System Architecture, Design Decisions & Assumptions

This project is built using SQLite3 database. The project has used Django Framework for backend data processing. HTML(Bootstrap V5) is used for frontend development.

The tables Used are:

1. Contact
2. Address
3. Phone
4. Date

The Schema of these tables are described below:

- First of all, we will create 4 different schemas which are called models in the Django framework. These are Contact, Address, Phone, and Date. These will store all the different kinds of information we need. As the name suggests, the Contact model will save the first name, middle name, and last name of a contact. All of them will be character fields with fixed lengths. It also has one more addition field which will be a self increment auto-generated integer field "contact_id". The "contact_id" will be the primary key for this schema.
- The next one is the Address schema. It will have 2 keys. The first one is the primary key for the table which is named "address_id" and the second one is a foreign key from the previous table, named "contact_id". This foreign key will restrict the database from adding any entries in this table without having it mapped to an entry from the Contact table. Also, when an entry in the Contact table will be deleted, the foreign key will delete the entries in the Address table. Apart from these, the Address table will have address_type, street, city, and state fields. All of them will be text fields with fixed lengths. The Address table will also have a field for entering zip code which will be a number field with a fixed length.
- Moving on to the next, we have Phone Schema. This Schema will also have 2 keys. One is the primary key for this table, named "Phone_id". This field is also an auto-generated integer field. This table also has the "contact_id" as a foreign key. Other fields are "area_code" and "number". These are integer fields that will store the information of contacts' phone numbers. Phone table will also store which type of phone number is that, like home, work, cell-phone, fax or other.
- The next table is the Date table. This table will store the information regarding any saved date of a Contact. This table has "Date_id" as a primary key. The table will story the type of date and a calender-date. This table will also contain a foreign key from the Contact table (contact_id).