

Lab Sheet 5

[1] WAP using JavaFX to implement JavaFX Layouts: FlowPane, BorderPane, HBox, VBox, GridPane.

Source code:

```
package com.JAVAFX.javafx_demo;

import javafx.application.Application;
import javafx.geometry.Insets;
import javafx.scene.Scene;
import javafx.scene.control.Button;
import javafx.scene.layout.BorderPane;
import javafx.scene.layout.FlowPane;
import javafx.scene.layout.GridPane;
import javafx.scene.layout.HBox;
import javafx.scene.layout.VBox;
import javafx.stage.Stage;

public class App extends Application {

    @Override
    public void start(Stage primaryStage) {
        primaryStage.setTitle("JavaFX Layout Example");

        // FlowPane
        FlowPane flowPane = new FlowPane();
        flowPane.setHgap(10);
        flowPane.setVgap(10);
        flowPane.getChildren().addAll(new Button("Button 1"), new Button("Button 2"),
new Button("Button 3"));

        // BorderPane
        BorderPane borderPane = new BorderPane();
        borderPane.setTop(new Button("Top"));
        borderPane.setLeft(new Button("Left"));
        borderPane.setCenter(new Button("Center"));
        borderPane.setRight(new Button("Right"));
        borderPane.setBottom(new Button("Bottom"));

        // HBox
        HBox hBox = new HBox(10);
        hBox.getChildren().addAll(new Button("Button A"), new Button("Button B"), new
Button("Button C"));

        // VBox
        VBox vBox = new VBox(10);
        vBox.getChildren().addAll(new Button("Button X"), new Button("Button Y"), new
Button("Button Z"));

        // GridPane
        GridPane gridPane = new GridPane();
        gridPane.setHgap(10);
```

```

        gridPane.setVgap(10);
        gridPane.setPadding(new Insets(10));
        gridPane.add(new Button("1,1"), 0, 0);
        gridPane.add(new Button("2,1"), 1, 0);
        gridPane.add(new Button("1,2"), 0, 1);
        gridPane.add(new Button("2,2"), 1, 1);

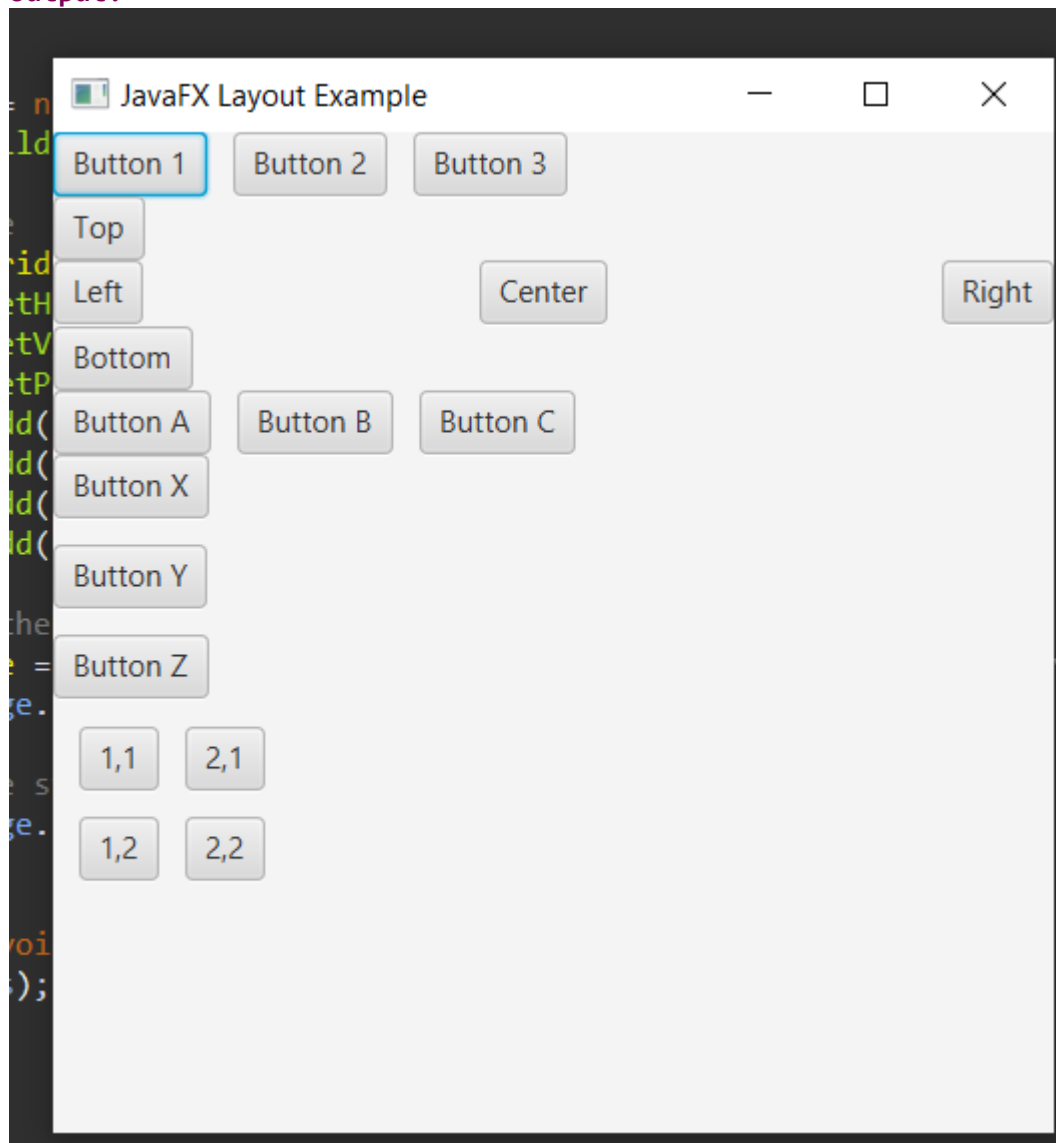
        // Set up the scene
        Scene scene = new Scene(new VBox(flowPane, borderPane, hBox, vBox, gridPane),
400, 400);
        primaryStage.setScene(scene);

        // Show the stage
        primaryStage.show();
    }

    public static void main(String[] args) {
        launch(args);
    }
}

