Tribhuvan University

Faculty of Humanities and Social Sciences

A PROJECT-I FINAL REPORT

ON

PHONE BOOK SYSTEM

Submitted to:

Department of Computer Application

Jana Bhawana Campus

In partial fulfillment of the requirement for the Bachelors in Computer Application

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ABSTRACT

The name of our project is **"PHONE BOOK SYSTEM"**. It is about storing and managing the information or details of users. It includes name of users, phone numbers and addresses of users. This is the concept which helps the users to get easy access to their contacts. This project is based on the database in which we can store and retrieve all the information as per our need. User can easily store, edit, update, read, search, modify and delete details. Admin can easily view, edit, update, search, delete details stored in database. Admin is the one who can manage or monitor overall system.

In manual method, if we forget information book then it is difficult to get the contact details. By using this application, we can see our contacts anywhere in the world. We will have security to the login page and no one can see our contacts without proper authentication. In this project we can save our contacts and we can search them by name and addresses and we can see all of them at a time.

Keywords : Phone Book System, add, delete, update, contact, address, database

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LIST OF ABBREVIATION

CSS : Cascading Style Sheets

DBMS : Database Management System

DFD : Data Flow Diagram

ER Diagram : Entity Relationship Diagram

HTML : Hypertext Markup Language

PHP : Hypertext Preprocessor

RDMS : Relational Database Management System

SDLC : Software Development Life Cycle

SQL : Structured Query Language

CHAPTER 1: INTRODUCTION

1.1 Background

PHONE BOOK SYSTEM is a web-based application introduced to help users in improvement of recording system of their contact lists. It is a project which provide a simple SQL based solution to store our contacts. Database is a structured format. So, if we store in the database, we can retrieve that particular information by giving a command directly. Whenever the database is needed, then only the database is created through coding. All the data are managed by DBMS. Here we have the feasibility to give input, change the data and to delete it if we are not in need of it anymore. It is one of the well-known application and mostly used in devices like mobiles, smartphones and business organizations. Whether users are at office or at home, users have to access to their contacts. Other terms used for 'PHONE BOOK' are 'TELEPHONE DIRECTORY' or 'PHONEBOOK DIRECTORY'. It can be used as a replacement of our hard phonebook or even use it as an office-wide phone directory.

PHONE BOOK SYSTEM is developed to help users for storing and managing contact details as per the need of users. In this system, user can easily store phone numbers, locations/addresses and email addresses of their contacts. This system is mainly designed to avoid errors which may occur while entering data i.e., entering invalid details. In order to keep updated the system, user can add, update, load, search, modify and delete the existing records according to their need. User has the authority to search any record and details from the existing details. The user interacts with the phonebook system to store phone numbers, look up phone numbers and delete phone numbers. After looking up a number, it is usually possible to edit the name or number or address, or else it makes easy to contact that person. User manages the contacts details likewise admin manages overall system i.e. user details and contact details. Admin has the authority to control the whole system.

This PHONE BOOK SYSTEM is developed to provide the addition, search and deletion result within a short interval of time. Likewise old system, there is no need to keep records manually on register or file. It helps to decrease paper based work which is beneficial for any organization. This will help an organization to keep records of their staffs to maintain contact details in phonebook without any extra or high efforts of human which automatically saves the time. This system is user friendly and it is anticipated that administrators, academics, students and applicants will easily access functions of the system. Just take an example having different branches of Laxmi Bank in different zone, each branch's representative manages contact details of their staffs or employees but there is one admin for all branches which is managed and controlled by admin. This system is a container of contacts which can be easily accessed by an user. Like that it can be used for any organization and offices to keep the contact details of their staffs and members. This system contains contactdetails, userdetails and admindetails which are stored in database that can be easily viewed by user and admin. This system is suitable for small organization. It is user friendly and less time processing system and easily accessing required information.

1.2 Problem Statement

'PHONE BOOK SYSTEM' project is designed to manage contacts and records. There are so many problems occur in using hard phonebook. In such hard phonebook, user cannot store, edit or modify the numbers or addresses if there are any changes occurred. Users cannot replace, rename or delete any information in that file system. This takes lots of time for user to search records. In file system, there is chance of misplace of details which may leads to data loss.

In hard phonebook system user cannot update any information according to their need. While searching any data, it takes lots of time and it may also need more numbers of human resources as compared to digital phonebook. Above discussed problems can be easily solved by digital phonebook system.

1.3 Objectives

The main objectives of this project are listed below :

i. To simplify the task

ii. To reduce the paper-based work

iii. To make data accessing and data processing easy

1.4 Applications

Phone Book System is very useful system which is used by both individual or organization. All business institute or any other organization need to keep records of their staffs or employees. This Phone Book System becomes helpful software for them. It is a digital Telephone Directory so; it makes work easier by reducing paper work. There is no any chance of misplace of data/information and data loss. Anyone can retrieve data whenever and wherever they want. An individual can easily store their contacts of their friends and family. Educational sectors like College, Schools, NEB, PABSON, TU Department etc., Health sectors like Hospitals, Clinics, Medical and Pharmacy, PHC etc., other institutions like Bank, NGOs, INGOs, Restaurants, Book Stores, etc. Are some of the applicable areas for this system.

1.5 Project Features

This Phone Book System is featured with new features. Like old days, user should not do all work manually. It is a digital system and all the works done on computers. The main shortlisted features of this Phone Book System are:

1. Add : Users can easily add the information which they want to store in database for future use. It helps to enter new entry of data. For example: if a new candidate is appointed in office, then it will help to add that candidate's information.

2. Update : User and admin can easily edit or modify the list of details if any changes occur in future. User can edit their profile details. Likewise admin can also edit their own profile details. For example: if we made any mistake while submitting data just like spelling of name or any other mistakes, or one staff leaved and another staff appointed on that place, then it will help to modify the details.

3. Load : Users and admin can easily read or retrieve the stored data or information according to their requirement. Admin can also view user details. For example: if we have to see all the details and information of staffs, then it will help to display whole details.

4. Delete : Users and admin can easily remove the history or any data that are not useful for further days. Admin can delete user details which are unwanted for further use. For example: if an employee changes their phone number or addresses, then it will help to delete previous information related to that employee.

5. Arrange : In this system, contact details which are added by user are arranged in alphabetical order. It arranges the data alphabetically by the name of contact. It helps to access contact faster.

6. Search: User and admin can easily search for the contacts or list just entering what they want to find. For example: if we need an information like phone number, name, address etc from contact details, then it will help to find that information with in a second.

1.6 Overview Of Report

Chapter one shows overall Introduction of our project. It consists the main aim of our project and describes about the title of our project. It includes objectives, features, problems, application scope, feasibility analysis, system requirements, budget analysis, work schedule and background study of our project. Chapter two includes a Literature Review giving a short description about the papers and articles that we have gone through. It talks about the related project done by other in different ways and methods.

Chapter three is consists of System Analysis and Design. It shows all the methods used to develop this project. It includes ER diagram, DFD, Use case diagram and software process model. This shows how the project work diagrammatically. Chapter four is all about work of Implementation And Testing that includes coding and testing of system performance part. Chapter five is about Conclusion And Recommendations which talks about the last conclusion of our system and its future enhancement that can be recommended for future update. Last chapter is reference which describes about the review taken for this project development.

This system is developed to help users for storing and managing contact details as per the need of users. In this system, user can easily store phone numbers, their locations/addresses and email addresses. This system is mainly designed to avoid errors which may occur while entering data I.e., entering invalid details. In order to keep updated the system, user can add, update, load, modify and delete the existing records according to their need. User has the authority to search any record and details from the existing details. The user interacts with the phonebook system to store phone numbers, look up phone numbers and delete phone numbers. After looking up a number, it is usually possible to edit the name or number or address, or else it makes easy to contact that person. There is no need to remember the contacts of users or note down information in paper like traditional phone book system. It is easy to retrieve information whenever and wherever we want.

Firstly user have to register their details. And then user need to login into this phonebook system to use this system. Then system shows that who has logged into this system at top. After that user can use this system. They can add their contact lists by adding from add new page. They must filled all the required information. And then they can see their total number of contact list, search contacts or any records, their profile and their contact information. User can edit, search and delete contacts easily. They can update their profile details and change password. User can logout from this system whenever they want and another user can also easily login to this phonebook.

CHAPTER 2: LITERATURE REVIEW

Literature Review is the most important step in software development process. Before developing the tool, it is necessary to determine the time factor, economy and organization strength. Once these things are satisfied, then next steps are to determine which operating system and language can be used for developing the tool.

This Phone Book System helps to search and manage contacts easily. The names are present in format set by users such as: alphabetical order, according to time, date, recently etc. So that user can also easily find the required person along with their telephone numbers and addresses and search option.

Telephone Directory System is a computerization of the telephone directory. The system provides options to add new subscriber's details, delete a contact if the telephone connection is cancelled and edit any of the details of new subscriber. It also provides the search option. The searching process can be done in two ways. By using the name or by using telephone number. In this system, the contacts are stored in the alphabetical order of names. This makes the searching process faster.[3]

Phone Book Application is a project developing a program which deals with the combination of structures, arrays, file pointers and other functions. This program could do some operations on arrays such as insertion, deletion, sorting, searching update, retrieve, merging, append and exit. By implementing this program, we can execute the inserted contact data, deletion of data, searching, updating, append, exit with numbers by using arrays and file pointers. This program is implemented for only numbers that can enter into an array. To do this analysis manually it takes a lot of time and patience but by implementing this program using high-level language like C it becomes much easier. But before going to make final solution for the problem, the problem must be analyzed.[4]

Phone Book System is a simple console application without graphics which is developed in C platform. Moreover, the user can download zip and edit as per their

need as this project is open-source. The main aim of this project is to provide an application that will be helpful to record any person's details just like in mobile phones. Besides, it helps to add, list, modify, and delete phonebook related records. Basically, this is an easy and fundamental level of tiny projects for learning purposes. Moreover, the user can also modify this scheme according to their requirements. They can also create a project that is a perfect advance level project. Besides, this project would be helpful for the beginner students where they can also submit in college and task it as a reference. Moreover, this application works smoothly without any bug.[5]

Store Management System is a system which allow managing, storing, and distributing the detail in computerized system. In the business, a detail Store Management System is one of biggest assets. We can see everywhere have advance technology system .so we have to remove phone diary and have to use technical record. From this everything's moving along quickly and efficiently.

"Web Based Student Information Management", S.R.Bharamagoudar et al., this paper assist in automating the existing manual system. It can be monitored and controlled remotely. This paper provides accurate information always. All years together gathered information can be saved and can be accessed at any time. The purpose is to design a college website which contains up to date information of the college. That should improve efficiency of college record management. [6]

"Web Based Coaching Institute Management System", Mayuri Kamble et al, "Coaching Institute Management System" software developed for an institute has been designed to achieve maximum efficiency and reduce the time taken to handle the storing activity. It is designed to replace an existing manual record system thereby reducing time taken for calculations and for storing data. The system is strong enough to withstand regressive daily operations under conditions where the database is maintained and cleared over a certain time of span. The implementation of the system in the organization will considerably reduce data entry, time and also provide readily calculated reports. [7]

CHAPTER 3: SYSTEM ANALYSIS AND DESIGN

3.1 System Requirement

It includes the collection and gathering of requirements according to the need of users. In this phase, we have to see the users' demand and interest for the system. It also includes analyzing phase. Here, we have to compute the users' need with seeing the level of knowledge or skills of users for using the system.

