

```
1  /*
2   * David Lim
3   * 9/2/22
4   * Dice Roll
5   */
6
7  import javax.imageio.ImageIO;
8  import javax.swing.*;
9  import java.awt.*;
10 import java.awt.event.ActionListener;
11 import java.awt.event.ActionEvent;
12 import java.awt.image.BufferedImage;
13 import java.io.File;
14 import java.io.IOException;
15 import java.util.Arrays;
16
17 public class Main extends JFrame implements ActionListener{
18     int rollMin = 1;
19     int rollMax = 6;
20
21     int randomRoll1; //don't assign value here so it can change with every button click
22     int randomRoll2;
23     JTextArea txaRandomRoll = new JTextArea("", 10, 30);
24     JButton btnRoll = new JButton("Roll");
25
26     public static void main(String[] args){
27         Main frame = new Main();
28         frame.setSize(500,500);
29         frame.setVisible(true);
30
31     }
32
33     //declare constructor for the project
34     public Main(){
35         //application bar name
36         super("Dice Roll");
37         setDefaultCloseOperation(EXIT_ON_CLOSE);
38
39         //layout manager
40         setLayout(new FlowLayout());
41
42         //screen components
43         add(txaRandomRoll);
44         add(btnRoll);
45
46         //add listener for the button
47         btnRoll.addActionListener(this);
48     } //end of constructor
49
50     //execute code below on button click
51
52     public void actionPerformed(ActionEvent event){
53         Object objSource = event.getSource();
54
55         if (objSource == btnRoll){
56             txaRandomRoll.setText("");
57             randomRoll1 = (int) Math.floor(Math.random() * (rollMax - rollMin + 1) + rollMin);
```

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58     randomRoll2 = (int)Math.floor(Math.random() * (rollMax - rollMin + 1) + rollMin);
59
60     //initialize class for calculation
61     calculate calculate = new calculate(randomRoll1, randomRoll2);
62
63     //get values for calculate class
64     int sum = calculate.getSum();
65
66     String outputString = "";
67
68     //output
69     outputString = "Roll 1: " + randomRoll1 + "\t" + "Roll 2: " + randomRoll2 + "\n"
70     + "Roll sum: " + sum + "\t" + "Sum Counts: " +
71     Arrays.toString(calculate.returnRollCount()) + "\n" +
72     "Roll Probabilities: " + Arrays.toString(calculate.returnArray()) + "\n" + "Total
73     Rolls: " + calculate.getRolls();
74     txaRandomRoll.append(outputString);
75 }
76
77 }
78 }
```