

CST8132–310 Object-Oriented Programming

Lab #8: GUI – Tip Calculator application

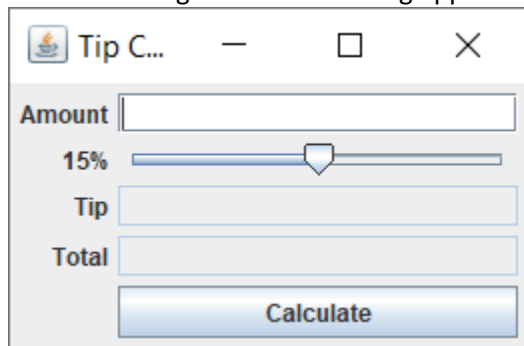
Purpose

Create a Swing version of the Tip Calculator application presented in Section 12.5 in the textbook (Java How to Program, 11/e).

Given the bill amount and tip percentage calculate the tip amount and total.

Requirements

Create a dialog with the following appearance:



TipCalculator class contains only the main with the following code:

```
/**
 * Launch the application.
 */
public static void main(String[] args) {
    EventQueue.invokeLater(new Runnable() {
        public void run() {
            try {
                TipCalculatorFrame frame = new TipCalculatorFrame();
                frame.setVisible(true);
            } catch (Exception e) {
                e.printStackTrace();
            }
        }
    });
}
```

TipCalculatorFrame class is a JFrame with a GridBagLayout that contains:

- The following instance variables:
JLabel amountLabel;
JLabel tipPercentageLabel;
JLabel tipLabel;
JLabel totalLabel;
JTextField amountTextField;
JSlider tipPercentageSlider; // slider that varies from 0 to 30
JTextField tipTextField;
JTextField totalTextField;
JButton calculateButton;

int tipPercentage = 15; // current tip percentage
static final DecimalFormat DF = new DecimalFormat("\$0.00");
- The following methods:
TipCalculatorFrame() // constructor
void setTipPercentage(int value) // ChangeListener for slider

```
void calculateResults() // ActionListener for button (see fig. 12.22 for exception handling)
```

Hint: To add calculateResults method to calculateButton, use the following code:

```
calculateButton.addActionListener(e -> calculateResults());
```

Submission Requirements

1. Create a new folder named CST8132_LastName_FirstName_Lab8.
2. Save all the Java files in the folder you created in Step 1.
 - TipCalculator.java
 - TipCalculatorFrame.java
3. ZIP the FOLDER created in Step 1 and name the resulting archive file CST8132_LastName_FirstName_Lab8.zip.
4. Upload the ZIP file to Brightspace as: CST8132_LastName_FirstName_Lab8.zip.