3.1.1 Functional Requirement

They are typically expressed as responses to inputs or conditions. The functional requirements of our project are: it must have a graphical user interface, it supports user authentication and it must be built with context menus. It includes registration form, add contacts interface and login interface in this system.

3.1.1.1 Use Case Diagram

It shows that user/admin first login to this system and then manage contacts i.e. add contacts, edit or update records and user registration details. But Manage contacts must incudes login, without login user cannot do operations on this system. And then user can view records and can easily logout whenever they want.

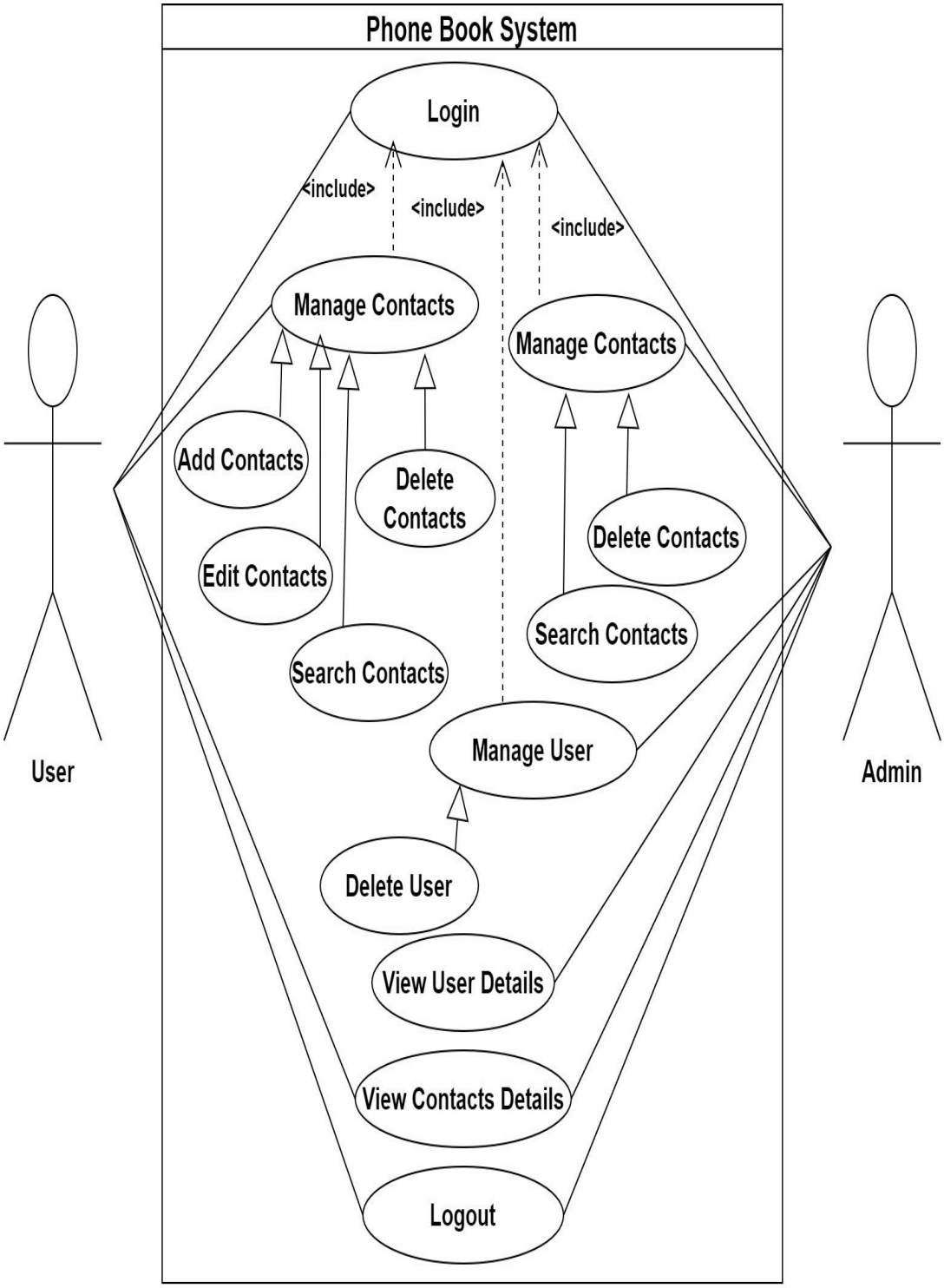


Figure 3.1: Use Case diagram of Phone Book System

3.1.2 Non-Functional Requirement

They cover: performance, usability, scalability, security and portability. It requires quality based performance with fast speed, database backup, security from unauthorized access etc.

- **Usability :**

  System is user friendly and easy to use.

- **Security :**

  There is secure database and database backup. It is safe from unauthorised access.

- **Performance :**

  The performance of this system is fast as it is hosted on localhost and its response time is quick. Database also performs functionally all the requirements that are specified.

3.1.3 Software Requirement

In this phase, we can include the requirement of software for this project. We need:

3.1.3.1 Development Requirement

To develop a good web application, there must be good gathering and analysis of requirements. A good collection of requirements increase the quality of system. The requirements are:

- Server: Xampp
- Toolkit: Visual Studio Code
- Coding Language: PHP, HTML, CSS, JavaScript

3.1.3.2 Deployment Requirement

The requirements which are necessary to develop our projects are :

- Operating System : Windows 10 or above/ Linux/ Mac

3.1.4 Hardware Requirement

In this phase, we can figure out the requirement of hardware for this project. We need laptop or computer having specification i.e., hard disk of 250 MB of free space, RAM of 512 MB, Screen Resolution of 1024x768, Processor Intel P4 or Latest.

3.2 Requirement Analysis

It involves frequent communication with system users to determine specific feature expectations and user expectations. Functional and Non-Functional requirements of the system have been studied to design and develop the system.

3.3 Feasibility Analysis

During system analysis, the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the organization. For feasibility analysis, some understanding of the major requirements for the system is essential.

Three key considerations involved in the feasibility analysis are:

3.3.1 Economic Feasibility

This study is carried out to check the economic impact that the system will have on the organization. The amount of fund that the organization can pour into the research and development of the system is limited. The expenditure is just for computational power. No other expenses are required to perform this project because most of the technologies used for this project are available freely. Thus, the proposed system is economically feasible.

3.3.2 Operational Feasibility

This study is carried out to check the level of acceptance of the system by the system. This includes the process of training needed by user to use the system efficiently. The project is user friendly; anyone can easily access to the data. There is no need of extra effort for users to use this system. This system proposed to make user familiar to this system easily, just entering information to the system. Thus, the proposed system is operationally feasible.

3.3.3 Technical Feasibility

This study is carried out to check the technical feasibility, that is the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands being placed on the client. This developed system must have a modest requirement as only minimal or null changes are required for implementing this system. Thus, the proposed system is technically feasible.

3.4 Budget Analysis

The project is a small project. So the budget required for our project is affordable and limited. The amount of fund that the organization can pour into the research and development of the system is limited. The expenditure is just for computational power. No other expenses are required to perform this project because most of the technologies used for this project are available freely. We have done our project within local server so it is given free in service. Thus, our project's budget is affordable and low in nature.

3.5 Work Schedule

In this stage, we discuss about the time period which we have to give or spent for our project. We figure out for each phase around what time will it take for us to complete our project. Here we show Gantt Chart.

It includes research, familiar to tools, designing, coding, testing and debugging, documentation and report. This shows that at what time we have completed this project, how long we have taken time to involve in those phases. It is all about time calculation to complete our project.

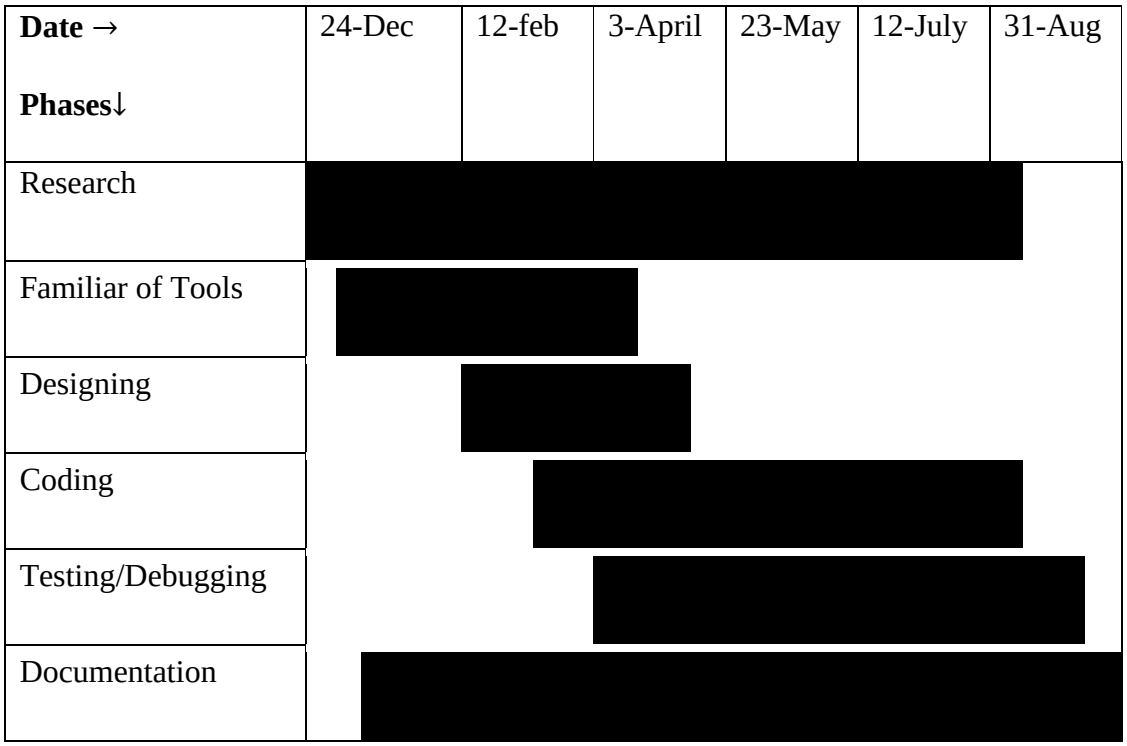


Figure 3.2: Gantt Chart

From the figure 3.2 Gantt Chart we can see the work schedule of our project. As we can see our work schedule and index where we have given two colors black one is for quantity of work which has taken time to complete and another one white color is for nothing just time which are not involved in any phases.

