

Practical Lab Week 5

Objective: the objective of this lab is to practice exceptions, and unit testing.

1. Find the errors in the program below by using the debugger in your IDE and fix the errors.

```
import java.util.Scanner;
import java.util.Random;

public class GuessGame {

    public static void main(String[] args) {

        Random ranGen = new Random(8); // seeded to make debugging easier
        final int sides = 6;           // number of sides for a die
        int userguess = -1;             // user's guess, 1 - 6 inclusive
        int rolled = -1;               // number rolled, 1 - 6 inclusive
        boolean rightGuess = false;    // flag for correct guess
        int numGuesses = 0;            // counts the number of guesses

        Scanner userInput = new Scanner(System.in);

        System.out.println("Welcome to the Guess Game!");
        System.out.println("If you guess the correct value in three or fewer
tries, you win; otherwise I win.");

        // roll the die
        rolled = ranGen.nextInt(sides+1);
        System.out.println("The computer has rolled the die.");
        System.out.println("You have five guesses.");

        while (numGuesses < 5 || !rightGuess) {

            // input & validation: must be in range 1 to 6 inclusive
            do {
                System.out.print("\nWhat is your guess [1-6]? ");

                userguess = userInput.nextInt();

                if ((userguess < 1) && (userguess > 6)) {
                    System.out.println("    Please enter a valid guess
[1-6]!");
                }
            } while (userguess < 1 || userguess > 6);

            // did the user guess right?
            if (rolled == userguess) {
                System.out.println("    Correct!");
            } else {
                System.out.println("    Incorrect guess.");
            }
            numGuesses++;
        }

        if (rightGuess && numGuesses < 3) {
            System.out.println("*** You win! ***");
        } else {
            System.out.println("*** You lose! ***");
        }

        userInput.close();
        System.out.println("Thanks for playing the Guess Game!");
    }

}
```