

Credit Name:computer science 3

Assignment Name: break a plate

1. private JFrame frame;

Purpose: This is the main window of the application, serving as the container for all UI components, including buttons, labels, and panels.

2. private JLabel[] plates = new JLabel[3];

Purpose: This array holds three JLabel objects that represent the plates in the game, allowing for visual representation of each plate's state (broken or unbroken).

3. public breakAPlate()

Purpose: This constructor initializes the game window. It calls methods to set up the frame, load images for the plates, and create the necessary UI components.

4. private void loadImages()

Purpose: This method loads images for the unbroken and broken plates from specified file paths. These images are essential for visually indicating the state of each plate during gameplay.

5. private void createPlatePanel()

Purpose: This method creates a panel to display the plates. It initializes each JLabel with the unbroken plate image and adds them to the panel, along with labels for animations and prizes.

Key Details: A loop initializes and adds each plate to the panel, establishing the visual layout for the game.

6. private void playGame()

Purpose: This method contains the main game logic triggered by the "Play" button. It resets all plates to unbroken, randomly determines the state of each plate, and updates the UI accordingly.

Key Details: A random number generator decides whether each plate is broken (1) or unbroken (0), and after updating the plates, it calls `updateResult` to determine the player's prize.

7. private void updateResult(int brokenCount)

Purpose: This method updates the result label and prize label based on the number of broken plates. It informs the player of their prize:

- If all plates are broken, the player wins a "Tiger Plush."
- If fewer plates are broken, they win a "Sticker."

Parameters:

- `brokenCount`: Indicates how many plates were broken during the game.

8. public static void ChangeImage(JLabel uiObject, String imageID)

Purpose: This static method changes the icon of a specified `JLabel` to a new image based on the provided image identifier, allowing for dynamic updates to the UI.

Parameters:

- `uiObject`: The `JLabel` whose icon is to be changed.
- `imageID`: The identifier for the new image to load.