3.6 Structuring System Requirements

3.6.1 Data Modeling

In this phase we discuss about the design and development of data model for storing data in database. Data modeling provides visual representation of data or information related to user. This phase is just for representing conceptual expression between data objects.

3.6.1.1 E-R Diagram (Entity Relationship Diagram)

This is the diagrammatical representation of relationship of entities used in this project. In this stage, each entity link with another entity.

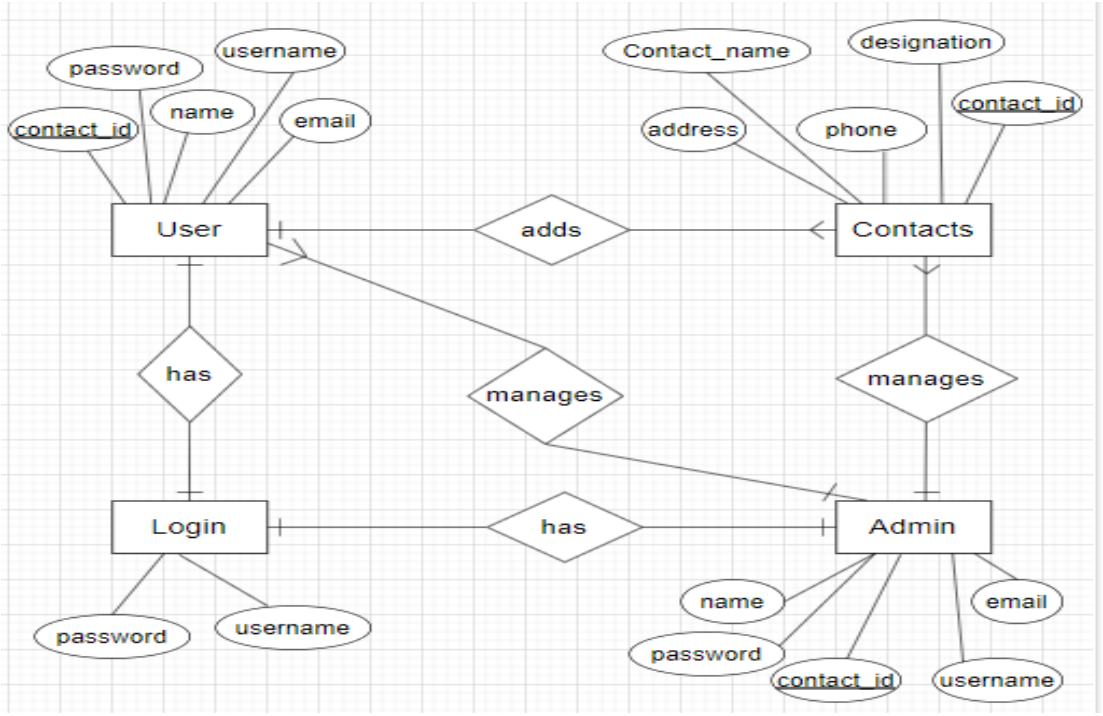


Figure 3.3: E-R diagram of Phone Book System

In this diagram 3.3, there is relationship between admin, user, details and login entity that shows that user can login to system and also add details or information of their contact lists. There is one to one relationship between user and login that means a single

user can login to system once at a time. Likewise there is one to many relationship between user and details that means user can add multiple details or contacts at a time. Likewise admin can login to system and admin can manage both user and details. There is one to one relationship between admin and login that means a single admin can login to system once at a time, there is one to many relationship between user and admin i.e. admin can manages multiple users and there is one to many relationship between admin and details that means admin can manage multiple details or contacts at a time.

3.6.2 Process Modeling

In this phase we discuss about the design and development of process for storing data in this system. Process modeling provides visual representation of data or information related to user. This phase is just for representing flow of data in this system.

3.6.2.1 Data Flow Diagram(DFD)

This diagram shows that how data flow through users to system or admin to system. There are admin and user who give data as inputs i.e. login details and contact details and system gives output as response i.e. errors if any or required data.

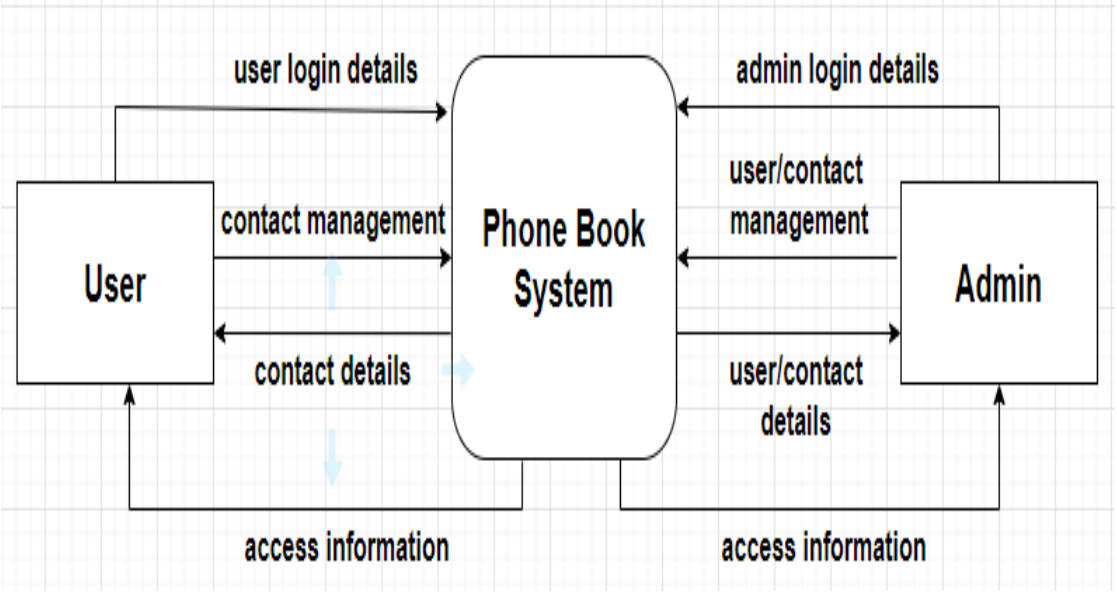


Figure 3.4: Zero level DFD of Phone Book System

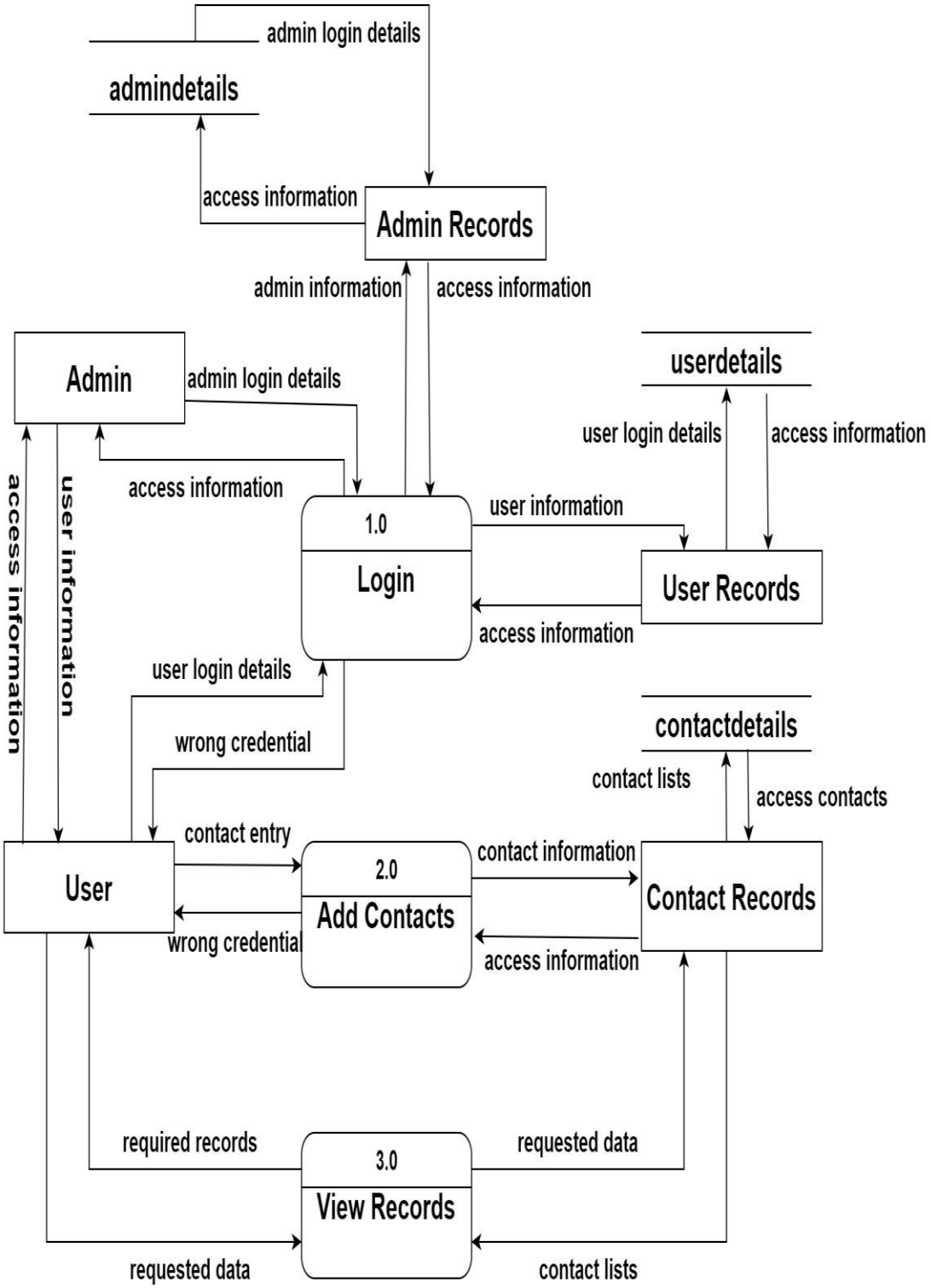


Figure 3.5: Level-1 DFD of Phone Book System

3.7 System Design

It includes modules, architecture, components and their interfaces and data for a system based on the specified requirements.

3.7.1 Database Schema

Database schema of this system contains logical schema such as userdetails and contactdetails which contains primary key. The scheme named userdetails has attributes like name, username, email, password likewise contactdetails has attributes like contact_name, phone, designation and address. contact_id is a primary key and can be autoincremented.

