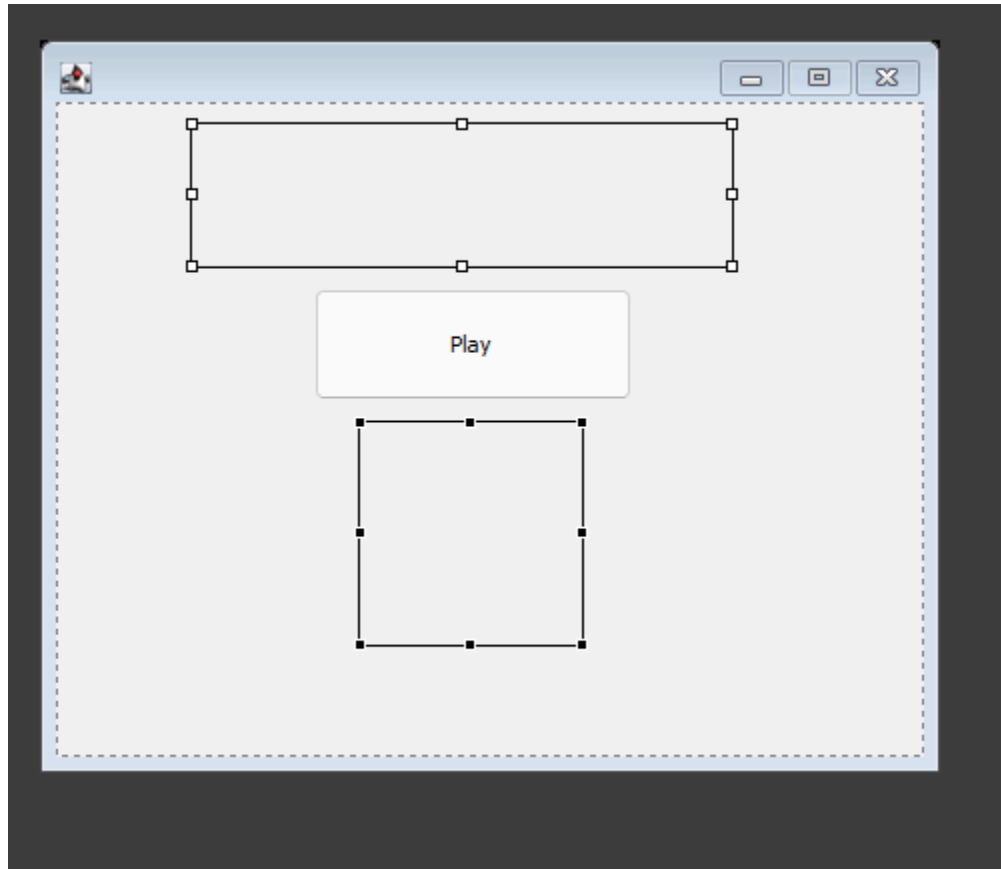


Credit Name: CSE 3010 - Computer Science 3

Assignment: BreakAPlateGUI

How has your program changed from planning to coding to now? Please Explain



I started this assignment by designing the graphical interface. This interface is composed of a JPanel, which is a container I used to contain and incorporate the other elements. Then I added a JButton and set its text to 'Play' because this will be the button that the user uses to play and restart the game. Then I added 2 JLabels above and below the JButton.

Lastly after checking the dimensions of the plate images and the prize images, I ensured the plate images were all the same sizes and the same for the prize images and then set the top label to be the same size as the plates and the bottom image to be the same as the prize images.

I labelled the buttons and labels 'PlayBtn', 'Plate_img' and 'Prize_img' for when i need to call them as i design the game's logic.

```

private void initialize() {

    Random random = new Random();

    ImageIcon p = new ImageIcon("../Chapter10/src/Mastery/Ch10 Mastery Img/plates.gif");
    ImageIcon bp = new ImageIcon("../Chapter10/src/Mastery/Ch10 Mastery Img/plates_all_broken.gif");
    ImageIcon tbp = new ImageIcon("../Chapter10/src/Mastery/Ch10 Mastery Img/plates_two_broken.gif");
    ImageIcon tp = new ImageIcon("../Chapter10/src/Mastery/Ch10 Mastery Img/tiger_plush.gif");
    ImageIcon s = new ImageIcon("../Chapter10/src/Mastery/Ch10 Mastery Img/sticker.gif");
    ImageIcon ph = new ImageIcon("../Chapter10/src/Mastery/Ch10 Mastery Img/placeholder.gif");
}

```

Then I added all the relevant images to my code via ImageIcon, designating variable names for each image.

```

75     Prize_img.setIcon(ph);
76     Plate_img.setIcon(p);
77

```

Below all the GUI components' declaration and initialization, i set the icons for both the prize and the plate to be the default images(all unbroken plates and blank prize image).

```

78 PlayBtn.addActionListener(new ActionListener() {
79     public void actionPerformed(ActionEvent e) {
80         if (PlayBtn.getText().equals("Play"))
81         {
82             int n1 = random.nextInt(2);
83             int n2 = random.nextInt(2);
84             int n3 = random.nextInt(2);
85             int sum = n1+n2+n3;
86
87             if (sum == 3)
88             {
89
90                 Prize_img.setIcon(tp);
91                 Plate_img.setIcon(bp);
92             }
93             else if (sum == 2)
94             {
95                 Prize_img.setIcon(s);
96                 Plate_img.setIcon(tbp);
97             }
98
99
100             PlayBtn.setText("Play Again");
101
102         }
103         else if(PlayBtn.getText().equals("Play Again"))
104         {
105             PlayBtn.setText("Play");
106             Prize_img.setIcon(ph);
107             Plate_img.setIcon(p);
108         }
109     }
110 });

```

Then I added an action listener for my button. Then i made an if else statement based on the text of the play button. When the button was clicked, if its text was “Play” then the actual game is played: first, 3 random numbers either 0 or 1 are generated and the sum is calculated.

If the sum is equal to 3, then the player wins which is shown by setting the plate image to all broken plates and the prize image to the tiger plush.

Else if the sum is equal to 2, two plates were broken. Thus, the according image is shown and the prize image is the sticker.

Otherwise they dont win anything, and nothing changes.

Then the button changes from “Play” to “Play Again”.

If the button is labelled “Play Again” when the player presses it then the icons set to the default and button goes back to being labelled as “Play”.