

TASK - 1

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

public class RandomNumberGuessingGames {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);
        Random random = new Random();
        int min = 1;
        int max = 100;
        int maxAttempts = 5;
        int roundsWon = 0;
        int totalRounds = 0;
        boolean playAgain;

        System.out.println("Welcome to the Number Guessing
Game!");

        do {
            // Generate a random number between min and max
            (inclusive)
            int randomNumber = random.nextInt((max - min) +
1) + min;

            boolean guessedCorrectly = false;
            totalRounds++;

            System.out.println("Guess the number between " +
min + " and " + max + ":");

            // Loop until the user guesses the correct number
            or runs out of attempts
            for (int attempts = 1; attempts <= maxAttempts;
attempts++) {
                System.out.print("Attempt " + attempts + ":
");

                int userGuess = scanner.nextInt();

                // Check if the user's guess is correct, too
                high, or too low
                if (userGuess == randomNumber) {
                    System.out.println("Congratulations! You
guessed the correct number: " + randomNumber);
                    guessedCorrectly = true;
                    roundsWon++;
                    break;
                } else if (userGuess < randomNumber) {
                    System.out.println("Too low! Try
again:");
                } else {
                    System.out.println("Too high! Try
again:");
                }
            }
        } while (playAgain);
    }
}
```

```

    }
}

if (!guessedCorrectly) {
    System.out.println("Sorry, you've run out of
attempts. The correct number was: " + randomNumber);
}

// Ask if the user wants to play another round
System.out.print("Do you want to play another
round? (yes/no): ");

playAgain =
scanner.next().equalsIgnoreCase("yes");

} while (playAgain);

// Display the user's score
System.out.println("Game Over!");
System.out.println("Total Rounds Played: " +
totalRounds);

System.out.println("Rounds Won: " + roundsWon);

scanner.close();
}
}

```

The screenshot shows an IDE with the following components:

- Package Explorer:** Lists various Java files including ElectricityBill.java, EvenOdd.java, Example.java, FactorialNumber.java, Fast.java, FastFood.java, GeometricChap.java, GeometricShape.java, HELLO.java, HelloWorld.java, LargestNumber.java, LinearSearch.java, Multiples.java, PositiveOrNegative.java, Shape.java, SmallestNumber.java, Swap.java, Telephone.java, Tv.java, WrapperClass.java, DesignPattern, Initab, Insem, Java20000071, week1, week2, week4, week8, module-info.java, RandomNumberGuessing, package-info.java, and StudentGrade.java.
- Source Editor:** Displays the code for `RandomNumberGuessingGames.java`. The code includes imports for `java.util.Random` and `java.util.Scanner`, and defines a `main` method that generates a random number, prompts the user for guesses, and provides feedback based on the guess's proximity to the target number.
- Console:** Shows the runtime output of the program. It displays the welcome message, the range of the random number (1 to 100), and the user's attempts. The user made 5 attempts, with the final guess being 6, which was correct. The program then asks if the user wants to play another round, and the user responds with 'no'.