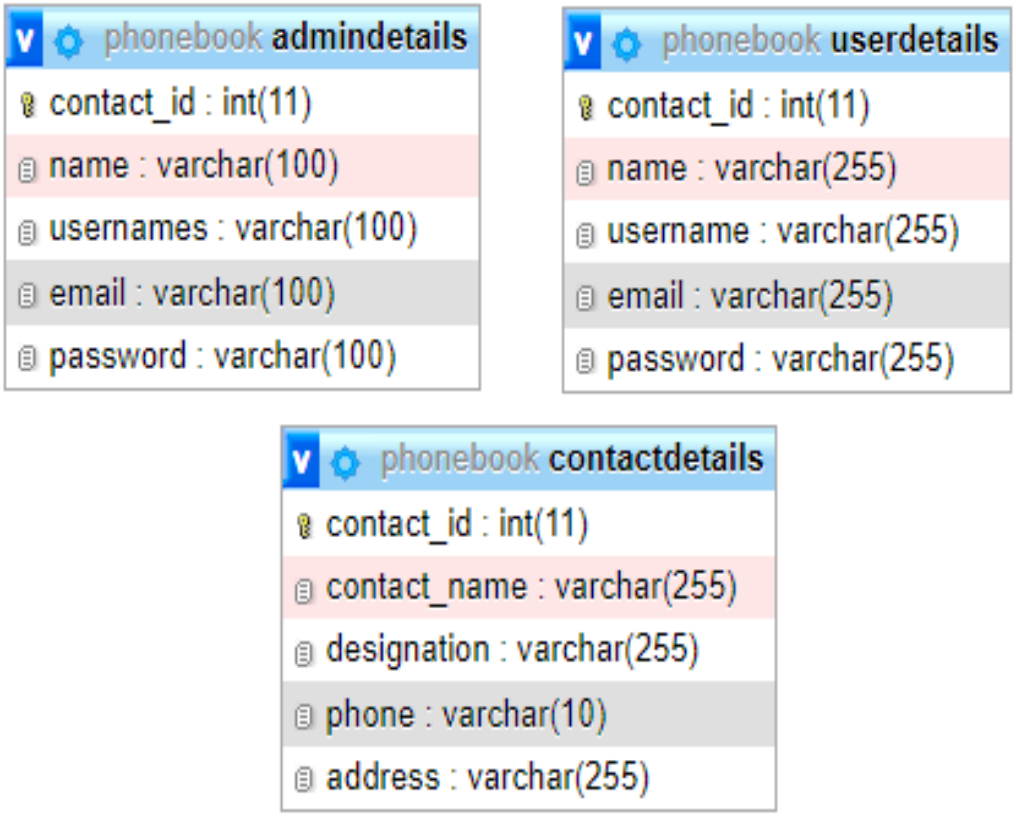


Figure 3.6: Database Schema used in Phone Book System

Tables Used

- contactdetails
- userdetails
- admindetails

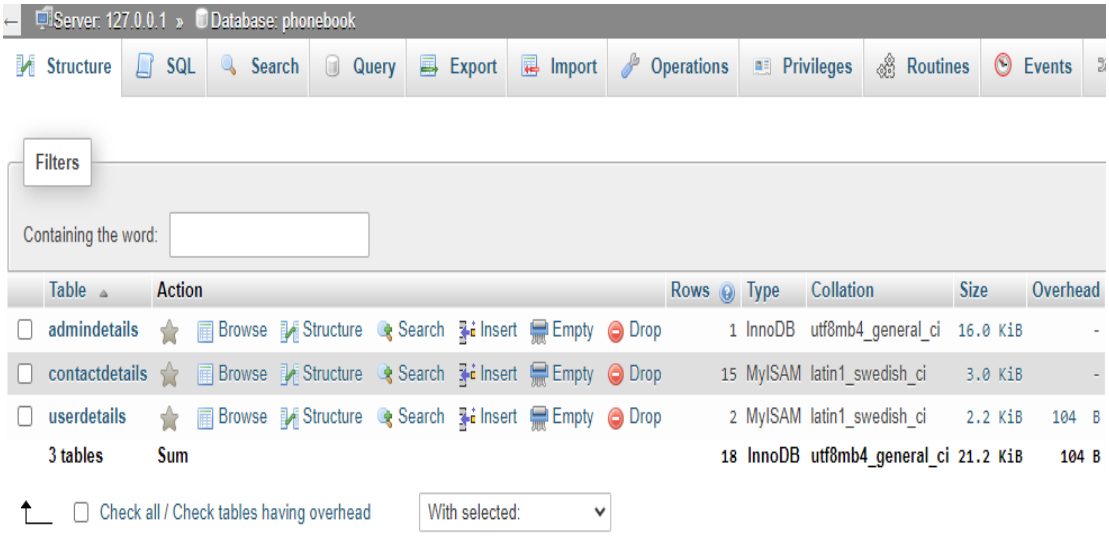


Figure 3.7: List of tables used in Phone Book System

Table : contactdetails

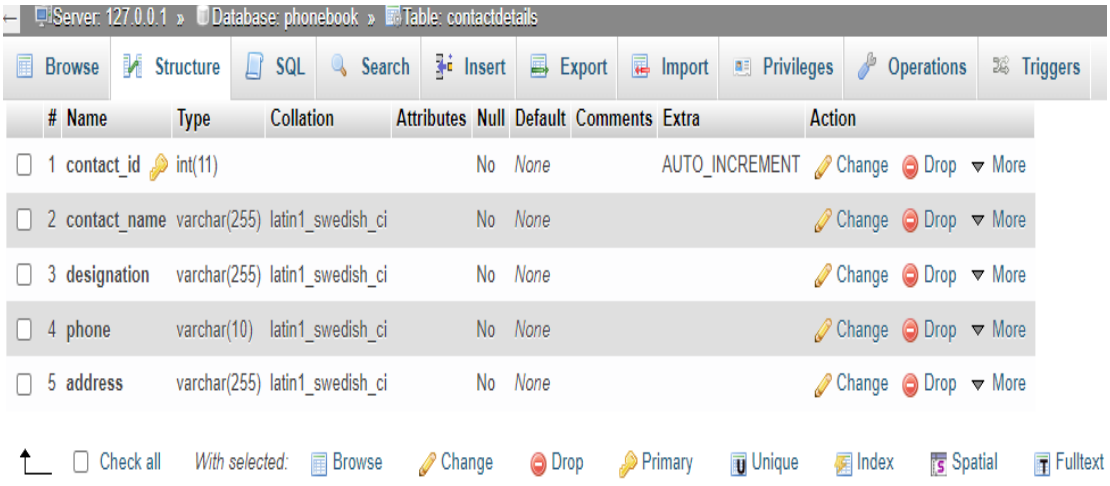


Figure 3.8: Contactdetails table in Phone Book System

Table : userdetails

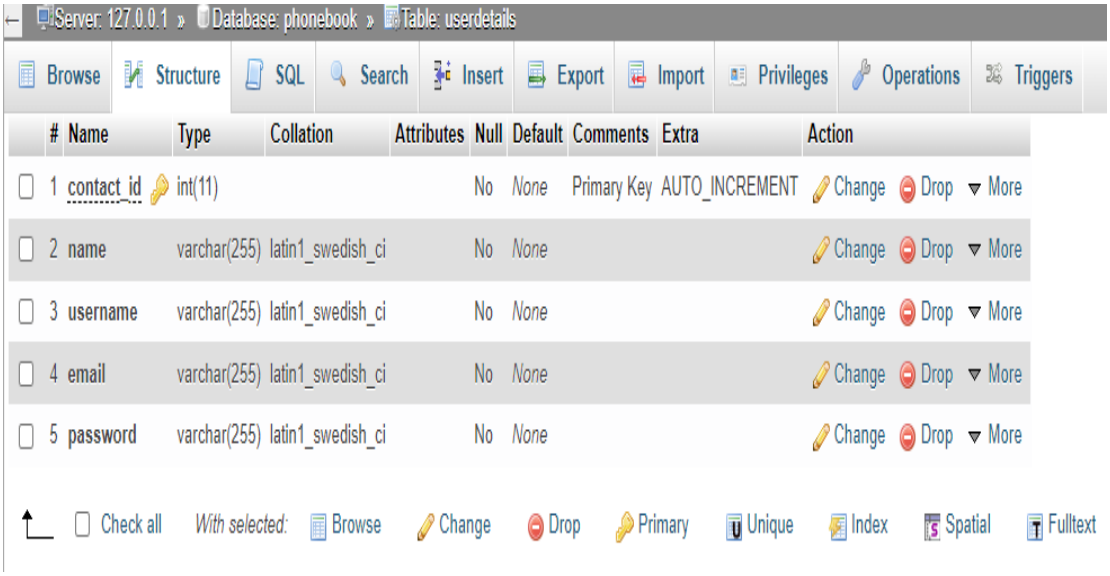


Figure 3.9: Userdetails table in Phone Book System

Table : admindetails

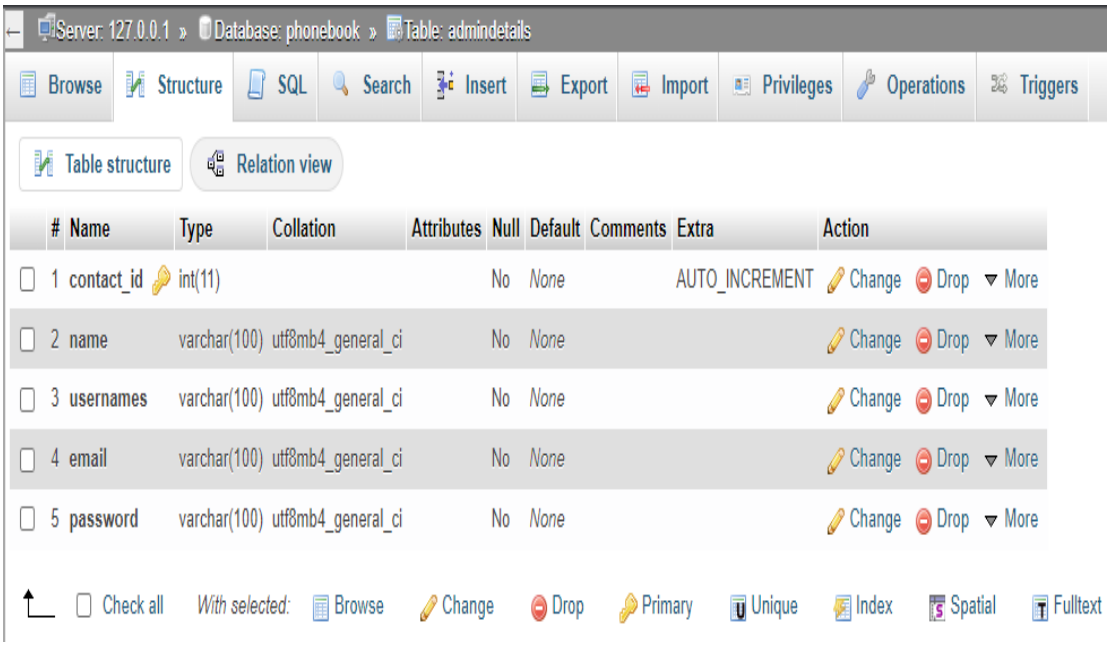


Figure 3.10: Admindetails table in Phone Book System

3.7.2 Architecture Design

It includes simple, labeled blocks that represent single or multiple items, entities or concepts, connected by lines to show relationships between them.

It shows that how user logged in to system, add, manage records and how database stores data and how data are accessed in this system.

