```java
import java.util.Random;

/**
 * A die with a fixed number of sides and a current face value. The die is mutable.
 */
public class Die {
    private final int DEFUALT_SIDES = 6;
    private final int DEFUALT_VALUE = 1;


    private int value;
    private int sides;

    /**
     * Constructs a new Die object.
     * @param sides The int representation of sides in a Die.
     */
    public Die(int sides){

        this.value = DEFUALT_VALUE;
        this.sides = sides;
    }

    /**
     * Constructs a new die with the default number of sides (6).
     */
    public Die() {
        this.value = DEFUALT_VALUE;
        this.sides = DEFUALT_SIDES;
    }

    /**
     * Rolls this die, updating its value to a random integer in [1, sides].
     */
```

```
35      public void roll(){
36          Random r = new Random();
37          this.value = r.nextInt(this.sides) + 1;
38      }
39
40      /**
41       * Returns the value of the current Die
42       * @return this.value The current value of the dice
43       */
44      public int getValue(){
45          return this.value;
46      }
47
48
49
50  //
51  //      /**
52  //       * @return this.sides The current side of the
    dice
53  //       */
54  //      public int getSides() {
55  //          return this.sides;
56  //      }
57  }
58
```

```java
/**
 * Author: James Lin
 * Honor Code: I affirm that I have carried out the attached academic endeavors with full academic honesty,
 * in accordance with the Union College Honor Code and the course syllabus.
 */


import java.util.Scanner;

class Client{
    /**
     * Plays a simple dice game:
     * 1) Uses a D6 and a D12.
     * 2) On each turn, rolls both dice and displays the results.
     * 3) The game is won when one die shows a value exactly twice the other;
     *    otherwise, roll again.
     */
    public static void main(String[] args) {
        Die diceOne = new Die();
        Die diceTwo = new Die(12);
        Scanner sc = new Scanner(System.in);

        boolean gameOver = false;
        String winner = "";

        while (!gameOver) {
            System.out.println("Press Enter to Continue");
            String userResponse = sc.nextLine();
            if  (userResponse.isEmpty()) {
                diceOne.roll();
                diceTwo.roll();

                if (diceOne.getValue()*2 == diceTwo.
```

```
33 getValue()) {
34                     gameOver = true;
35                     winner = "Die 2";
36                 }else if (diceTwo.getValue()*2 ==
   diceOne.getValue()) {
37                     gameOver = true;
38                     winner = "Die 1";
39                 }
40 
41                 System.out.printf("Dice Rolled: %d, %d
   \n", diceOne.getValue(), diceTwo.getValue());
42 
43                 if (winner != "") {
44                     System.out.printf("Winner is: %s\n"
   , winner);
45                 }
46             }
47         }
48         sc.close();
49 
50 
51     }
52 }
```