CSE 271 Lab 9 – GUIs and Graphics
Spring 2022
Assigned: 3/31/2022
Due: 4/3/2022

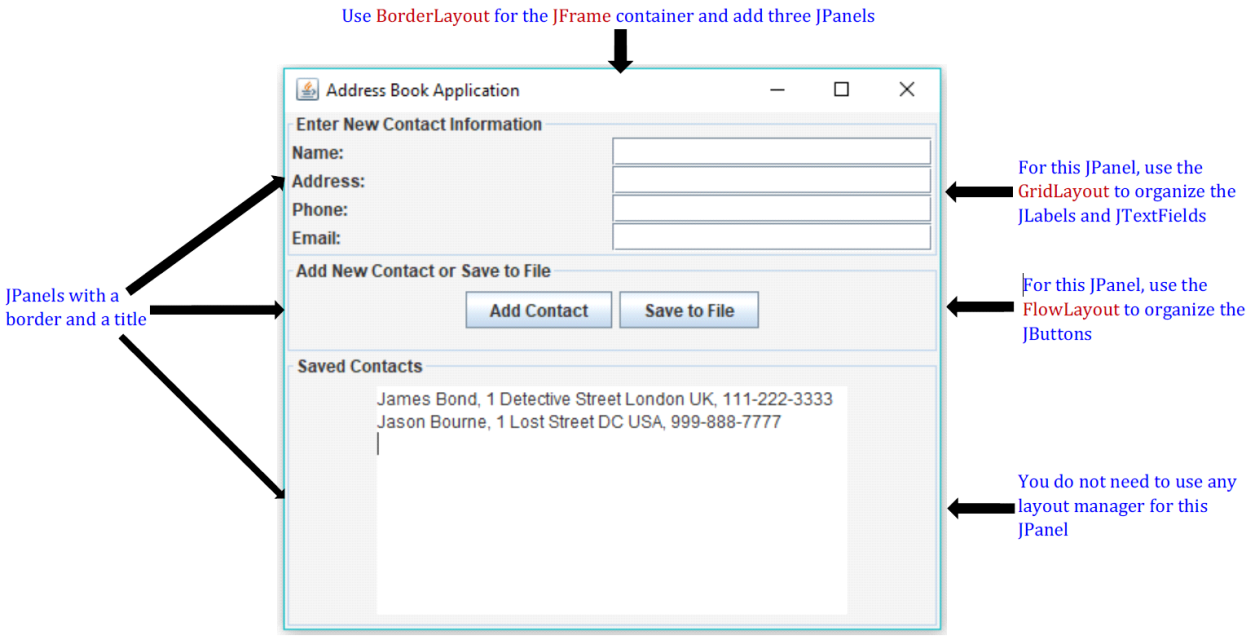
Introduction:

In this lab, we will continue practicing GUI creation as well as drawing Graphics. Begin with creating a project in your Eclipse IDE called **Lab9** and copy your previous **AddresBook.java** class from the previous Lab 8 to use for problem 1. Following, make another class named **Emoticon.java** so that we can do problem 2.

Problem 1:

We are going to redesign the GUI that we made in the previous lab with the **AddressBook.java** class. Specifically, we are going to utilize layout managers and multiple JPanels. Use the following figure as a guideline to redesign the GUI of the **AddressBook.java** class.

Note: for this problem, we are concerned with the actual layout of the GUI rather than the functionality of the GUI. So, if your previous lab had functionality problems, you will not lose points for it on this lab.

