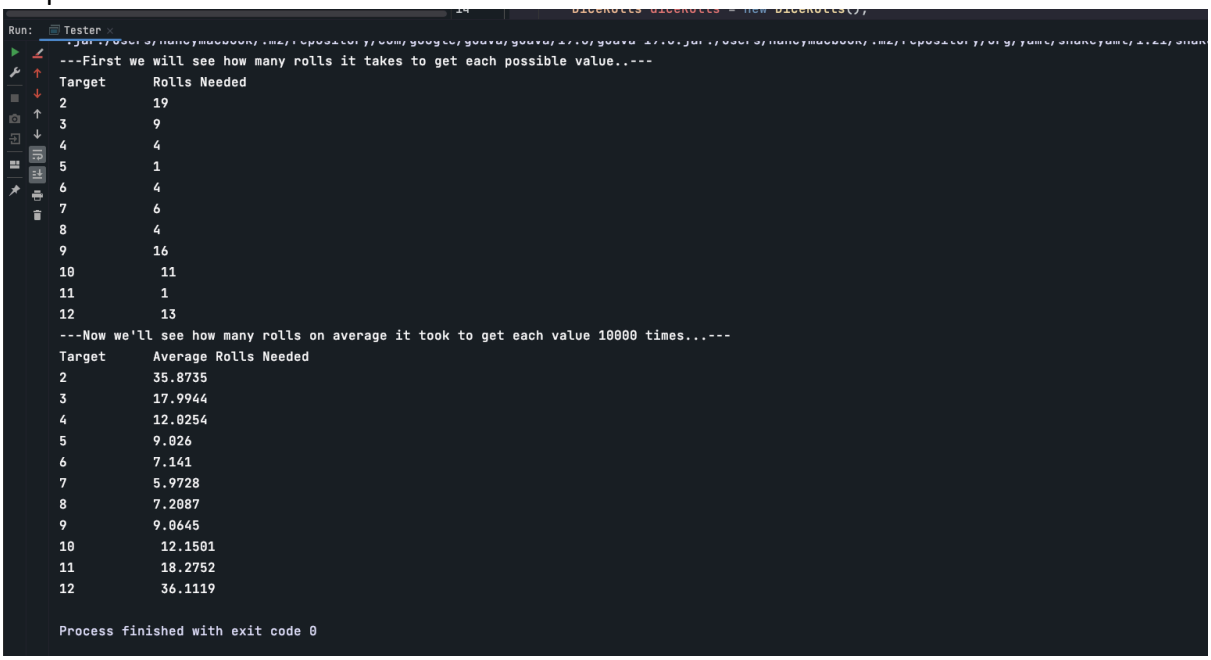
Class DiceRolls

```
import java.util.Random;

public class DiceRolls {
    Random random = new Random();

    public int RollPair() {
        int roll1 = random.nextInt(1, 7);
        int roll2 = random.nextInt(1, 7);

        return roll1 + roll2;
    }
    public int RollsOfPairsToGet(int target) {
        int counter = 0;
        int result;

        do {
            result = RollPair();
            counter += 1;
        }

        while (result != target);

        return counter;
    }
}
```

Tester

```
public class Tester {
    public static void main(String[] args) {
        System.out.println("---First we will see how many rolls it takes to
get each possible value..---");
        System.out.println("Target      Rolls Needed");
        DiceRolls diceRolls = new DiceRolls();


        for (int target = 2; target <= 12; target++) {

            int attempts = diceRolls.RollsOfPairsToGet(target);

            System.out.println(target + "           " + attempts);
        }
        System.out.println("---Now we'll see how many rolls on average it
took to get each value 10000 times...--- ");
        System.out.println("Target      Average Rolls Needed");
        int trials = 10000;

        for (int target = 2; target <= 12; target++) {

            long totalRolls = 0;
            for (int i = 0; i < trials; i++) {
                totalRolls += diceRolls.RollsOfPairsToGet(target);
            }
            double averageRolls = (double) totalRolls / trials;
            System.out.println(target + "           " + averageRolls);

        }

    }
}
```

output:


Run:
Tester
---First we will see how many rolls it takes to get each possible value..---
Target Rolls Needed
2 19
3 9
4 4
5 1
6 4
7 6
8 4
9 16
10 11
11 1
12 13
---Now we'll see how many rolls on average it took to get each value 10000 times...---
Target Average Rolls Needed
2 35.8735
3 17.9944
4 12.0254
5 9.026
6 7.141
7 5.9728
8 7.2087
9 9.0645
10 12.1501
11 18.2752
12 36.1119
Process finished with exit code 0