

COMSATS University Islamabad, Lahore campus

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Assignment no. 2

Code:

package com.example.userformvboxapp;

import javafx.application.Application;

import javafx.geometry.Insets;

import javafx.scene.Scene;

import javafx.scene.control.\*;

import javafx.scene.image.Image;

import javafx.scene.image.ImageView;

import javafx.scene.layout.\*;

import javafx.stage.FileChooser;

import javafx.stage.Stage;

import java.io.File;

public class UserFormVBoxApp extends Application {

@Override

public void start(Stage primaryStage) {

// Step 1: Create Labels and Inputs

Label nameLabel = new Label("Name");

TextField nameField = new TextField();

Label fatherNameLabel = new Label("Father Name");

TextField fatherNameField = new TextField();

Label cnicLabel = new Label("CNIC");

TextField cnicField = new TextField();

Label dateLabel = new Label("Date (Picker)");

DatePicker datePicker = new DatePicker();

Label genderLabel = new Label("Gender");

RadioButton maleButton = new RadioButton("Male");

RadioButton femaleButton = new RadioButton("Female");

ToggleGroup genderGroup = new ToggleGroup();

maleButton.setToggleGroup(genderGroup);

femaleButton.setToggleGroup(genderGroup);

HBox genderBox = new HBox(10, maleButton, femaleButton);

Label cityLabel = new Label("City");

ComboBox<String> cityComboBox = new ComboBox<>();

cityComboBox.getItems().addAll("City 1", "City 2", "City 3");

Label imageLabel = new Label("Image");

FileChooser fileChooser = new FileChooser();

fileChooser.setTitle("Select an Image");

fileChooser.getExtensionFilters().add(new FileChooser.ExtensionFilter("Image Files", "\*.png", "\*.jpg", "\*.jpeg"));

ImageView imageView = new ImageView();

imageView.setPreserveRatio(true);

imageView.setFitWidth(150);

imageView.setFitHeight(150);

Button chooseImageButton = new Button("Choose Image");

chooseImageButton.setOnAction(event -> {

File selectedFile = fileChooser.showOpenDialog(primaryStage);

if (selectedFile != null) {

imageView.setImage(new Image(selectedFile.toURI().toString()));

}

});

VBox imageBox = new VBox(10, chooseImageButton, imageView);

Button saveButton = new Button("Save");

// Reset Button

Button resetButton = new Button("Reset");

resetButton.setOnAction(event -> {

nameField.clear();

fatherNameField.clear();

cnicField.clear();

datePicker.setValue(null);

genderGroup.selectToggle(null);

cityComboBox.setValue(null);

imageView.setImage(null);

});

// Step 2: Use HBox for Label and Input Pairs

HBox nameRow = new HBox(10, nameLabel, nameField);

HBox fatherNameRow = new HBox(10, fatherNameLabel, fatherNameField);

HBox cnicRow = new HBox(10, cnicLabel, cnicField);

HBox dateRow = new HBox(10, dateLabel, datePicker);

HBox genderRow = new HBox(10, genderLabel, genderBox);

HBox cityRow = new HBox(10, cityLabel, cityComboBox);

HBox imageRow = new HBox(10, imageLabel, imageBox);

// Step 3: Arrange Rows in a VBox

VBox root = new VBox(15, nameRow, fatherNameRow, cnicRow, dateRow, genderRow, cityRow, imageRow, saveButton, resetButton);

root.setPadding(new Insets(10)); // Add padding around the VBox

// Step 4: Create the Scene and Show the Stage

Scene scene = new Scene(root, 600, 500);

primaryStage.setTitle("User Form - VBox Layout");

primaryStage.setScene(scene);

primaryStage.show();

}

public static void main(String[] args) {

launch(args);

}

}

The following Java code offers the implementation of a Java FX application which builds a user form with a lot of input fields embedded in different types of controls: labels, text fields, combo boxes, radio buttons and image selector (with date chooser). Here, the user is given more information such as name, sex, city of residence, date and photo.

Key Features:

The Form Inputs: It will have fields for Name, Father’s Name, CNIC, Date of Birth, Gender (ideally to be displayed via radio buttons) and Home City (preferably a combo box).

Image Selection: A FileChooser to select an image file and the loaded selected image on the ImageView.

Reset: A clear reset button removes all the inputs and returns the form to its original position.

Layout: The matrix form, which is made up of HBox to place the labels and inputs next to each other, and all the other rows together with buttons which is arranged by VBox.

Scene and Stage: The structure of the form is contained in a Scene, which is boxed in a Stage (the window of the application).

The general form and format guarantee that the interface for the input and the display of the data is user friendly.

