12 JavaFX Graphical User Interfaces: Part 1

Objectives

In this chapter you'll:

- Build JavaFX GUIs and handle events generated by user interactions with them.
- Understand the structure of a JavaFX app window.
- Use JavaFX Scene Builder to create FXML files that describe JavaFX scenes containing `Label`s, `ImageView`s, `TextField`s, `Slider`s and `Button`s without writing any code.
- Arrange GUI components using the `VBox` and `GridPane` layout containers.
- Use a controller class to define event handlers for JavaFX FXML GUI.
- Build two JavaFX apps.

Outline

1. 12.1 Introduction
2. 12.2 JavaFX Scene Builder
3. 12.3 JavaFX App Window Structure
4. 12.4 **Welcome** GUI—Displaying Text and an Image

    1. 12.4.1 Opening Scene Builder and Creating the File `Welcome.fxml`
    2. 12.4.2 Adding an Image to the Folder Containing `Welcome.fxml`
    3. 12.4.3 Creating a `VBox` Layout Container
    4. 12.4.4 Configuring the `VBox` Layout Container
    5. 12.4.5 Adding and Configuring a `Label`
    6. 12.4.6 Adding and Configuring an `ImageView`
    7. 12.4.7 Previewing the `Welcome` GUI

5. 12.5 **Tip Calculator** App—Introduction to Event Handling
    1. 12.5.1 Test-Driving the **Tip Calculator** App
    2. 12.5.2 Technologies Overview
    3. 12.5.3 Building the App's GUI
    4. 12.5.4 `TipCalculator` Class
    5. 12.5.5 `TipCalculatorController` Class

6. 12.6 Features Covered in the Other JavaFX Chapters
7. 12.7 Wrap-Up

1. Summary
2. Self-Review Exercises
3. Answers to Self-Review Exercises
4. Exercises
5. Making a Difference