**JavaFX Application Form Code Explanation**

# Introduction

This document provides an explanation of the JavaFX Application Form code. The application form includes fields for entering personal information such as name, father's name, CNIC, date of birth, gender selection, and city selection. It also provides an option to upload an image. Each section of the code and components used are explained in detail below.

# Component Explanations

## 1. Banner

The banner, 'APPLICATION FORM', is displayed at the top of the form with a large font size and bold style to serve as the header. An HBox layout is used to center-align the banner, and padding is added to create some space around it. The background color of the banner is set to Sky Blue.

## 2. Name Field

This consists of a Label ('Name') and a TextField where users can enter their name. It is added to the GridPane layout with specific row and column positioning.

## 3. Father Name Field

Similar to the Name Field, this section contains a Label ('Father Name') and a TextField for entering the father’s name, positioned using the GridPane.

## 4. CNIC Field

This section includes a Label ('CNIC') and a TextField for entering the user's CNIC number. It is also added to the GridPane.

## 5. Date Picker

The DatePicker component is used to allow users to select a date. It is commonly used for selecting the date of birth or another important date.

## 6. Gender Selection

This section includes two RadioButtons ('Male' and 'Female') for selecting the gender. A ToggleGroup is used to ensure that only one RadioButton can be selected at a time.

## 7. City ComboBox

The ComboBox component is used to display a dropdown list of cities (Lahore, Karachi, Islamabad). This allows users to choose their city from the list.

## 8. Image Upload Section

An ImageView component is used to display the uploaded image. The 'Upload Image' button opens a FileChooser dialog that allows users to select an image file from their computer. The selected image is displayed in the ImageView.

## 9. Save and Cancel Buttons

The 'Save' button is intended to save the form data, while the 'Cancel' button closes the application. Both buttons are aligned within the GridPane layout.

# Layout Explanation

The application uses several layout components to organize its sections:  
  
- HBox: Used for horizontally aligning elements, such as the banner and gender options.  
- VBox: Used for vertically stacking components, such as the image upload section.  
- GridPane: Provides a grid layout to neatly position each form field in rows and columns.

# Event Handling

Event handlers are used for various actions, including opening the FileChooser to select an image and setting the image in the ImageView. Additionally, the 'Cancel' button hides the application window.

# Scene and Stage Setup

The Scene is set with a size of 800x600 and is added to the primary Stage, which is given the title 'Application Form'. The Scene organizes all the layouts and components, and the Stage displays the form.

# OUTPUT