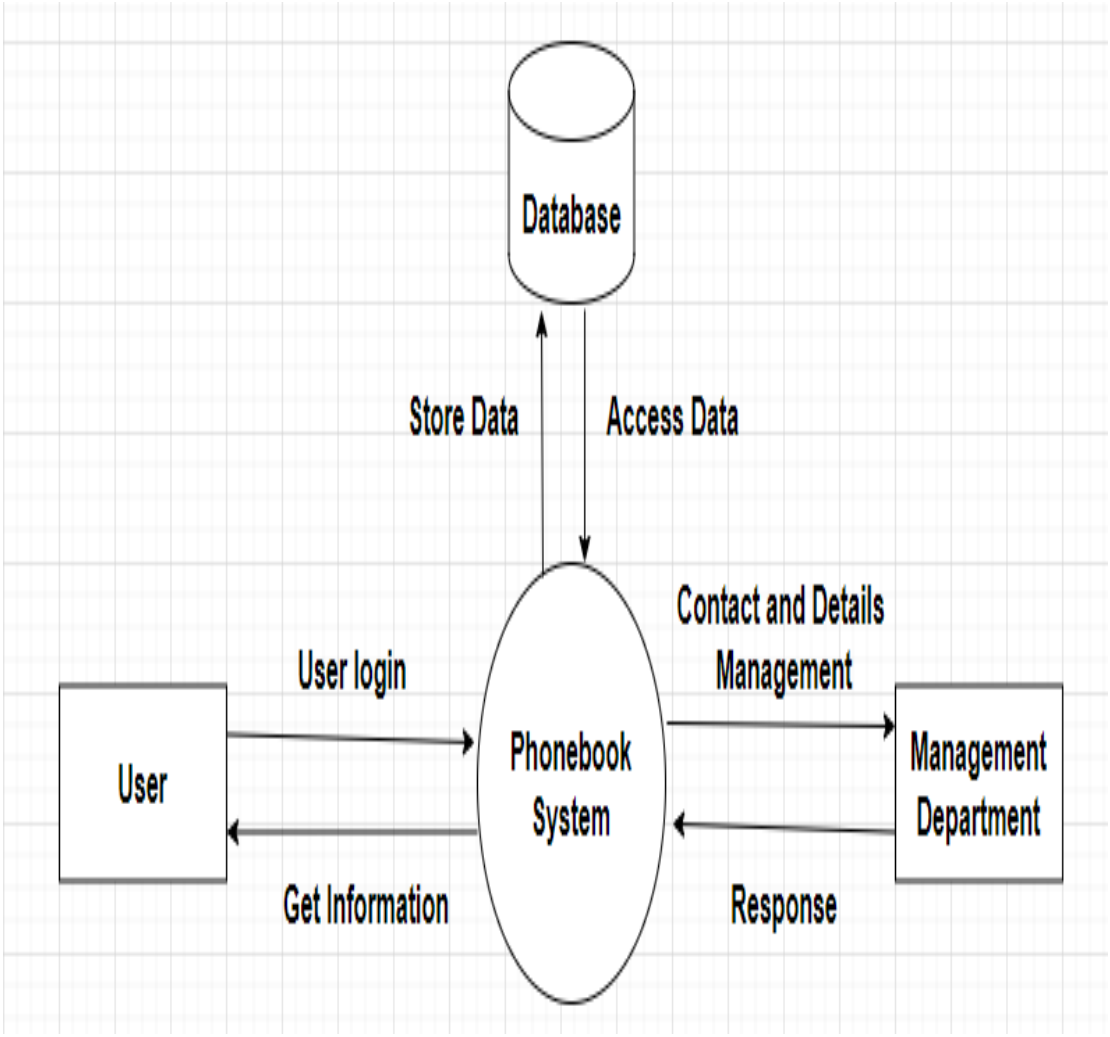


Figure 3.11: Block diagram of Phone Book System

3.7.3 System Flowchart

There is flow of the system by which whole system works. It shows that if user already logged in to system then goes to dashboard else it goes for login. And then user can easily add contacts, view records, view profile, manage phonebook etc.

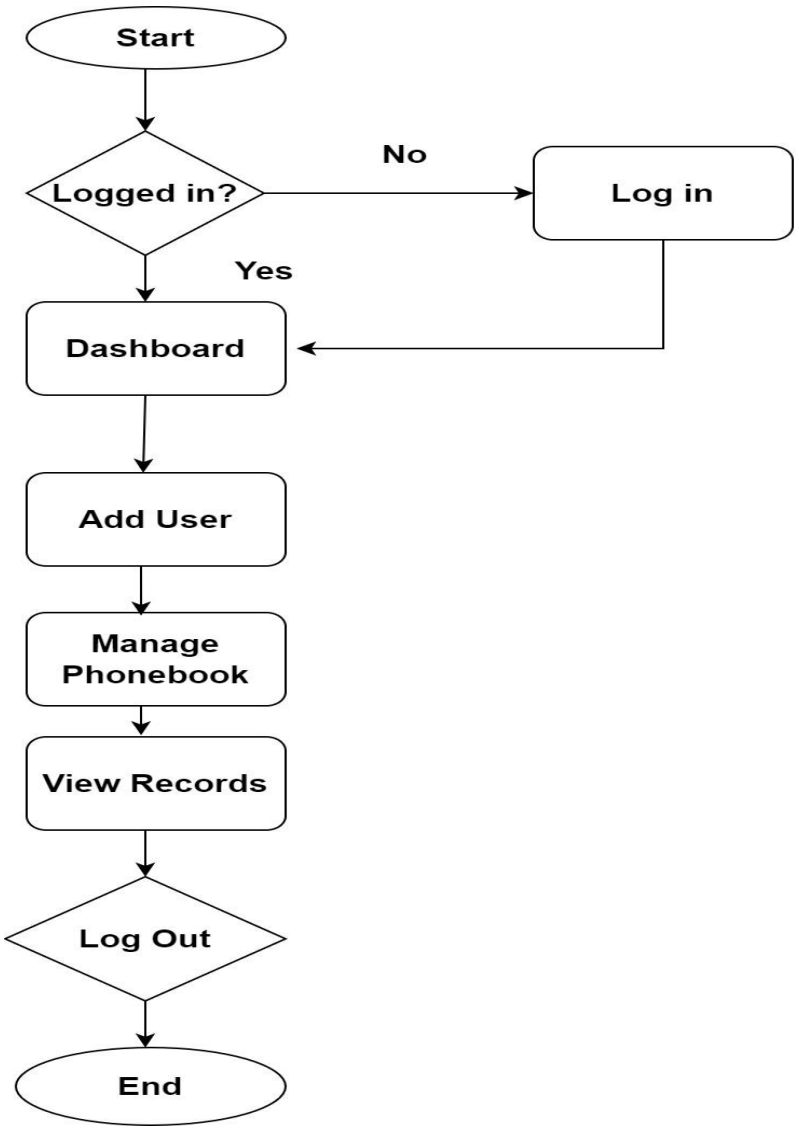
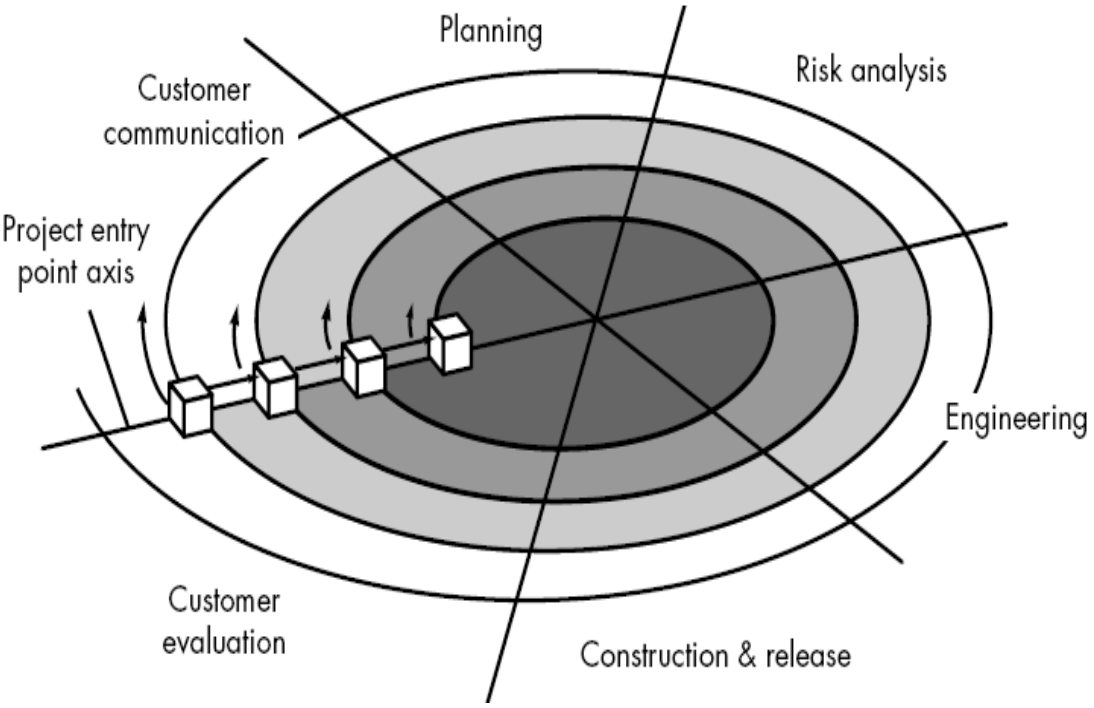


Figure 3.12: System Flowchart of Phone Book System

3.7.4 Software Process Model

This is the state where we can discuss or represent the order in which the activities of our project's development will be undertaken. Our project is small in nature and changeable requirements and testing is done time to time to meet the demand of user so we basically use **Spiral Model**. This is the SDLC model, which combines the features of prototyping model and waterfall model in order to eliminate almost every possible or known risk factor from it. This process follows a spiral process as the development takes place. In this model, the development of each modified version of the system prototype is carefully designed using the steps of waterfall model. It takes the process activities of customer communication, planning, risk analysis, engineering, construction and release and customer evaluation.

This model works on clockwise circular motion. The best part of this model is that the changes can be made and additional functionality can be added at later date. There is high amount of risk analysis. We have to test this system continuously until the best outcome come. There are specific activities that are done in single iteration where the output in small prototype of the large software. The same activities are then repeated for all the spiral until the entire software id built. The software engineering team adds functionality for the additional requirement in every increasing spiral until the application is ready for the production phase. In this model process phases are separated as customer communication, planning, risk analysis, engineering, construction and release and customer evaluation which we can clearly see in diagram given below.



[Source: www.1000sourcecodes.com/2012/05/software-engineering-spiral-model.html]

Figure 3.13: Spiral Model

- **Customer Communication**

In this phase we communicate with customer or user about their needs and requirements to develop this system. Software and Hardware requirements are demanded for this system. Requirements i.e. Operating system : windows 10 or above, coding language : PHP, CSS, HTML, JavaScript, coding tool : Visual Studio Code, server : Xampp, RAM : 512 MB, Processor : Intel P4 or Latest, Hard disk : 250 MB of free space and Screen Resolution : 1024x768 are needed for this project. After need of resources demanded for project by customer, its collection and analysis is done.

