Rochester Institute of Technology
National Technical Institute for the Deaf
Information and Computing Studies Department

Name: Edward Riley

NACA.161 Programming Fundamentals II
In Class Exercise #31 – Introduction to GUI

Overview

This exercise is designed to let you practice creating a GUI program.

1) Create a class called **MyGUI** that contains a main method.

2) Create a JFrame object with the default constructor. Compile and run.

   What package did you include? javax.swing.*;

   Did a GUI window appear? No

   Why not?

   There is nothing to look at. setVisible is not enabled.

3) Fix the code by making the frame visible. What method did you use?

   jf.setVisible(true);

   Did a window appear? Yes

   What did it look like?

   A tiny unrecognizable window at top left of screen

4) Since there wasn't any text in the titlebar, modify your code to display the words "My First GUI" in the titlebar.

   How did you add the title? (You may also need to maximize the window to see the title.)

("My First Gui") inside constructor

5) Now create a button with the label MyButton.

What class did you use to create the button?

JButton

6) Add the button to the frame. Make sure your code compiles before continuing.

7) Run the code. Can you see the button? No

Why not?

I didn't add it to the GUI.

8) Fix the problem by making the size of the frame to be 500x200 pixels. Write the statement to do this.

jf.setSize(500, 200);

9) Can you see the button text? Yes

Why not? (You may still be able to see the button text.)

10) Fix the problem by moving the setVisible method to the end of your code, compile and run. You should now see the button, if not, keep trying until you do. (setVisible should be the last thing to be done for a jFrame object)

11) Now add another button to the frame, compile and run the program.

Why didn't both buttons appear?

Because the second overwrites

12) Fix the problem, compile, and run the program to make sure both buttons appear on the screen.

What method did you add? jf.setLayout(new FlowLayout());

13) The last remaining problem is that when you click on the 'X' in your GUI program, it doesn't really exit. Add code that will make your program actually exit when you tell it to.

Write the statement to do this.

jf.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

Run your program until it works correctly.

NOTE: Below is optional and not covered by today's powerpoint. ✓

14) Make a copy of your program and call it **MyGUI2.**

What is the line to make MyGUI2 a sub-class of the JFrame class?

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15) Create the main method so that it creates an object of class **MyGUI2** and sets the properties of the frame.

16) Create the constructor for the class MyGUI2 that will create the window that you see on the screen. Correct your code until the program displays exactly the same as the previous version with all code in the main.

Signoff

When you complete all of the steps successfully and answer all of the questions, contact your instructor to check if your application(s) executes correctly and to review your code. We will initial the line below.

_____**Successful execution of code**

If you do not finish the program during the class period, contact your instructor to check to review your code and initial below.

_____**Code not completed during lab time**

You may then submit your work at the start of next class. You may not use the work period of the next class to complete this assignment. If you do not have a signature, then you cannot receive any points for this assignment.