**GUI Programming 2016 – Year 2**

**Labwork 2: (5% - or 50 points out of 500 points for labwork this semester)**

**NOTE: ALL LABS TO BE COMPLETED USING TEXTPAD. NO COPYING PERMITTED AND ZERO MARKS WILL APPLY TO COPIED WORK.**

**ALL WORK SUBMITTED TO MOODLE BY DATE SPECIFIED (2 LABS SUBMISSIONS OF FIVE LABS THROUGHOUT THE SEMESTER)**

**Part 1 – Building a basic window (JFrame) (10 points)**

Create a Java program called **Lab2Part1**. Make the program a JFrame that does all of the following:

* Create the frame by extending the JFrame class (2 points)
* Set the title of the JFrame to “YourName”, e.g., “JoeBloggs” (2 points)
* Set the size of the JFrame to 500 x 300 (2 points)
* Set the visibility of the JFrame to true (2 points)
* Run and test the JFrame (it should pop up on the screen) (2 points)

**Part 2 – Building a basic window with labels (10 points)**

Create a class called **Lab2Part2**. Create a JFrame with labels as follows:

* Create the frame and set the title to “Frame With Labels” (2 points)
* Create a JLabel called nameLabel and fill with text (2 points)
* Create a second JLabel called homeTownLabel and fill with text (2 points)
* Create a JPanel call labelPanel and add BOTH labels to it (2 points)
* Add the panel to content pane of Frame and test (see both labels?) (2 points)

Note: Just for a learning exercise you could try this exercise again without the JPanel and see what changes when you add the labels one after the other to the content pane of the frame without the panel

**Part 3 – Adding buttons to the Frame (10 points)**

Create a JFrame class called **Lab2Part3**. Create the JFrame as follows:

* Create a Label called loginLabel with the text “Login: “ (2 points)
* Create a JButton call loginButton with text “Login” (2 points)
* Create a JPanel called loginPanel and add the label and button to it (3 points)
* Add the loginPanel to the content pane of the frame (2 points)
* Run and test (you should see the label then button) (1 point)

Note: You can change the size of the JFrame so that the GUI looks right, i.e., everything lines up. Pushing the button has no effect yet!!!...but you will notice it depresses (appears to move up and down) when clicked.

**Part 4 – Adding multiple components to a JFrame (20 points)**

Create a class called **Lab2Part4**. Create a JFrame that displays **THREE** of your favourite pictures in a JFrame (make the images small so that the frame will fit into the screen with all three images visible…and the images must be of something like family, friends, pets, car etc.). Each image should be labeled with a name and a text area describing the image, e.g., Fido <Image Here> Description: This is a picture of my dog Fido taken at Dollymount beach.

Required activities and marking guideline:

* Create the JFrame, set appropriate size and set title to “My Pics” (2 points)
* Create EACH of the three labels and position on GUI (3 x 2 points) (6 points)
* Create EACH of the three text areas and position on GUI (3 x 2 pts.) (6 points)
* Create a panel and add all components in the correct order (4 points)
* Run and test the frame so that the GUI displays correctly (2 points)

Note: You may have to keep changing the size of the frame until the images, labels and text areas line up correctly. It is very likely you will NEED at least one panel for this (could need more than one).