- **Planning**

In this phase, we discuss about the objectives, alternatives and constraints of the projects are determined and are documented. The objectives and other specifications are fixed in order to decide which strategies to follow during project life cycle..

- **Risk Analysis**

In this part, we discuss about the risk factor that may occurs in the system. This phase is for identifying and analyzing the risks and for finding alternative solutions. A prototype is produced at the end of the risk analysis phase to proceed with available data. It reduces the system failure and any risk occurrence in future date.

- **Engineering**

This phase is the most important stage of project. In this state, the actual development of the project is done. The output of this phase is passed through all the phases iteratively in order to obtain improvement in same. Engineering tasks required building one or more representations of the application.

- **Construction And Release**

In this phase, tasks required to construct, test, install and provide user support. Here all the coding are to implement our project plan. It implements or works to achieve the goal of this system. PHP, CSS, HTML, JavaScript are the coding language used to design user interface, database creation and database connection through visual studio code. After implementation, testing is done. System testing and Unit testing are done for this project. System Testing of software or hardware includes login error, password error and all required filled empty error. Unit testing is a software testing includes edit, update, delete errors occurs while edition and deletion of data. After testing, it goes for use in customer environment. It is release to market. They evaluate this project and correct or suggest anything they want.

- **Customer Evaluation**

At last we have customer evaluation phase. In this phase customer evaluate the system and changes their need or requirements if any. Customer give feedback to this system which helps in increasing the quality of the system. In this state, new version or functions are added or updated. It is for enhancement of product. It helps to upgrade the version of the system which makes user easier to use this system.

3.7.5 Interface Design (UI Structure/ Interface Structure Diagram)

Some of the user interface design of this system are shown below :

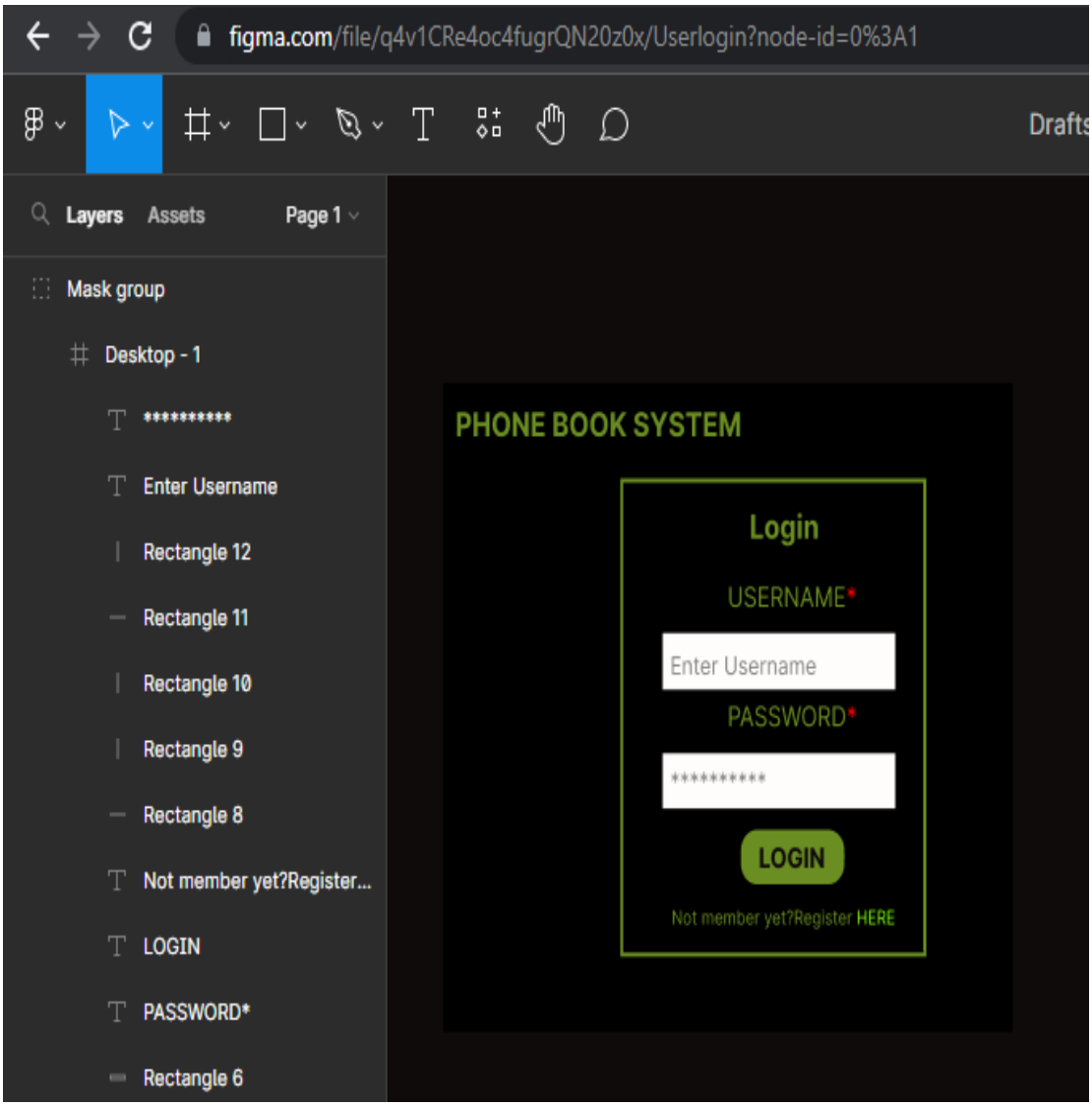


Figure 3.14 : User home page of Phone Book System

In the above figure 3.14, we can see the home page of the system where login interface is given. Through this page user can login to system if they have registered to system else they can click to here button to register directly. After login to this system it entered to dashboard of system.

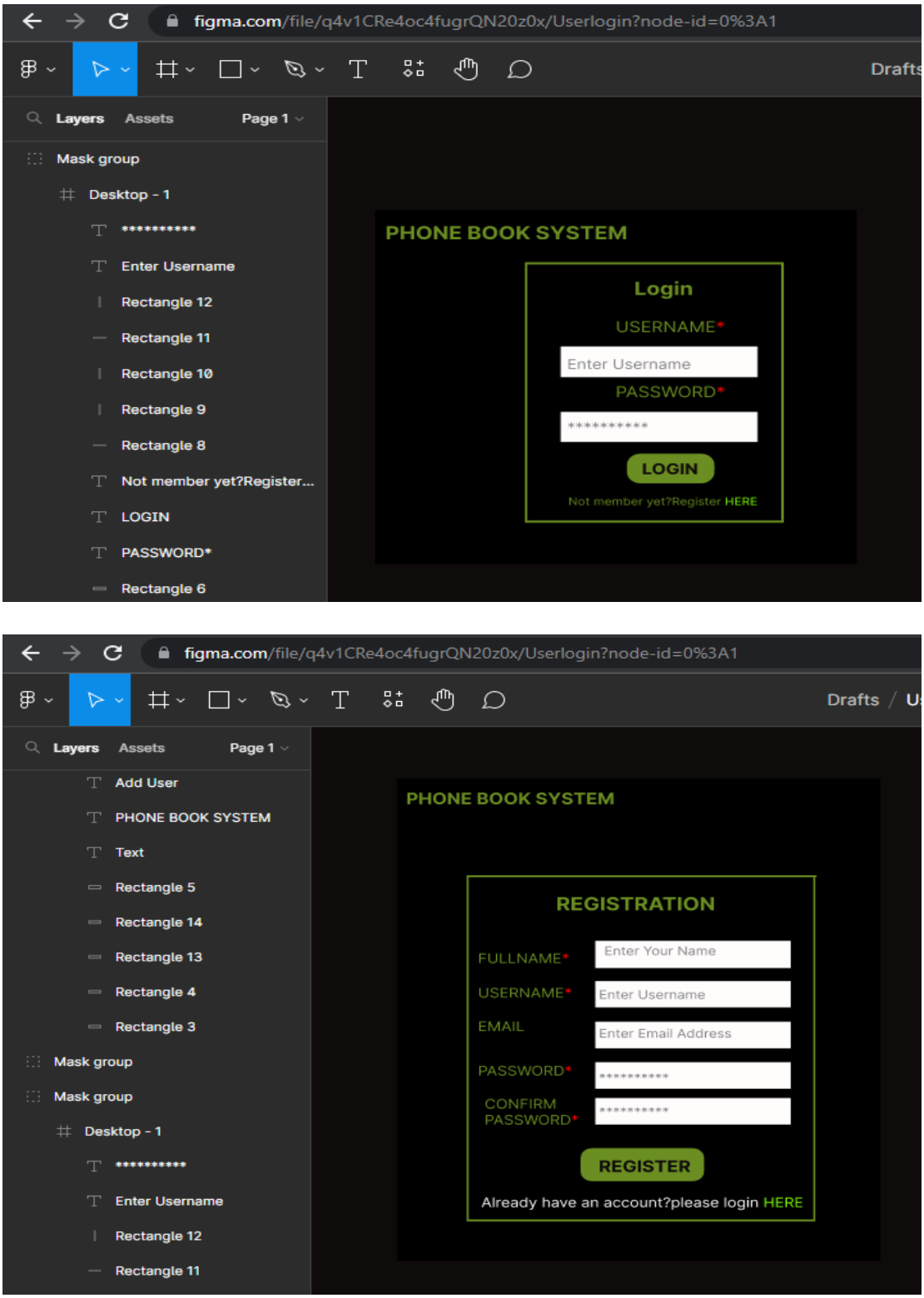


Figure 3.15 : User-registration and login to Phone Book System

In above figure 3.15, we can see the registration page for user. Through which user can register to phone book system to add their contact list. They must fill all the boxes where star in red color appeared. User can login directly if they have already registered by clicking here button shown above. Another figure shows login page for user after the completion of registration of user submit. After registration user can easily login through login page. They have already became a member of phone book system after registered into system. From this page user can register also if they have not register yet by clicking that Here button shown above.

