

Resolution & Result

Bug 3: The DiceValues are the same for each game

1 Resolution

As stated in Tracing document, the issue is while *roll()* method returns new value, the game just compare and display the pick value with the first *value* of the dice from the constructor. Therefore, the solution is to assign new value for variable *value* after the roll.

```
public class Dice {  
    private DiceValue value;  
  
    public Dice() {  
        value = DiceValue.getRandom();  
    }  
  
    public DiceValue getValue() {  
        return value;  
    }  
  
    public DiceValue roll() {  
        // return DiceValue.getRandom();  
        value = DiceValue.getRandom();  
        return value;  
    }  
  
    public String toString() {  
        return value.toString();  
    }  
}
```

There is also no risk for the resolution, as the *roll()* method is just called in **Dice.java** and **Game.java**. The game is still decided with the comparison of *pick* with *d.getValue()*, which returns value.

2 Result

2.1 Bug3Test

Different results are showed

```
Test Dice roll values of three dices
Original dice values: DIAMOND , CROWN , CLUB
Results of 10 turns rolling:
Turn 1: ANCHOR , CROWN , CROWN
Turn 2: ANCHOR , CROWN , HEART
Turn 3: CLUB , CLUB , DIAMOND
Turn 4: DIAMOND , HEART , ANCHOR
Turn 5: CLUB , HEART , ANCHOR
Turn 6: DIAMOND , CROWN , CROWN
Turn 7: CLUB , CROWN , ANCHOR
Turn 8: CROWN , CROWN , ANCHOR
Turn 9: CLUB , CROWN , CROWN
Turn 10: DIAMOND , CROWN , ANCHOR
```

2.2 Main console

After the change, there is no error as showed in the console.

```
Start Game
Fred starts with balance 100, limit 0
Turn 1: Fred bet 5 on CROWN
Rolled DIAMOND, DIAMOND, CLUB
Fred lost, balance now 95

Turn 2: Fred bet 5 on DIAMOND
Rolled DIAMOND, DIAMOND, DIAMOND
Fred won 15, balance now 110

Turn 3: Fred bet 5 on DIAMOND
Rolled DIAMOND, CLUB, DIAMOND
Fred won 10, balance now 120

Turn 4: Fred bet 5 on DIAMOND
Rolled HEART, DIAMOND, DIAMOND
Fred won 10, balance now 130

Turn 5: Fred bet 5 on ANCHOR
Rolled HEART, ANCHOR, HEART
Fred won 5, balance now 135

Turn 6: Fred bet 5 on DIAMOND
Rolled HEART, CROWN, CROWN
Fred lost, balance now 130
```