

Software Design Document

Introduction

This design document is to describe the system architecture of Contact List application. This application is prepared for personal use where user can store list of contacts. This system allows user to create, modify, delete or view the contact information which includes their full name, multiple address like home and work, multiple phone numbers and multiple dates (birthdate, anniversary etc.)

System Overview

System comes with 1000 preloaded contact list. Viewing the records, adding new, modifying existing are the key functionalities of the application.

System Architecture

Name, Address, Phone, and Date has dedicated Models and controllers. Some views are shared among one or more than one entities. For example, when user searches for a keyword, the keyword is queries in Name, Address, Phone and Date and combined detail is displayed.

Decomposition description

System is organized in many subsystems. The main subsystem is the Name which stores the First Name, Middle Name and Last Name of the user. The other three, that is – Address, Phone and Date are linked to the Name by the contact id which is unique to each record in the Name table.

Data Design

a. Data description:

System uses MySQL as database. The Name and Address has one to many relationships. Similar relationship exists between the Name and Phone and Name and Date. However, there is no direct relationship between Address, Date and Phone.

b. Data dictionary

CONTACT [ContactID(int), Fname(varchar), Mname(varchar), Lname(varchar)]

ADDRESS [AddressID(int), ContactID(int), Address_type(varchar), Address(varchar), City(varchar), State(varchar), Zip(int)]

DATE [DateID(int), ContactID(int), Date_type(varchar), Date(date)]

PHONE [PhoneID(int), ContactID(int), Phone_type(varchar), Areacode(int), Number(int)]

GUI

All the expected operations can be performed from UI. Details are as per follow:

Contact Search:

User will see the list of records. With this list, there is a search box to fire queries. Entered search query will search for matching part in all the attributes of the all the tables. In another words, the entered query will be searched in name, address, phone number and date. If the user enters multiple space separated keywords, each keyword will be searched separately.

Add Contact:

A new contact information can be added into the system by clicking on the Add contact button. It allows the user to add multiple address, dates and phone numbers. After submitting the form, a new id will be issued to the contact and each of the address(s), phone(s) and date(s) will also be issued a new ID

Delete Contact:

If the user clicks on the delete record button, the system will delete all the contact information including the address(s), date(s) and phone(s) associated with it.

Edit Contact:

If the user clicks on the edit record button, the user will be redirect to a new page (update contact form) which will be prefilled with the existing data. Here user can modify the existing data, add or delete address, date or phone.

Assumptions:

1. All the IDs of particular table is auto incremented.
2. The following fields are compulsory – First name, last name, address_type, city, date, and phone_type cannot be empty.
3. The entry of address, date and phone will be fed into the system only if user provides street address, date and Areacode on the UI. After these entries, the system will validate the entries and then connect to database.