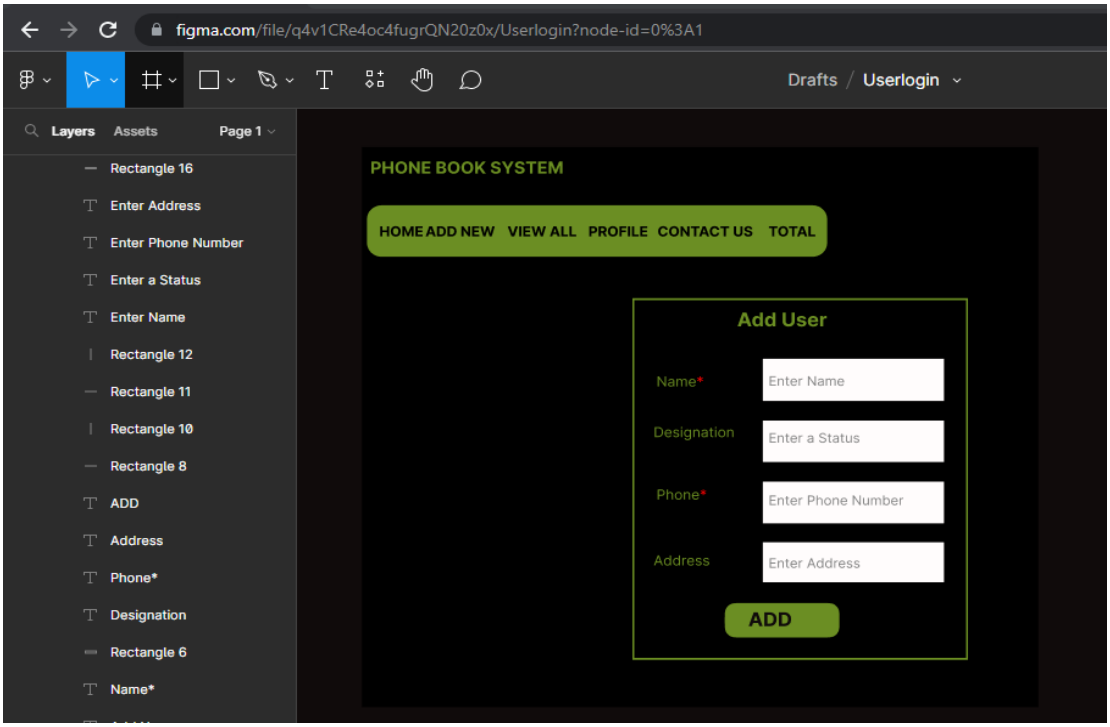


Figure 3.16 : Add-contacts in Phone Book System

This figure 3.16 is all about the adding contact and contact list of users which they want to store in this system. They add their contact lists which they can easily access whenever needed in future use. They can add contact details by filling that empty boxes and clicking that add button shown in figure. Then we can view all the contact lists which was added by user. We can easily see the number of contacts which we have entered or added. We can easily edit contact details using edit button.

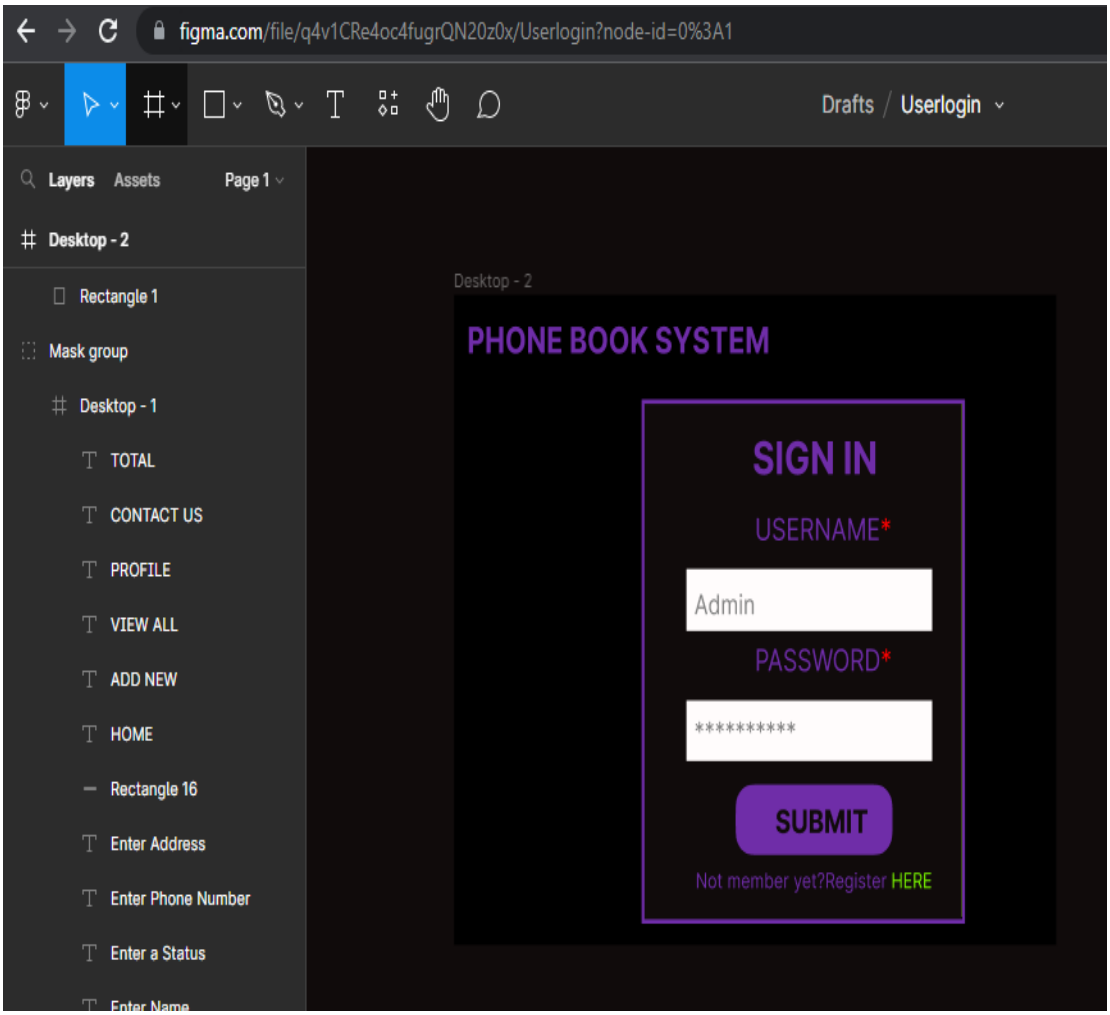


Figure 3.17 : Admin home page of Phone Book System

In the above figure 3.17, we can see the admin home page of the system where login interface is given. Through this page admin can login to system if they have registered to system else they can click to here button to register directly. After login to this system it entered to dashboard of system.

CHAPTER 4: IMPLEMENTATION AND TESTING

4.1 Implementation

Implementation phase of the Project Management Process puts the project into action. It consists four sub phases: execution, monitoring and control, and move to production. All the physical design of the project is turned into working computer code. Many tools and resources are used to develop the system.

4.1.1 Module Description

Phone Book System is having many modules which make the software more efficient. The modules make the maintenance of database easier. The modules used in this system are given below:

- **Admin Module :**

The module provides functionality for the power admin only. This module will allow an admin to manage the menu that is displayed. Admin is allowed to view details of users and delete unwanted users, view details of the contacts and manage the contacts of the system i.e. edit contacts and delete contacts.

- **User Module :**

The module provides functionality for the power user only. This module will allow an user to manage the menu that is displayed. User is allowed to add details and edit any information, view details of the contacts and manage the contacts of the system.

- **Add User Module :**

This module provides functionality where user can add new entry of contacts where their personal information like name, address, phone number, status or designation are stored. In this module we can store personal details. This module helps in the storage of contacts with required records to make easy to see contact lists whenever needed.

- **View All Module :**

In this module all the information of contacts are shown or displayed. Their name, address, phone number and designation are stored in it. This module also allow to edit and delete the details as per the need.

- **Search Module :**

In this module all the information of contacts can be searched. Their name, address, phone number and designation which are stored in the system's database. This module allow both user and admin to search the details as per their requirement.

4.2 Tools Used

4.2.1 Front End Tools

Front End Tool is the one which helps developed to build attractive website layouts and apps with ease. It helps to accelerate the web development process by providing drag and drop elements and various built-in features to create a more attractive web design layout.

- **HTML :**

The Hyper Text Markup Language(HTML) is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets(CSS) and scripting language such as JavaScript.

- **CSS :**

CSS stands for Cascading Style Sheets. It is a style sheet language which is used to describe the look and formatting of a document written in markup language. It provides an additional feature to HTML. It is generally used with HTML to change the style of web pages and user interfaces.

- **JavaScript :**

JavaScript(JS) is a lightweight, interpreted, or just-in-time compiled programming language with first class functions. It is text-based programming language used both on client-side and server-side that allows you to make web pages interactive. JavaScript has curly bracket syntax, dynamic typing, prototype-based object orientation, and first-class functions.

4.2.2 Back End Tools

These tools are programming languages, frameworks, database management systems, web servers, testing and deployment tools, and various others.

- **PHP :**

PHP stands for Hyper Text Preprocessor, that earlier stood for Personal Home Pages. It is server-side scripting language that is used to develop dynamic and interactive webpages.

- **My SQL :**

MySQL is an open-source relational database management system(RDMS) based on Structured Query Language(SQL). MySQL server is used to add, access, and process data stored in a computer database.

4.2.3 Documentation Tools

Documentation tools are tools that make authoring and delivering documentation faster and easier, reducing time it takes to create and manage documents.

- **MS-WORD :**

Microsoft Word(MS-WORD) is the document editor that you can take with you on the go. It is made by computer company Microsoft. It is a graphical word processing program that users can type with.

- **draw.io :**

draw.io is a free online diagramming software application for building diagrams. It also produces web-based diagramming technology and integrates with Google Drive and Dropbox.

4.3 Testing

4.3.1 Test Cases For Unit Testing

Unit testing is a software development process in which the smallest testable parts of an application, called units, are individually and independently scrutinized for proper operation. The goal of unit testing is to isolate each part of the program and show that the individual parts are correct. A unit test provides a strict, written contract that the piece of code must satisfy.

Table 4.1 : Test Case For Unit Test For User

S.NO	Input	Expected Outcome	Actual Output	Remarks
1.	Add Contacts	Insert into database	Inserted Successfully	Test Success
2.	Edit Contacts	Edit Contacts	Edited Successfully	Test Success
3.	Update User Profile	Update User	Updated Successfully	Test Success
4.	Delete Contacts	Delete Contacts	Deleted Successfully	Test Success

Table 4.2 : Test Case For Unit Test For Admin

S.NO	Input	Expected Outcome	Actual Output	Remarks
1.	Edit Contacts	Contacts Edited	Edited Successfully	Test Success
2.	Update Admin Profile	Admin Updated	Updated Successfully	Test Success
3.	Delete User	User Deleted	Deleted Successfully	Test Success
4.	Delete Contacts	Contacts Deleted	Deleted Successfully	Test Success

4.3.2 Test Cases For System Testing

System testing, also referred to as system-level tests or system-integration testing, is the process in which a quality assurance team evaluates how the various components of an application interact together in the full, integrated system or application

Table 4.3 : Test Case For System Test For User

S.NO	Input	Expected Output	Actual Output
1.	Username : Puja Password : ppppppppp	Login Successful	Login Successfully
2.	Username : Puja Password : 123456 or Username : Pooja Password : ppppppppp	Login Failed	Login Error

Table 4.4 : Test Case For System Test For Admin

S.NO	Input	Expected Output	Actual Output
1.	Username : admin Password : admin1234	Login Successful	Login Successfully
2.	Username : aadmin Password : admin1234 or Username : admin Password : admin123456	Login Failed	Login Error

CHAPTER 5: CONCLUSION AND RECOMMENDATION

5.1 Learnt Outcome

This system have taught us how to add, change or edit, remove or delete, update or modify and view data from/to a file. We have learnt about PHP, MYSQL and database connectivity. We have learnt knowledge of digital storage system of contacts of persons in a device. This system have taught about the overall concept or working mechanism of Phone Book System.

