

# CS 211 Lab Assignment

---

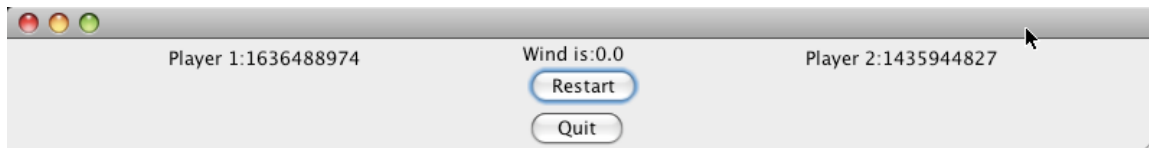
Instructor: Dan Fleck, Ricci Heishman

Lab: Small GUI Application

## Overview

In this lab you will create a small game status GUI. This GUI development must be done manually (not with a GUI builder).

Your GUI will present the status and controls for a small game. The GUI should look like the GUI below:



This shows Player 1 and 2s score, wind speed and two buttons.

## Requirements

1. Your class will have three public methods to update various components:

```
public void updateScore1(int score)
public void updateScore2(int score)
public void updateWind (double wind)
```

2. Restart button should call the update methods for both scores and set the scores to 0.
3. Quit button should end the program by calling **System.exit(0);**
4. To make the GUI you will need four JPanels inside a JFrame. The panels are colored below:



- a. Red and yellow frames contain a JLabel with the text
- b. Blue frame uses a Y\_AXIS BorderLayout and has three widgets in it
  - i. windLabel, restartButton, quitButton
- c. There is also an outer frame that holds the red, blue and yellow JPanel. The outerPanel uses an X\_AXIS BorderLayout.

5. Your main program will just randomly update the scores. This is a sample main program you can copy into your program.

```
/**
 * main method to test GameState GUI
 */
public static void main(String[] args) {
    GameState statusPanel = new GameState();

    // Create a random number generator
    Random rand = new Random();

    // Loop forever, because we'll exit using
    // a button.
    while (true) {
        try {
            // Sleep for 1 second (1000 ms)
            Thread.sleep(1000);
        } catch (Exception e) {
            e.printStackTrace();
        }

        // Update the scores randomly
        statusPanel.updateScore1(rand.nextInt());
        statusPanel.updateScore2(rand.nextInt());
    }
}
```

## Hints

You will need to implement ActionListener to check for button events. A button event is what happens when someone presses one of the buttons on the GUI.

## What to turn in:

1. A Jar file containing your Java source code and compiled code.
2. A screen shot of the window your code creates.

---

**Grading Rubric:** This assignment is worth 10 points and will be graded based on the following rubric:

Area	Exemplary	Competent	Developing	Points
Class Header	All header components are present, with references and comments that accurately support the	All header components are present, but references and comments are incomplete or nonspecific.	Header is missing or only partially present, and references and comments are vague or	__ / 1

	state of the file.		unmeaningful.	
Coding Style	Code implementation utilizes appropriate white space, self-documentation techniques and non-obvious comments.	Code implementation exhibits minor alignment or spacing problems, some comments are missing or redundant.	Significant alignment and spacing problems, comments are generally missing or sporadic.	__ / 1
Method Signatures	The method signatures match the expected signatures exactly.	The method signatures contain the basic components, but are not exactly as expected.	The method signatures are very different from the assignment instructions.	__ / 2
Restart and Quit buttons	The Restart and Quit buttons are present and work precisely as stated in the assignment.	The Restart and Quit buttons are present but only one performs the intended functionality.	The Restart and Quit buttons are missing completely or both do not perform the required functionality.	__ / 2
Main method	The main method is present and copied precisely from the assignment.	The main method is present, but required changes from the method given in the assignment.	The main method is missing or does not work.	__ / 1
GUI Layout	The GUI looks exactly as described in the assignment with no visible differences.	The GUI has some visible differences from the assignment, but does contain all required components.	The GUI does not look like the assignment states or is missing components.	__ / 3