```

Output:



[2] WAP using JavaFX to implement JavaFX UI Controls: Label, TextField, Button, RadioButton, CheckBox, Hyperlink, Menu, Tooltip, FileChooser.

Source code:

```
package com.JAVAFX2.javafx_demo2;

import javafx.application.Application;
import javafx.scene.Scene;
import javafx.scene.control.*;
import javafx.scene.layout.VBox;
import javafx.stage.FileChooser;
import javafx.stage.Stage;

import java.io.File;

public class MainApp extends Application {

    @Override
    public void start(Stage primaryStage) {
        primaryStage.setTitle("JavaFX UI Controls Example");

        // Label
        Label label = new Label("Enter your name:");

        // TextField
        TextField textField = new TextField();

        // Button
        Button button = new Button("Say Hello");
        button.setOnAction(event -> {
            String name = textField.getText();
            if (!name.isEmpty()) {
                Alert alert = new Alert(Alert.AlertType.INFORMATION);
                alert.setTitle("Greeting");
                alert.setHeaderText(null);
                alert.setContentText("Hello, " + name + "!");
                alert.showAndWait();
            }
        });

        // RadioButton
        ToggleGroup radioGroup = new ToggleGroup();
        RadioButton radioButton1 = new RadioButton("Option 1");
        RadioButton radioButton2 = new RadioButton("Option 2");
        radioButton1.setToggleGroup(radioGroup);
        radioButton2.setToggleGroup(radioGroup);

        // CheckBox
        CheckBox checkBox = new CheckBox("Check me");

        // Hyperlink
        Hyperlink hyperlink = new Hyperlink("Open Google");
```

```

        hyperlink.setOnAction(event ->
getHostServices().showDocument("https://www.google.com"));

// Menu
MenuBar menuBar = new MenuBar();
Menu fileMenu = new Menu("File");
MenuItem openMenuItem = new MenuItem("Open");
openMenuItem.setOnAction(event -> openFile());
fileMenu.getItems().add(openMenuItem);
menuBar.getMenus().add(fileMenu);

// Tooltip
Tooltip tooltip = new Tooltip("Click me!");
button.setTooltip(tooltip);

// VBox to hold all controls
VBox vbox = new VBox(10);
vbox.getChildren().addAll(label, textField, button, radioButton1,
radioButton2, checkBox, hyperlink, menuBar);

// Set up the scene
Scene scene = new Scene(vbox, 400, 300);
primaryStage.setScene(scene);

// Show the stage
primaryStage.show();
}

private void openFile() {
    FileChooser fileChooser = new FileChooser();
    fileChooser.setTitle("Open File");
    File selectedFile = fileChooser.showOpenDialog(null);
    if (selectedFile != null) {
        Alert alert = new Alert(Alert.AlertType.INFORMATION);
        alert.setTitle("File Opened");
        alert.setHeaderText(null);
        alert.setContentText("Selected file: " + selectedFile.getAbsolutePath());
        alert.showAndWait();
    }
}

public static void main(String[] args) {
    Launch(args);
}
}

```

Output:

