Assignment 1: GUI Programming

Date issued: Monday 3rd November 2014

Due date: Monday 3rd November 2014 by 11:00PM

N.B. Submit this assignment using Moodle before the above date.

Assignment Marking: 15% of overall

Name: Find the Pot-of-Gold

Description:

Create a Java JFrame Guessing game using SWING buttons and related event listeners. The GUI should supply a number of buttons (minimum nine) with images in them representing rainbows, leprechauns and one image for a 'pot of gold'. The idea of the game is very simple; you start with two lives, if you find a rainbow you gain a life, if you find a leprechaun you lose a life, if you find the pot of gold before your lives end you win!. The buttons will either show the image or not show the image they contain (like a guessing game you click the button to reveal the underlying image; some will need to be blank (no image) of course). The Game should start by displaying nine blank buttons on the interface. When the user selects a button the button will reveal its image (blank, rainbow, leprechaun or 'pot of gold'). The game interface should have a label that reports the state of the game, e.g., "Number of lives: 2; Rainbows Found: 2 etc.". Your game will have an option to reset the game and start again; this should be supplied as a button somewhere on the interface. Each time the game is reset you should be able to mix-up where the rainbows, leprechauns and 'pot of gold' are, i.e. randomize the locations of the images so that the game is not repeatable the same way.

The required classes:

Just one class is required for this program (a JFrame application), however, you should consider using methods to split your code into logical units. Some marks will be awarded for the use of well-defined methods (see marking scheme below).

What to upload to moodle:

One zip file with the source code **AND images** used in the program.

N.B. Proposed Marking Scheme:

The marks will be awarded as follows **[Total 100 Marks]:**

1. Deliver the JFrame, layouts, JPanel's etc to form the GUI **[25 marks]**
2. Layout and JPanels managers used for well designed GUI layout **[20 marks]**
3. Use of the images **[10 marks]**
4. Image swapping works in game play (blank to displayed) **[10 marks]**
5. Label status display for the lives\objects shown **[5 marks]**
6. 'Reset the game' buttons and handlers work **[10 marks]**
7. Game functions according to specification **[10 marks]**
8. Methods spilt up code in logical units **[5 marks]**
9. Comments, variable nomenclature, code layout/indent **[5 marks]**

Note :

This is an individual assignment, any student involved in collusion will get 0% (i.e. DON'T COPY!)

Any assessments handed up LATER than the above deadline will receive 0% (If there are any genuine circumstances affecting the delivery date it is your responsibility to inform the lecturer)

You **CAN** ask me questions and ask me (or other lab lecturers) for help with this assignment during the labs and lectures. Also, feel free to e-mail any queries to me or open up forum discussions on Moodle.