

Design Document - Library Contact Management System

1. Introduction

The purpose of this document is to outline the design for Library Contact Management System. This will include a view of the high level overview and how data will flow through the system and list any special requirements required.

2. System Overview

2.1 High Level Description

The Library Contact Management System provides a user interface to add, update, delete contacts to the database. The project also allows search feature that performs keyword based contact search.

2.2 Technology Stack

Front end - Java (Swing interface)

Back end - MySQL

3. System Design

The application is controlled by admin username and passwords. Upon entering valid credentials, the user can access the application. This is implemented in the class "Login" which is called from the Main method upon execution of the application.

The Menu options for applications is implemented in the "Welcome". The AddMember class allows addition of new contacts to the database as implemented by the class "AddMember".

The other menu option is for search feature. The keyword for search is entered which is passed to the database using the class "SearchData" and displayed to the GUI in "SearchView" class.

After the search results are displayed the user can modify or delete required record by clicking the record. This displays the contact details to a form which allows the user to edit and save the changes to database. The contact can also be deleted from the database. The update and delete options are coded in the class "UpdateMember".

All the classes are created within the package "LibraryContact".

4.Data

The tables are created with appropriate data type and key constraints. Contact_id is the foreign key to the tables Address, Phone and Date.

The DDL and DML scripts required is included along with the code. This needs to be executed to set up the database for the application. The scripts has to be executed in the below order for database setup.

Library_DDL.sql
Contact_DML.sql
Address_DML.sql
Phone_DML.sql
Date_DML.sql
ForeignKeyDDL.sql

5. Additional Requisites

The project is created using Eclipse IDE using inbuilt Java packages Swing and AWT. The database connection requires an external JAR, which is included along with the application code components which needs to be added to the classpath.