint and setprecision
//
//*************************************************************

#include <iostream>
#include <iomanip>
#include <string>

using namespace std;

int main()
{
    string mortItem      = "Mortgage payment:";
    string carItem       = "Car payment:";
    string electricItem  = "Electric payment:";
    string waterItem     = "Water payment:";
    string cableItem     = "Cable payment:";
    string phoneItem     = "Phone payment:";

    double mortgagePmt;
    double carPmt;
    double electricPmt;
    double waterPmt;
    double cablePmt;
    double phonePmt;

    double totalOwed = 0;

    // This is where your program will go.

    return 0;
}
```

You should be able to figure out how I used the string variables in lines 20 through 25.

Save your program with the name **in-classActivity5.cpp**. Make sure it runs before you submit it. When it runs properly, submit it in canvas.