**COMSATS UNIVERSITY ISLAMABAD**

**LAHORE CAMPUS**

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**(Assignment no 2)**

**Subject:** Object Oriented Programming

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**Registration no:** SP24-BSE-112

**Major:** BSE

**Section:** A

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**Question:**

Make a data entry from using JavaFX.

**Layout:**

**Code:**

*package com.example.dataform;  
  
import javafx.application.Application;  
import javafx.scene.layout.\*;  
import javafx.scene.paint.Color;  
import javafx.stage.Stage;  
import javafx.scene.Scene;  
import javafx.scene.control.\*;  
import javafx.stage.FileChooser;  
import javafx.scene.image.ImageView;  
import javafx.scene.image.Image;  
import javafx.geometry.Insets;  
import javafx.scene.text.Font;  
import javafx.scene.text.FontWeight;  
import javafx.scene.text.Text;  
import javafx.collections.FXCollections;  
import javafx.collections.ObservableList;  
import javafx.scene.effect.DropShadow;  
import javafx.scene.paint.LinearGradient;  
import javafx.scene.paint.Stop;  
import javafx.scene.paint.CycleMethod;  
import javafx.scene.shape.Circle;  
import javafx.scene.layout.StackPane;  
import javafx.scene.layout.VBox;  
  
import java.io.File;*

public class ApplicationForm extends Application {  
  
 private ObservableList<String[]> submittedData = FXCollections.*observableArrayList*();  
  
 public static void main(String[] args) {  
 *launch*(args);  
 }

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@Override  
 public void start(Stage primaryStage) {  
 primaryStage.setTitle("Elegant Application Form");  
  
 // Instagram-like gradient  
 LinearGradient backgroundGradient = new LinearGradient(  
 0, 0, 1, 1, true, CycleMethod.*NO\_CYCLE*,  
 new Stop(0, Color.*web*("#FF7E5F")),  
 new Stop(0.5, Color.*web*("#FD3A84")),  
 new Stop(1, Color.*web*("#C13584"))  
 );  
  
 BorderPane root = new BorderPane();  
 root.setBackground(new Background(new BackgroundFill(backgroundGradient, null, Insets.*EMPTY*)));  
  
 // Banner  
 Text bannerText = new Text("Application Form");  
 bannerText.setFont(Font.*font*("Arial", FontWeight.*BOLD*, 24));  
 bannerText.setFill(Color.*WHITE*);  
 bannerText.setEffect(new DropShadow(3, Color.*BLACK*));  
 StackPane banner = new StackPane(bannerText);  
 banner.setPadding(new Insets(20));  
 banner.setStyle("-fx-background-color: rgba(0, 0, 0, 0.3); -fx-border-radius: 15px;");  
 root.setTop(banner);  
  
 // Profile Picture Section  
 VBox imageSection = new VBox(10);  
 imageSection.setPadding(new Insets(15));  
 imageSection.setStyle("-fx-alignment: center;");  
  
 // Circular Image View  
 ImageView profileImageView = new ImageView();  
 profileImageView.setFitWidth(100);  
 profileImageView.setFitHeight(100);  
 profileImageView.setPreserveRatio(true);  
  
 // Create a circular mask for the image  
 Circle clip = new Circle(50, 50, 50); // Create a full circle clip  
// profileImageView.setClip(clip);  
  
 // Removed the border style here  
 StackPane circularContainer = new StackPane(profileImageView);  
 circularContainer.setPrefSize(110, 110); // Adjust for the size of the image and clip

// Button to upload the image  
Button uploadImageButton = new Button("Upload Image");  
styleButton(uploadImageButton);  
FileChooser fileChooser = new FileChooser();  
uploadImageButton.setOnAction(e -> {  
 File selectedFile = fileChooser.showOpenDialog(primaryStage);  
 if (selectedFile != null) {  
 Image image = new Image(selectedFile.toURI().toString());  
 profileImageView.setImage(image);  
 }  
});  
  
imageSection.getChildren().addAll(circularContainer, uploadImageButton);  
  
// Form layout  
GridPane formGrid = new GridPane();  
formGrid.setPadding(new Insets(20));  
formGrid.setHgap(10);  
formGrid.setVgap(15);  
formGrid.setStyle("-fx-background-color: rgba(255, 255, 255, 0.9); -fx-border-radius: 15px; -fx-padding: 15px;");  
  
Label nameLabel = new Label("Name:");  
styleLabel(nameLabel);  
TextField nameField = new TextField();  
nameField.setPromptText("Enter your name");  
styleInput(nameField);  
  
Label fatherNameLabel = new Label("Father's Name:");  
styleLabel(fatherNameLabel);  
TextField fatherNameField = new TextField();  
fatherNameField.setPromptText("Enter father's name");  
styleInput(fatherNameField);  
  
Label emailLabel = new Label("Email:");  
styleLabel(emailLabel);  
TextField emailField = new TextField();  
emailField.setPromptText("Enter your email");  
styleInput(emailField);  
  
Label dobLabel = new Label("Date of Birth:");  
styleLabel(dobLabel);  
DatePicker dobPicker = new DatePicker();  
dobPicker.setPromptText("Select your date of birth");  
styleInput(dobPicker);  
  
