

Design Document

CONTACT LIST

Introduction

- **Purpose**

The Purpose of the document is to describe the implementation of Contact list application. The Contact list application is designed to search a contact in the contact list, add a new contact to the contact list, modify and delete a contact in the list.

- **Approach**

The Database Design for the application is composed of definitions for database objects derived by mapping entities to tables, attributes to columns, unique identifiers to unique keys and relationships to foreign keys.

- **Overview**

This document describes the implementation of Contact list application. The project consists of a two major functions. First to import contacts data from CSV file to database and the second to perform the Create, Read, Update and Delete operations. This document will not specify any actual functions or testing the application.

Technologies Used

- Python3 with Tkinter enabled
- SQL

Design Considerations

- **Assumptions**

- Zip is an integer with a length of 5.
- Phone Area Code is an integer with a length of 3 (should not begin with 0).
- Phone Number is an integer with a length of 7.
- Date must be in the format of MM/DD/YYYY. MM is an integer and it is restricted to 12, DD is an integer and is restricted to 31, YYYY has no restrictions.

- **Goals**

The design goal was to develop a contact book where user can create, update, search and delete a contact.

Architecture

- The entire application was developed in python importing tkinter module. Tables were created for the database using SQLITE. Data from CSV file is imported into the tables created using '.db' file.
- Four different functions are defined for Search, Add, Update, Delete a contact and are named as SearchDatabase, Add_cnt, Update_cnt, DeleteData.
- OnSelected function is defined for displaying update window when a contact is selected from a tree, so that we can update a contact.
- UpdateAddrData, UpdatePhnData, UpdateDateData functions are used to update multiple Addresses, Phone numbers, Dates in the update window.
- AddAddr, AddPhone, AddDate functions are defined to place frames in the update window.
- AddMoreFields function is defined to add frames and labels in Update window.
- OnAddrSelected, OnPhnSelected, OnDateSelected functions are defined to place frames and labels for multiple addresses, dates and phones window.
- DeleteAddrData, DeletePhnData, DeleteDateData functions are defined to update or delete multiple entries to a single data type.

Table Dependencies

- Contact_id → Fname, Mname, Lname.
- Contact_id → Address_type, Address, City, State, Zip.
- Contact_id → Phone_type, Area_code, Number.
- Contact_id → Date_type, Date.

User Interface Design

- **Overview of User Interface**
 - To create contact user can press Add New button and enter the contact details in the Adding new contact window. Inorder to add multiple addresses or dates or numbers to a single contact, user must press Save and add more information that saves the information to the database and automatically opens update window to add multiple data types to a single contact.
 - To update a contact user should double click the contact and update the data in the update window.
 - To update or delete a phone number, date, address double click on the respective tree in the update window.
 - To delete a contact user must select a contact and then press delete button.