# Assignment 3

**Reading**

Read pages 123-129, 133-135, 140-143 on more advanced input and the online notes (Lesson 3)

**Questions**

a) A C++ program must have at least one function. What is its name?

b) What parameters (number and type) can you identify in the following function:

```
double example (int a, double b) {
        double result = b + a;
    return result;
}
```

c) Assume the following lines are part of a program:

```
int  val1;
```

```
char    val2;

cin >> val1 ;

cin >> val2;

…..
```

If, when the program stops for input, we enter the sequence of two space separated characters, x z : is anything read into *val2*? Why not? (Hint: Carefully read the assigned pages, with special attention to input failure)

d) What are the main differences the character and string types in C++ (use Google and summarize in no more than two sentences) -

e)

Change the code in the one of the examples in the file Formatting Ouput, *lesson 3, Blackboard Course Contents) to produce the C++ output statement that produces the following output:

(****Two words)

Use only the code provided with one change.

**(see next page for the C++ programming assignment)**

**C++ Program**

Write a program with two functions: main (as usual) and a function called *decimal* that will return the decimal part of any non-negative decimal number sent to it as input. For example, a call like:

*decimal(3.7)* should return 0.7

It should be clear that function *decimal* will have to return a **double**, and will have to accept a parameter of type **double**. Define the function so that its return type and parameter type are consistent with the above description.

Your program should prompt the user in main to enter a decimal number, and then call function *decimal* to separate the decimal portion and return the resulting double, a value that main will display.

You can separate the decimal part by subtraction if you create a truncated version of the original decimal number. You can truncate a decimal into an int by casting it to int or by type coercion (search this term in the book or Google it). The goal of this exercise is to become more familiar with the use of functions.