Label cityLabel = new Label("City:");  
styleLabel(cityLabel);  
TextField cityField = new TextField();  
cityField.setPromptText("Enter your city");  
styleInput(cityField);  
  
Label addressLabel = new Label("Address:");  
styleLabel(addressLabel);  
TextArea addressArea = new TextArea();  
addressArea.setPromptText("Enter your address");  
addressArea.setPrefRowCount(2);  
styleInput(addressArea);

*Label cityLabel = new Label("City:");  
styleLabel(cityLabel);  
TextField cityField = new TextField();  
cityField.setPromptText("Enter your city");  
styleInput(cityField);  
  
Label addressLabel = new Label("Address:");  
styleLabel(addressLabel);  
TextArea addressArea = new TextArea();  
addressArea.setPromptText("Enter your address");  
addressArea.setPrefRowCount(2);  
styleInput(addressArea);  
  
Label genderLabel = new Label("Gender:");  
styleLabel(genderLabel);  
ToggleGroup genderGroup = new ToggleGroup();  
RadioButton maleButton = new RadioButton("Male");  
RadioButton femaleButton = new RadioButton("Female");  
styleRadioButton(maleButton);  
styleRadioButton(femaleButton);  
HBox genderBox = new HBox(10, maleButton, femaleButton);  
  
formGrid.addRow(0, nameLabel, nameField);  
formGrid.addRow(1, fatherNameLabel, fatherNameField);  
formGrid.addRow(2, emailLabel, emailField);  
formGrid.addRow(3, dobLabel, dobPicker);  
formGrid.addRow(4, cityLabel, cityField);  
formGrid.addRow(5, addressLabel, addressArea);  
formGrid.addRow(6, genderLabel, genderBox);*

// Submit button  
Button submitButton = new Button("Submit");  
styleButton(submitButton);  
submitButton.setMaxWidth(Double.*MAX\_VALUE*); // Button stretches horizontally  
submitButton.setOnAction(e -> {  
 String name = nameField.getText();  
 String fatherName = fatherNameField.getText();  
 String email = emailField.getText();  
 String dob = dobPicker.getValue() != null ? dobPicker.getValue().toString() : "";  
 String city = cityField.getText();  
 String address = addressArea.getText();  
 String gender = maleButton.isSelected() ? "Male" : (femaleButton.isSelected() ? "Female" : "Not Selected");  
  
 if (name.isEmpty() || fatherName.isEmpty() || email.isEmpty() || dob.isEmpty() || city.isEmpty() || address.isEmpty() || gender.equals("Not Selected")) {  
 Alert alert = new Alert(Alert.AlertType.*ERROR*, "Please fill all fields!");  
 alert.showAndWait();  
 return;  
 }  
  
 submittedData.add(new String[]{name, fatherName, email, dob, city, address, gender});  
 showDataScreen();  
});

private void showDataScreen() {  
 Stage dataStage = new Stage();  
 VBox dataLayout = new VBox(10);  
 dataLayout.setPadding(new Insets(20));  
 dataLayout.setStyle("-fx-background-color: rgba(255, 255, 255, 0.9); -fx-border-radius: 15px;");  
  
 Label dataLabel = new Label("Submitted Data:");  
 dataLabel.setStyle("-fx-font-size: 16px; -fx-font-weight: bold; -fx-text-fill: #C13584;");  
 dataLayout.getChildren().add(dataLabel);  
  
 for (String[] entry : submittedData) {  
 String entryString = String.*format*(  
 "Name: %s\nFather's Name: %s\nEmail: %s\nDate of Birth: %s\nCity: %s\nAddress: %s\nGender: %s\n",  
 entry[0], entry[1], entry[2], entry[3], entry[4], entry[5], entry[6]  
 );  
 Label entryLabel = new Label(entryString);  
 entryLabel.setStyle("-fx-background-color: #C13584; -fx-text-fill: white; -fx-padding: 10px; -fx-border-radius: 10px; -fx-background-radius: 10px;");  
 dataLayout.getChildren().add(entryLabel);  
 }  
  
 Scene dataScene = new Scene(dataLayout, 400, 500);  
 dataStage.setScene(dataScene);  
 dataStage.show();  
 }  
  
 private void styleLabel(Label label) {  
 label.setStyle("-fx-text-fill: #333; -fx-font-weight: bold; -fx-font-size: 14px;");  
 }  
  
 private void styleInput(Control control) {  
 control.setStyle("-fx-background-color: white; -fx-text-fill: #333; -fx-border-color: #C13584; -fx-border-radius: 10px;");  
 }  
  
 private void styleButton(Button button) {  
 button.setStyle("-fx-background-color: #FD3A84; -fx-text-fill: white; -fx-font-weight: bold; -fx-border-radius: 10px; -fx-padding: 10px;");  
 }  
  
 private void styleRadioButton(RadioButton radioButton) {  
 radioButton.setStyle("-fx-text-fill: #333; -fx-font-weight: bold;");  
 }  
}

**Code File:**

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