CSE 230 - WINTER 2006
PROGRAMMING PROJECT 5

1. A Pay Check Program

Write a class *PayCheck* that uses dialog boxes to compute the total gross pay of an hourly wage worker. The program should use input dialog boxes to get the number of hours worked and the hourly pay rate from the user. The program should use a message dialog to display the total gross pay. The pay calculation should assume the worker earns time and a half for overtime (for hours over 40).

Deliverables

- A printout of the complete program and the screenshots of the final execution.

2. Isosceles Right Triangle Program

Write a program named IsoscelesRightTriangle that draws an isosceles right triangle as a figure formed of the character *. You are not allowed to use Graphics class. The size of the bottom side is the first argument to the program. For instance, the command

```
java IsoscelesRightTriangle  6
```

should produce the following output.

```
     *
    **
   ***
  ****
 *****
******
```

Deliverables:

- A printout of the complete program and the screenshots of the final execution.

3. Adding Buttons to *StyleOptions.java*

In this exercise you will add a set of three radio buttons to the StyleOptions example in Listings 5.22 and 5.23 of the text to let the user choose among three font sizes. The method of adding the radio buttons will be very similar to that in the QuoteOptionsPanel class (Listing 5.25 of the text). Before modifying the program compile and run the program to see how it works and study the QuoteOptionsPanel example.

Do the following to add the radio buttons to the panel:

1. Declare instance variables *fontSize* and *style* and initialize them to 36 and *Font.PLAIN* in StyleOptionsPanel.java. Use these variables to replace 36 and *Font.PLAIN* values in the setFont method call.

2. Declare three objects *small, medium,* and *large* of type JRadioButton.

3. Instantiate the button objects labeling them "Small Font," "Medium Font," "Large Font." Initialize the large font button to true. Set the background color of the buttons to cyan.

4. Instantiate a button group object and add the buttons to it.

5. Radio buttons produce action events so you need an ActionListener to listen for radio button clicks. Use the existing StyleListener class without creating a new inner class (hit: use multiple interfaces). The code you need to add to *actionPerformed* will be similar to that in the QuoteListener in Listing 5.25. In this case you need to set the *fontSize* variable (use 12 for small, 24 for medium, and 36 for large) in the if statement, then call the *setFont* method to set the font for the *saying* object. (Note: the code that checks to see which check boxes have been selected should stay the same.)

6. In *StyleOptionsPanel()* add each button to the StyleListener object. Also add each button to the panel.

7. Compile and run the program. Note that as the font size changes the checkboxes and buttons re-arrange themselves in the panel. You will learn how to control layout later in the course.

Deliverables

- A printout of the modified StyleOptionsPanel.java which includes StyleListener class resulting from 1 through 6 and the screenshots of the final execution from 7.

PROJECT 1 DELIVERABLES

Submit hardcopy of the following items in lab **AND** softcopy (excluding the signature page) to lab assistant.

- A cover page with the project number, due date, and the names of your Project Team members.
- Deliverables from the exercise 1, 2 and 3. This page, with the appropriate signature and date, indicating that the project has been completely and correctly demonstrated in lab.

LABORATORY SIGNATURE

PROJECT TEAM MEMBERS:

STUDENT NAME _____

STUDENT NAME _____

STUDENT NAME _____

_____ _____

LAB INSTRUCTOR SIGNATURE **DATE**