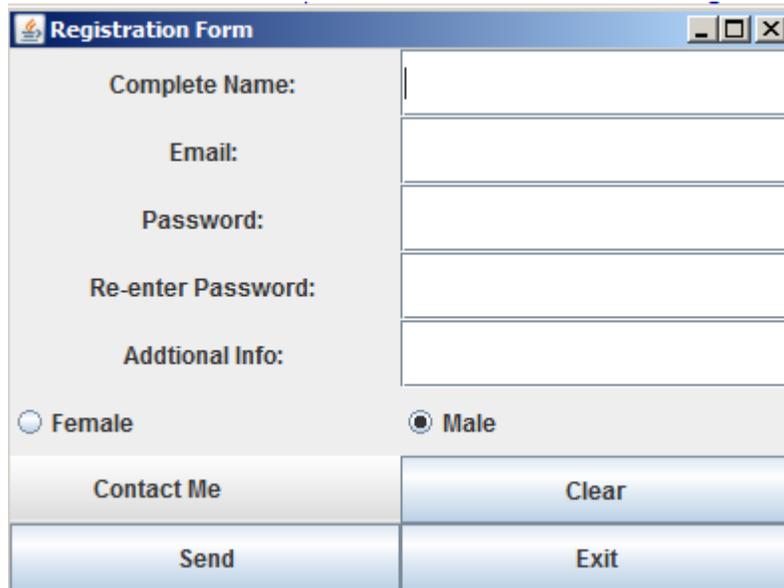University of Puerto Rico
Department of Electrical and Computer Engineering
ICOM 4015 Laboratory: Advanced Programming

Laboratory: Graphical User Interphases (GUI's)

Completed by:
ID:
Date:

Introduction

In this laboratory we will practice GUIs. We are going to create the following GUI for a simple online registration form to create an account in a website:

Figure 1 - GUI for a simple online registration form

It asks you for your name, email address, secret password to access your account, confirms the correctness of your password, asks for additional information, and your gender. You can choose among different ways that the website can contact you through a drop down MenuBar labeled "Contact Me". The "Clear" button erases the information that you have entered. By clicking on the "Send" button a DialogBox - which is created by using JOptionPane - will appear to confirm that your form has been submitted. Finally the "Exit" button closes the window and terminates the application. To implement the functionality of these buttons we will use the ButtonHandler class.

In this GUI several components classes will be used:

- JLabel
- JTextField
- JButton
- ButtonHandler
- JRadioBox
- JMenuBar
- JOptionPane

Make sure that you familiarize yourself with the Java API documentation for these classes before you come to the lab.

Question 1:
In one line describe the purpose of each GUI component and identify an example among the components in Figure 1. Write your answers below:
///
///

Question 2:
Search in the Java API documentation and list five more GUI components available in Java. Write the names of the classes and a short description or their purpose in the area below:
///
///

Question 3:
We provide you a partial implementation of the registration form from Figure 1 in the form of class ContactMeGui. Your job in the lab will consist of completing the implementation to make the form look as in Figure 1 and behave as specified below.

Copy the ContactMeGuiPartial.jave file into a new Eclipse project. Rename the class to ContactMeGui and run it to see what features are missing. You will complete the implementation in the lab following several steps.

Complete the implementation by accomplishing the changes described in steps 1-7. Finally copy and paste your whole ContactMeGui class in the designated area at the end of this document.

1. Adding a new TextField with its corresponding Label to ask for complete name. **Hint:** For doing this you need to provide a space in your frame first. For doing this you should make a change in **pane.setLayout(new GridLayout(6, 3)).**

2. Adding functionality to validate that the user enters a text in the email TextField that contains one @. Validation should be done after pressing the "Send" button. In case of an invalid email, a DialogBox should be displayed with the error message "email address is wrong".

3. In the code provided, when the user enters his/her password, the characters are visible. That's not secure. Help the user by adding this feature to the password TextField that when the user types the password just some black small circles (dots) appear in the box. **Hint:** you should substitute TextField with one of its subclasses.

4. The code provided doesn't compare the string in the password field with the string in the re-enter password field. Add necessary code to do this task and signal a validation error in case of a mismatch.

5. The Jmenu "Contact Me" possess only two items. Add "Cell Phone" and "Regular Mail" as the third and fourth items.

6. Add a RadioBox to ask for the gender.

7. The "Clear" button doesn't erase the form fields. You should fix it to do so. Follow the example of the "Send" and "Exit" buttons to activate the "Clear" button. You need to create an inner class "ClearButtonHandler" which implements "ActionListener" to process the "Clear" event.

Your complete class here:
//
//////
//