A logo of a university

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| **Submitted By** | **Name :** Zaina Hassan  **Roll no :** SP24-BSE-126 |
| **Subject** | **Object Oriented Programming (OOP)** |
| **Assignment** | **Data Entry Form using JAVAFX** |

**Submitted to :**

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| **Moderator** | **Muhammad Shahid Bhatti** |

**Lab Assignment 2**

**Data Entry Form using JAVA FX**

**1. Purpose of the Application**

* A **JavaFX-based Data Entry Form** that allows users to enter and save personal information.
* Includes features like **form fields**, **image upload**, and **exit functionality**.

**2. Key Features of the Application**

1. **Interactive Form Fields**:
   * Text fields for **Name**, **Father's Name**, and **CNIC**.
   * A **DatePicker** for **Date of Birth**.
   * Gender selection using **Radio Buttons**.
   * A **ComboBox** for choosing a **city**.
2. **Image Upload Functionality**:
   * Allows users to upload an image file (**PNG, JPG, JPEG, GIF**).
   * Displays the uploaded image using an **ImageView**.
3. **Action Buttons**:
   * **Save Button**: Reserved for saving user input.
   * **Exit Button**: Closes the application.

**3. Application Structure**

1. **Main Class (ApplicationForm)**:
   * Extends Application and sets up the **JavaFX UI components**.
   * Divided into three sections:
     + **Top Banner**: Displays the title of the form.
     + **Center GridPane**: Hosts the input fields and buttons.
     + **Right VBox**: Handles image upload and display.
2. **Helper Class (Person)**:
   * Represents the user’s data with fields like name, fatherName, cnic, dateOfBirth, gender, and city.
   * Includes:
     + **Constructor**: Initializes a person object with user input.
     + **Getters and Setters**: Manage field values.
     + **toString() Method**: Displays the information in a formatted string.

**4. Technical Highlights**

* **Layouts**:
  + BorderPane for organizing main sections.
  + GridPane for structured input fields.
  + VBox for the image upload section.
* **Styling**:
  + Inline CSS for banner (-fx-background-color, -fx-text-fill).
* **Event Handling**:
  + onAction for button clicks and image selection.

**5. Potential Enhancements**

* **Validation**:
  + Add input validation for fields like CNIC and Name.
* **Save Button Functionality**:
  + Implement logic to save the input as a Person object and display it.

**Output:** A computer screen shot of a computer

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