**COMSATS UNIVERSITY ISLAMABAD**

**LAHORE CAMPUS**

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**(Assignment no 2)**

**Subject:** Object Oriented Programming

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**Registration no:** SP24-BSE-049

**Major:** BSE

**Section:** A

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**Question:**

Make a data entry from using JavaFX.

**Layout:**

**Code:**

*package* com.example.data\_entry\_form;  
  
*import* javafx.application.Application;  
*import* javafx.geometry.Insets;  
*import* javafx.geometry.Pos;  
*import* javafx.scene.Scene;  
*import* javafx.scene.control.\*;  
*import* javafx.scene.image.Image;  
*import* javafx.scene.image.ImageView;  
*import* javafx.scene.layout.\*;  
*import* javafx.scene.shape.Circle;  
*import* javafx.scene.paint.Color;  
*import* javafx.stage.FileChooser;  
*import* javafx.scene.shape.StrokeType;  
*import* javafx.stage.Stage;  
*import* java.io.File;  
*import* java.time.LocalDate;  
*import* java.util.ArrayList;  
  
*public class* DataEntryForm *extends* Application {  
 ArrayList<String> dataEntryForms = *new* ArrayList<>();  
  
 @Override  
 *public void* start(Stage primaryStage) {  
 BorderPane mainContainer = *new* BorderPane();  
 mainContainer.setPadding(*new* Insets(10));  
 mainContainer.setStyle("-fx-background-image: url('images.png');" +  
 "-fx-background-size: cover;" +  
 "-fx-background-position: center;" +  
 "-fx-background-repeat: no-repeat;");  
  
 *// Header Section* Label headerLabel = *new* Label("DATA Entry Form");  
 headerLabel.setStyle("-fx-font-size: 22px;-fx-background-radius: 10px; -fx-font-weight: bold; -fx-border-color: black;-fx-border-width: 1;-fx-background-color: #78B3CE; " +  
 "-fx-padding: 10; -fx-text-fill: white; -fx-alignment: center; -fx-border-radius: 10px;");

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BorderPane.*setAlignment*(headerLabel, Pos.***CENTER***);  
 mainContainer.setTop(headerLabel);  
  
 *// Form Section* GridPane formGrid = *new* GridPane();  
 formGrid.setHgap(10);  
 formGrid.setVgap(15);  
 formGrid.setPadding(*new* Insets(20,20,20,20));  
 formGrid.setMaxWidth(500);  
 formGrid.setAlignment(Pos.***TOP\_CENTER***);  
 formGrid.setStyle("-fx-background-color: C9E6F0; -fx-border-color: #000000;-fx-background-radius: 10px; -fx-border-radius: 10px;");  
  
 *// Image Section* Label imageLabel = *new* Label("Image:");  
 Button imageButton = *new* Button("Choose Image");  
  
*// ImageView with circular clipping* ImageView imageView = *new* ImageView();  
 imageView.setFitWidth(150);  
 imageView.setFitHeight(150);  
 Circle clip = *new* Circle(75, 75, 75);  
 imageView.setClip(clip);  
  
 Circle border = *new* Circle(75, 75, 75);  
 border.setStroke(Color.***LIGHTBLUE***);  
 border.setStrokeWidth(4);  
 border.setFill(Color.***ALICEBLUE***);  
 border.setStrokeType(StrokeType.***OUTSIDE***);  
 StackPane imageContainer = *new* StackPane();  
 imageContainer.getChildren().addAll(border, imageView);  
 imageContainer.setAlignment(Pos.***CENTER***);  
 FileChooser imageChooser = *new* FileChooser();  
 imageButton.setOnAction(e -> {  
 File file = imageChooser.showOpenDialog(primaryStage);  
 *if* (file != *null*) {  
 Image image = *new* Image(file.toURI().toString());  
 imageView.setImage(image);  
 }  
 });

VBox imageBox = *new* VBox(10, imageLabel, imageButton);  
imageBox.setAlignment(Pos.***CENTER\_LEFT***);  
HBox mainLayout = *new* HBox(20, imageBox, imageContainer);  
mainLayout.setAlignment(Pos.***CENTER\_LEFT***);  
mainLayout.setStyle("-fx-padding: 10px; ");  
VBox centeredBox = *new* VBox(mainLayout);  
centeredBox.setAlignment(Pos.***CENTER***);  
formGrid.add(centeredBox, 1, 0);  
  
