

Last updated 28 January, 2013

## Intro to programming Lab 4 (Methods, Objects, and Method Decomposition)

Work your way through the listed tutorials to try to solve the following problems:

1. Create a program that:
  - a. has a class variable that stores a value representing the minimum value for a random number generator (this variable should be declared directly in the class as a static variable, rather than being a variable in a method),
  - b. has a class variable that stores a value representing the maximum value for a random number generator (this variable should be declared directly in the class as a static variable, rather than being a variable in a method),
  - c. has a method with the header **public static void setRange(int min, int max)** which sets the values for the minimum and maximum class variables to be equal to the arguments passed into this method,
  - d. has a method with the header **public static int random()** that returns a random int value between the values stored in the minimum and maximum class variables,
  - e. has a main method that states that it will create 10 random values, sets and then prints the minimum and maximum values possible (you decide what these are), then prints 10 random values using the random method created above in an easily readable format (this is to check that you are setting the minimum and maximum values correctly)

This program should give you practice creating class variables, practice method decomposition by creating “helper” methods that support the main goal of the program, and gives a bit of practice with manually testing your program (later we will learn about automated testing).

**Hint:** remember to compile and run the program regularly after each small change so that if something goes wrong, you will more easily be able to know where your problem is.

Remember to submit your source file(s) for labs (no need to turn in any files created through the tutorials, **unless you use those source files to run your program**).