LAB - Iteration

1. Work with your pair programming partner to develop an algorithm for a Java program that randomly picks a whole number between 1 and 100 inclusive. It should then ask the user to guess the number. In response to the guess, have the program respond "Too High", "Too Low" or "That's Right".

   If the guess is right, the program should end. Otherwise, the program should allow the user to make another guess and continue on until they get it right. A user should be able to abort the program by entering a negative number.

   At the end, tell the user how many guesses they made before finding the correct number – but only if they are successful.

   Finally, if the user guesses correctly OR aborts, they should be given the opportunity to start over with a new number.

2. Once you agree that the algorithm is complete, implement the program using pair programming guidelines. This means whoever typed the algorithm, should move aside and let the other person type the code. As you write the Java program that you designed, use your algorithm as a guide. Place your algorithm as comments in the body of the main method. Use proper indentation, and meaningful identifiers throughout the code.

3. Test your program thoroughly. Generate test cases as part of a test plan to exercise all branches of your program. Follow the guidelines on pages 108-9 of the textbook, Big Java, and provide complete coverage of all decision points. Use the Test Plan document to list all of your test data and the expected results.

4. Demonstrate your working program with commented algorithm and test plan to your lab TA.