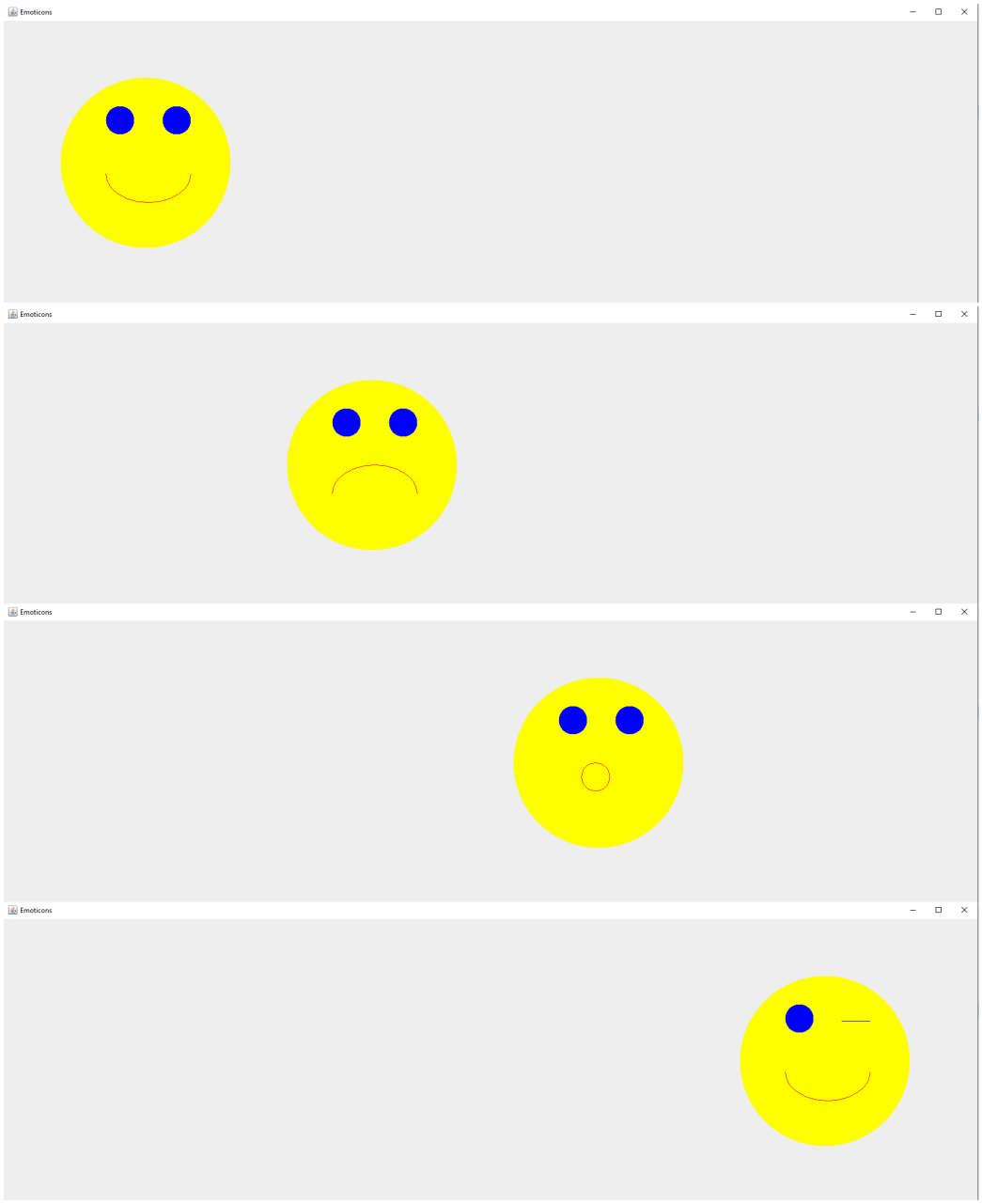


Hint: The TitledBorder will be useful for each of the separate sections and to order them correctly the BorderLayout of the ContentPane container will be useful as well.

Problem 2:

Create a class called **Emoticon.java** and draw the following faces from the figure below on the frame, side by side, using the JComponent Java Graphics. Also, each emoticon face will be displayed momentarily then removed in sequence as shown in the figure below using a Timer. You may choose the

colors of these faces. The faces are, from left to right, smiley, sad, surprised, and winking. You can use your own size dimensions to paint them as long as they resemble the faces below. You will receive full credit if they resemble the example emoticon faces as well as appear and disappear sequentially with the timer. The sample sizes below are a frame of 1800x600 pixels. Each face consists of ovals and arcs which can be drawn using the Graphics g object. The faces are 300x300 ovals, the eyes are 50x50 ovals, arcs are 150x100, and each face is 400 pixels away from each other. You do not have to use these dimensions; they are just suggestions.



Note: Make sure you use the javax.swing.Timer class for your Timer as it will save you some trouble while coding. Also, for the timer delay, I used 500 milliseconds. Look back at the Week 9 Lecture Code for examples of painting and using a Timer. Finally, an instance property which keeps track of which face should be printed next will help.

Additional Notes:

- Make sure you include JavaDoc comments for all methods and classes including parameter and return descriptions.

- Make sure that all classes are named correctly.

Submission Instructions:

After you have completed the lab assignment, locate your source code (**AddressBook.java and Emoticon.java**) in your workspace and submit it to the corresponding Lab 9 Canvas folder.

Rubric:

Task	Grade
AddressBook	
Used multiple JPanels set with different layouts	10
GUI separated into three sections	15
Correctly organized GUI elements within each section	15
Emoticon	
Correctly painted the smiley emoticon	10
Correctly painted the sad emoticon	10
Correctly painted the surprised emoticon	10
Correctly painted the winking emoticon	10
Used a Timer to make the emoticons appear and disappear sequentially	10
Adequate JavaDoc included in the AddressBook and Emoticon classes and followed the Miami University coding guidelines	10
Total	**100**