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Project 3
Craps Game

I pledge that this work is entirely mine, and mine alone (except for any code provided by my instructor.)

Aaron Teague

I spent 2 hours and 30 min. on 2/14, 5 hours and 30 min on 2/19, and 1 hour on 2/21 reading the book, designing a solution, writing code, fixing errors and putting together the printed document.

```java
/**
 * Author: Aaron Teague
 * Dice Game
 * CIS 162 Project 3
 */
public class Craps
{
    /** die one */
    private GVdie dieone;
    /** die two */
    private GVdie dietwo;
    /** the point */
    private int point;
    /** current balance of credit */
    private int creditbalance;
    /** current status of the game */
    private String message;
    /** the status of rollout for the turn */
    private boolean out;

    /** initialize the variables */
    public Craps()
    {
        dieone = new GVdie();
        dietwo = new GVdie();
        creditbalance = 10;
        point = -1;
        out = true;
        message = "Welcome to Scott's Game of Craps!";
    }

    /** returns the creditbalance */
    public int getCredits()
    {
        return creditbalance;
    }

    /** returns point status */
    public int getPoint()
    {
        return point;
    }

    /** returns current status of game */
    public String getMessage()
    {
        return message;
    }
```

```java
50
51      /** sets creditbalance if amount is positive    */
52      public void setCredits(int amount)
53      {
54          //Checks if amount is positive
55          if( amount >= 0)
56          {
57              creditbalance = amount;
58          }
59      }
60
61      /** This method controls the game in the come out phase    */
62      public void comeOut()
63      {
64          //Check if the game is out and the credit balance is at least one
65          if(out && creditbalance >= 1)
66          {
67              //roll die one
68              dieone.roll();
69              //roll die two
70              dietwo.roll();
71
72              //calculate total of the roll of the dice
73              int total = dieone.getValue() + dietwo.getValue();
74
75              //check if the total of the roll is 7 or 11
76              if(total == 7 || total == 11)
77              {
78                  //the credit balance is incremented
79                  creditbalance++;
80                  message = "Your rolled " + total + " and win!";
81                  out = true;
82
83              }
84              else
85              //check if the total of the roll is 2, 3, 12
86              if(total == 2 || total == 3 || total == 12)
87              {
88                  //the credit balance is decremented
89                  creditbalance--;
90                  message = "Your rolled " + total + " loose one credit.";
91
92                  out = true;
93              }
94              else
95              {
96                  //The point is set to the total of the dice.
97                  point = total;
```

```
98                     message = "You rolled " + total + " your point is " + poi
      nt + ". Roll again.";
99
100                         out = false;
101                     }
102                 }
103             else
104             {
105                 message = "Sorry no more credits.";
106             }
107
108         }
109
110     /** This method controls the game in the roll phase phase    */
111     public void roll()
112     {
113
114         if(out == false && creditbalance >= 1)
115         {
116                 //roll die one
117             dieone.roll();
118                 //roll die two
119             dietwo.roll();
120
121             int total = dieone.getValue() + dietwo.getValue();
122             if(total == 7)
123             {
124                     //the credit balance is decremented
125                 creditbalance--;
126                     //the point is set to -1
127                 point = -1;
128                 message = "Your rolled " + total + " loose one credit.";
129                 out = true;
130             }
131             else
132             if(total == point)
133             {
134                 creditbalance++;
135                     //the point is set to -1
136                 point = -1;
137                 message = "Your rolled " + total + " win one credit.";
138                 out = true;
139             }
140             else
141             {
142                 message = "Your rolled " + total + " the point is: " + po
      int;
143                 out = false;
144
```

```
145                    }
146              }
147          else
148          {
149                  message = "Sorry no more credits";
150          }
151      }
152
153      /** Checks to see if i'ts time to roll   */
154      public boolean okToRoll()
155      {
156          if(out)
157          {
158              return false;
159          }
160          else
161          {
162              return true;
163          }
164      }
165
166      /** Gets the die    */
167      public GVdie getDie(int num)
168      {
169          if(num == 1)
170          {
171              return dieone;
172          }
173          else
174          {
175              return dietwo;
176          }
177
178      }
179  }
180
```

could do :

/ return !out;

✓

```
1    import javax.swing.*;
2    import java.awt.*;
3    import java.awt.event.*;
4    import javax.swing.JFrame;
5    /**
6     * Author: Aaron Teague
7     * GUI for Craps Game
8     * CIS Project 3 Part 2
9     *
10    */
11
12   public class GUI extends JPanel
13   {
14       /** Initiates the GUI */
15       public static void main (String[] args)
16       {
17           JFrame frame = new JFrame ("Craps");
18           frame.setDefaultCloseOperation (JFrame.EXIT_ON_CLOSE);
19
20           frame.getContentPane().add(new GUI());
21           frame.pack();
22           frame.setVisible(true);
23       }
24       //Create buttons
25       private JButton rollButton, comeOutButton;
26       //Create labels
27       private JLabel message, credits;
28       //Creates an onbject of Craps
29       private Craps game;
30       //Creates two die
31       private GVdie dieone ;
32       private GVdie dietwo;
33
34       /** Creates the GUI */
35       public GUI ()
36       {
37           //sets all variables
38           game = new Craps();
39
40           dieone = game.getDie(1);
41           dietwo = game.getDie(2);
42
43           rollButton = new JButton ("Roll");
44           comeOutButton = new JButton ("Come Out");
45
46           //Create and set button listener
47           ButtonListener listener = new ButtonListener();
48           comeOutButton.addActionListener (listener);
49           rollButton.addActionListener (listener);
```

GUI - Border layout ?   -3

```
50
51          message = new JLabel (game.getMessage());
52          credits = new JLabel(" ");
53
54          //adds all componets to the GUI
55          add (comeOutButton);
56          add (rollButton);
57          add (message);
58          add (credits);
59          add (dieone);
60          add (dietwo);
61
62          comeOutButton.setEnabled(true);
63          rollButton.setEnabled(false);
64
65      }
66
67      /** Creates the button listener */
68      private class ButtonListener implements ActionListener
69      {
70          public void actionPerformed (ActionEvent event)
71          {
72
73              if (event.getSource() == rollButton)
74                  game.roll();
75
76              if (event.getSource() == comeOutButton)
77                  game.comeOut();
78              if(game.okToRoll())
79              {
80                  comeOutButton.setEnabled(false);
81                  rollButton.setEnabled(true);
82
83              }
84              else
85              {
86                  comeOutButton.setEnabled(true);
87                  rollButton.setEnabled(false);
88
89              }
90              credits.setText("Credits: " + game.getCredits());
91              message.setText(game.getMessage());
92          }
93      }
94  }
95
96
```

___If initial roll is 7, did player win? Did credits increase by one?

___If initial roll is 11, did player win? Did credits increase by one?

___If initial roll is 2, did player lose? Did credits decrease by one?

___If initial roll is 3, did player lose? Did credits decrease by one?

___If initial roll is 12, did player lose? Did credit decrease by one?

___If initial roll is any but 7, 11, 2, 3, 12, is the point set to the total of the dice?

___If in the roll phase and player rolls a 7 dose the player lose a credit?

___If in the roll phase and player rolls the point does the player gain a credit?

What is the result if in the roll phase and player rolls anything but 7 or the point?

___If the credit balance is 0 can the player roll?

Is the Roll button enabled or disabled when the game is first run?

When the games reaches the Roll phase is the Come Out button disabled?