

## Insight Guide: Patient Record Management App

### **Understanding of the Assignment**

The goal of this assignment is to create a Patient Record Management application using Tkinter for the graphical user interface (GUI) and MySQL for the database. The application allow users to add patient records, fetch all records, update existing records, and fetch records by Aadhar number. The assignment involves integrating GUI components, database operations, and handling user interactions.

### **Implementation Strategy**

#### **GUI Design:**

Utilized Tkinter for creating a user-friendly GUI. Included entry fields for patient information (Name, Age, Gender, Diagnosis, Phone, Aadhar). Integrated buttons for adding records, fetching records, updating records, and fetching by Aadhar. Implemented a Listbox to display patient records.

#### **Database Initialization:**

Used MySQL as the database management system. Created a 'patients' table with attributes such as name, age, gender, diagnosis, phone, and Aadhar. Checked for the existence of the table and created it if not present.

#### **Adding Patient Records:**

Validated user input for mandatory fields and specific length constraints. Checked for the uniqueness of Aadhar numbers before adding a new record. Inserted new patient records into the 'patients' table.

#### **Updating Patient Records:**

Allowed users to select a record from the Listbox for updating. Opened a new window for updating patient details. Validated input and checked for unique Aadhar numbers before updating the record.

### **Fetching Records:**

Fetches all patient records from the 'patients' table and displays them in the Listbox. Used a scrollbar for easy navigation through the Listbox.

### **Fetching by Aadhar:**

Prompted the user to enter an Aadhar number. Fetches patient details based on the entered Aadhar number and displays the information in a messagebox.

### **Error Handling:**

Implemented error handling for database operations to provide meaningful error messages. Ensured that the application remains robust in case of unexpected issues.