  
*// Name Field*Label nameLabel = *new* Label("Name:");  
TextField nameField = *new* TextField();  
formGrid.add(nameLabel, 0, 1);  
formGrid.add(nameField, 1, 1);  
  
*// Father Name Field*Label fatherNameLabel = *new* Label("Father Name:");  
TextField fatherNameField = *new* TextField();  
formGrid.add(fatherNameLabel, 0, 2);  
formGrid.add(fatherNameField, 1, 2);  
  
*// Gender Selection*Label genderLabel = *new* Label("Gender:");  
RadioButton maleRadioButton = *new* RadioButton("Male");  
RadioButton femaleRadioButton = *new* RadioButton("Female");  
ToggleGroup genderGroup = *new* ToggleGroup();  
maleRadioButton.setToggleGroup(genderGroup);  
femaleRadioButton.setToggleGroup(genderGroup);  
HBox genderBox = *new* HBox(10, maleRadioButton, femaleRadioButton);  
formGrid.add(genderLabel, 0, 3);  
formGrid.add(genderBox, 1, 3);  
  
*// Date of Birth*Label dobLabel = *new* Label("Date of Birth:");  
DatePicker datePicker = *new* DatePicker();  
formGrid.add(dobLabel, 0, 4);  
formGrid.add(datePicker, 1, 4);

*// City Dropdown*Label cityLabel = *new* Label("City:");  
ComboBox<String> cityComboBox = *new* ComboBox<>();  
cityComboBox.getItems().addAll("Lahore", "Islamabad", "Gujranwala", "Karachi", "Quetta");  
formGrid.add(cityLabel, 0, 5);  
formGrid.add(cityComboBox, 1, 5);  
  
*// Address Field*Label addressLabel = *new* Label("Address:");  
TextField addressField = *new* TextField();  
formGrid.add(addressLabel, 0, 6);  
formGrid.add(addressField, 1, 6);  
  
*// Email Field*Label emailLabel = *new* Label("Email:");  
TextField emailField = *new* TextField();  
formGrid.add(emailLabel, 0, 7);  
formGrid.add(emailField, 1, 7);  
  
*// Submit Button*Button submitButton = *new* Button("Submit");  
submitButton.setStyle("-fx-background-color: #78B3CE; -fx-text-fill: white;-fx-background-radius: 10px;-fx-border-radius: 10px;-fx-border-color: black;-fx-border-width: 1px; -fx-font-weight: bold;");  
formGrid.add(submitButton, 1, 8);  
  
mainContainer.setCenter(formGrid);  
  
  
VBox displayBox = *new* VBox(10);  
  
Scene displayScene = *new* Scene(displayBox, 400, 400);  
submitButton.setOnAction(e->{  
 String name=nameField.getText();  
 String FatherName=fatherNameField.getText();  
 RadioButton selectedGender = (RadioButton) genderGroup.getSelectedToggle();  
 String gender = selectedGender != *null* ? selectedGender.getText() : "Not selected";  
 LocalDate dob = (datePicker.getValue() != *null*) ? datePicker.getValue() : *null*;  
 String city = (cityComboBox.getValue() != *null*) ? cityComboBox.getValue() : "Not selected";

String Address=addressField.getText();  
 String Email=emailField.getText();  
  
 dataEntryForms.add("\tName: " + name + "\n" +  
 "\tFather's Name: " + FatherName + "\n" + "\tDate of Birth: "+dob+"\n\tGender: " + gender+  
 "\n\tCity: " + city + "\n" +  
 "\tAddress: " + Address + "\n" +  
 "\tEmail: " + Email + "\n"  
 );  
  
 displayBox.getChildren().clear();  
 *for* (String data : dataEntryForms) {  
 Label dataLabel = *new* Label(data);  
 displayBox.getChildren().add(dataLabel);  
 }  
 primaryStage.setScene(displayScene);});  
  
 *// Scene and Stage Setup* Scene scene = *new* Scene(mainContainer, 400, 600);  
 primaryStage.setTitle("Data Entry Form");  
 primaryStage.setScene(scene);  
 primaryStage.show();  
 }  
  
 *public static void* main(String[] args) {  
 *launch*(args);  
 }  
}

**Code File:**

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