

1.INTRODUCTION

The project involves the creation of a database system host application that interfaces with a backend SQL database implementing a Contact List application. The application allows users to view, create, modify and delete data entries.

The frontend of the application is designed using PHP,HTML and CSS and backend using MySQL(PHPMyAdmin MySQL admin tool).

2.SOFTWARE REQUIREMENTS

- A. Xamp version 7.4.3
 - Apache working module on port 80,443
 - MySQL working module on port 3306

3. SYSTEM ARCHITECTURE

3.1. Frontend System Architecture

The frontend of the application system provides a GUI which allows the user to perform the below functionalities:

- A. Insert Data

The user can insert attributes like:

 - Name: First Name, Middle Name, Last Name.
 - Important Dates: Birthday, Anniversary (Format of input must be YYYY-MM-DD, if incorrect format entry is provided then it will be converted to 0000-00-00)
 - Phone Numbers: Home phone number, personal cell phone number, work phone number
 - Address: Home street address, city, state and postal code as well as Work street address, city, state and postal code
- B. Read Data
 - Displays all entries for attributes Name, Dates, Phone, Address in a tabular format against respective user entries
- C. Update/Edit Data
 - User will need to select the data he/she wants to update.
 - Selection can be done from read view or search view
- D. Delete Single Data entry
 - User will need to select the data he/she wants to delete
 - Selection can be done from read view or search view
- E. Delete All Data From Database

- When database has more than 1 entry stored it allows user to delete all the data.

F. Search Data Entry

- User can search for data using search bar and search button to type the search element and search.
- Matched search list will be displayed in tabular format

The ID field is autoincremented as per next integer value key

3.2. Backend System Architecture

The backend database system allows storage of data in a combination of four different tables following the below schema:

- A. Table CONTACT – contact_id(Primary Key), first_name, middle_name, last_name.
- B. Table ADDRESS – address_id(Primary Key), contact_id(Foreign Key), home_address(to specify street number and name), home_city, home_state, home_zip(to specify postal code of home address), work_address(to specify street number and name), work_city, work_state, work_zip(to specify postal code of work address).
- C. Table PHONE – phone_id(Primary Key), contact_id(Foreign Key), home_phone(to specify home phone number), cell_phone(to specify personal phone number), work_phone(to specify work phone number) .
- D. Table DATES – date_id(Primary Key), contact_id(Foreign Key), birth_date(to specify birthday) , anni_date(to specify anniversary date).

Every record has a primary key that is auto-generated with the SQL AUTOINCREMENT option.

4.1 DESIGN VIEWS AND ASSUMPTIONS

A. Insert View:

- User is not allowed to provide contact ID, which is populated by database itself on a new entry
- Every insertion must have a first name attribute to create an entry in the database.

Assumption: User has a first name.

B. Read View:

- User is allowed to read all data present in the database.
- The read view also provides edit option button in the last column for user to select data it wants to edit/update.

Assumption: User might choose to select and entry to edit while viewing all data entries.

C. Update View:

- The edit button enables when user reads or searches.
- User can populate the data into the form by selecting the edit button and then edit or update the same record by clicking the edit button.

Assumption: User wants to populate the data by using the edit button.

D. Delete View:

- The edit button enables when user reads or searches.
- User can populate the data into the form by selecting the edit button and then delete the same record by clicking the delete button.
- User can delete all records only when there are more than 1 records in the system.

Assumption: Delete all button should be activated only when there is more than 1 data entry in the database

5. DOCUMENT VERSION

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