5.2 Limitations

Some of the limitations of our system are :

1. This system is not suitable for large organizations. There is difficult in storing large amount of data in case of large organization. It is simple system which can be used for small organization so it is not efficient for those huge organizations.
2. This system is not capable to count users' login. This system cannot give the information about how many time does user have login to the system.

5.3 Conclusion

This application software has been computed successfully. And it was also tested successfully. It has required choices that can be used by the users to perform required operations. It is user friendly and easy to use. It is developed using front end and backend in windows environment.

The goals that are achieved by this project are :

- Management of information efficiently
- Less processing time and getting required information
- Optimum utilization of resources

- Simplify the operations
- Portable and flexible for further enhancement

5.4 Future Enhancement

1. Security can be improved using emerging technologies
2. As the technology emerges, it is possible to upgrade the system and can be future extensible
3. GPS can be added

REFERENCES

[1] Singh Saud Ramesh, Chaudhary Indra, 2076 “DATABASE MANAGEMENT SYSTEM”, KEC publication and distribution pvt.ltd

[2] Singh Saud Ramesh, Singh Saud Bhupendra, Chaudhary Indra, 2076 “SYSTEM ANALYSIS AND DESIGN”, Kathmandu, KEC publication and distribution pvt.ltd

[3] Schmidt, A., & Gellersen, T.S.(2001) “Telephone Directory System” Germany.

[4] Bentley F, & Chen, “Phone Book Application”, Tamil Nadu: VITBS(VIT University Vellore).

[5] Doran, A., & Jeffrey, R.(2013) ”Phone Book System” Australia: Harvard University.

[6] Using real time computer vision algorithms in automatic attendance management systems by V Shehu, A Dika - (ITI), 2010 32nd International Conference on, 2010

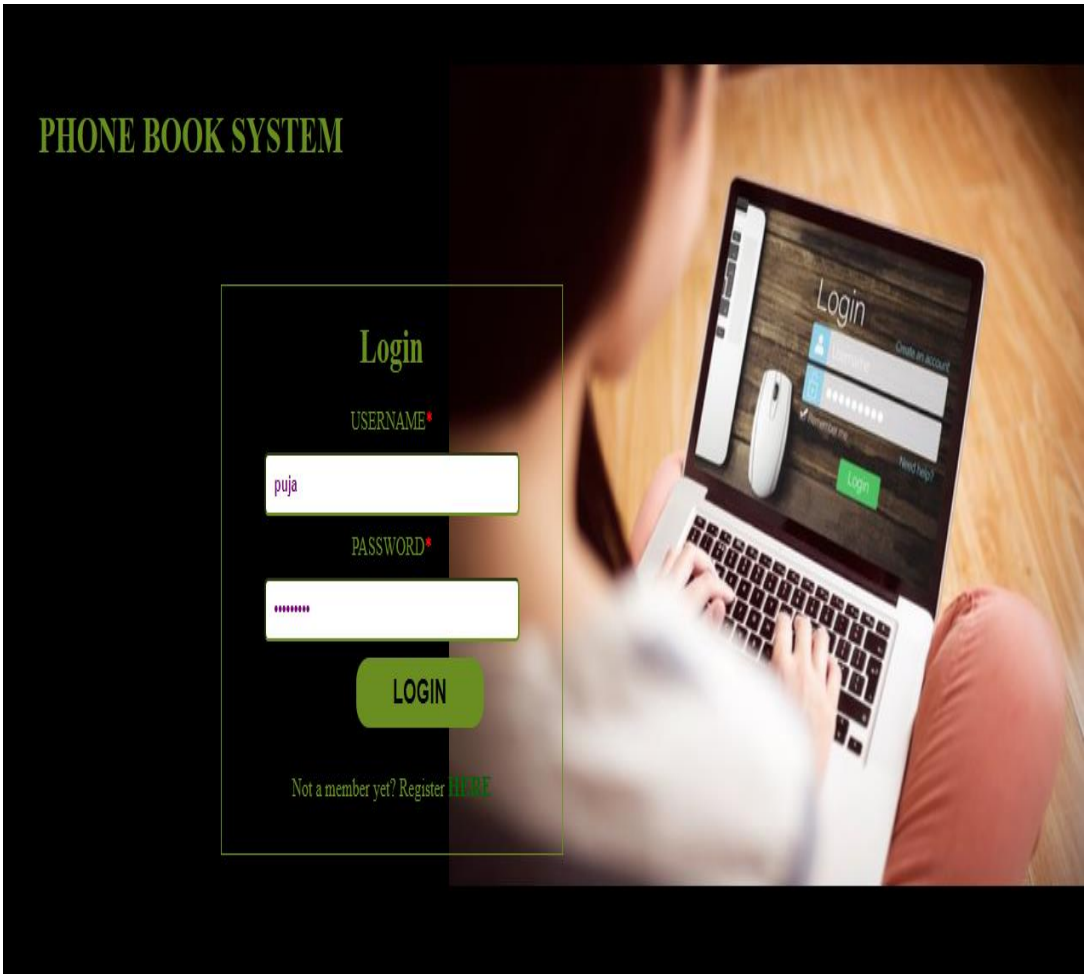
[7] Published in: Computer Science and Information Technology - Spring Conference, 2009. IACSITSC '09. International Association of. Date of Conference: 17-20 April 2009 Page(s):174 - 177 Print ISBN: 978-0-7695- 3653-8

APPENDIX

Some of the screenshots of our Phone Book System are given below :

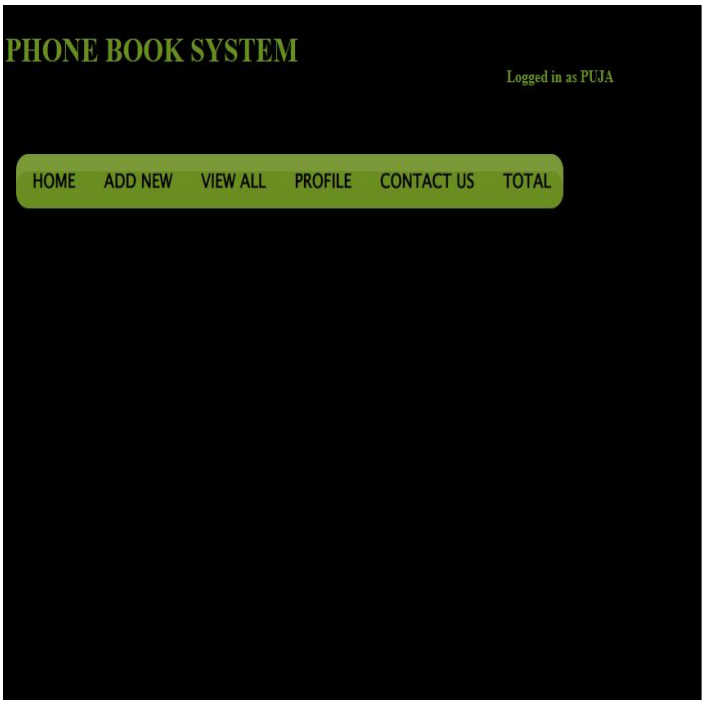
User Interfaces:

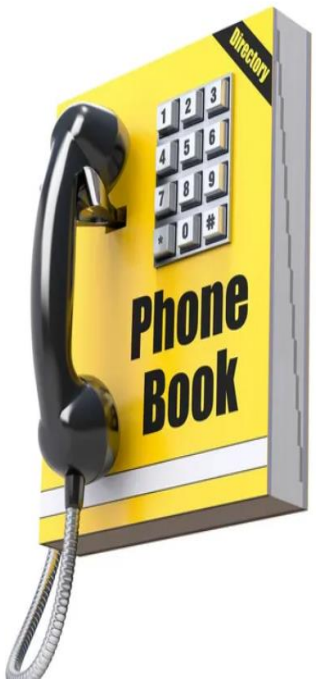
Home Page / Login Form :



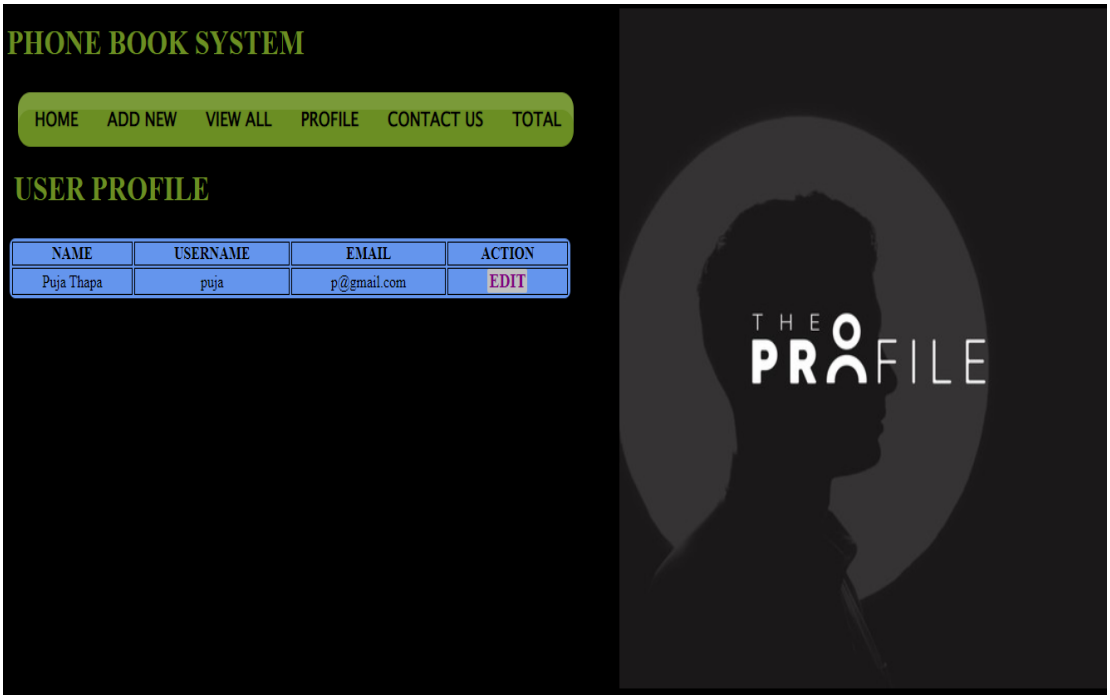
Registration Page :

Dashboard :

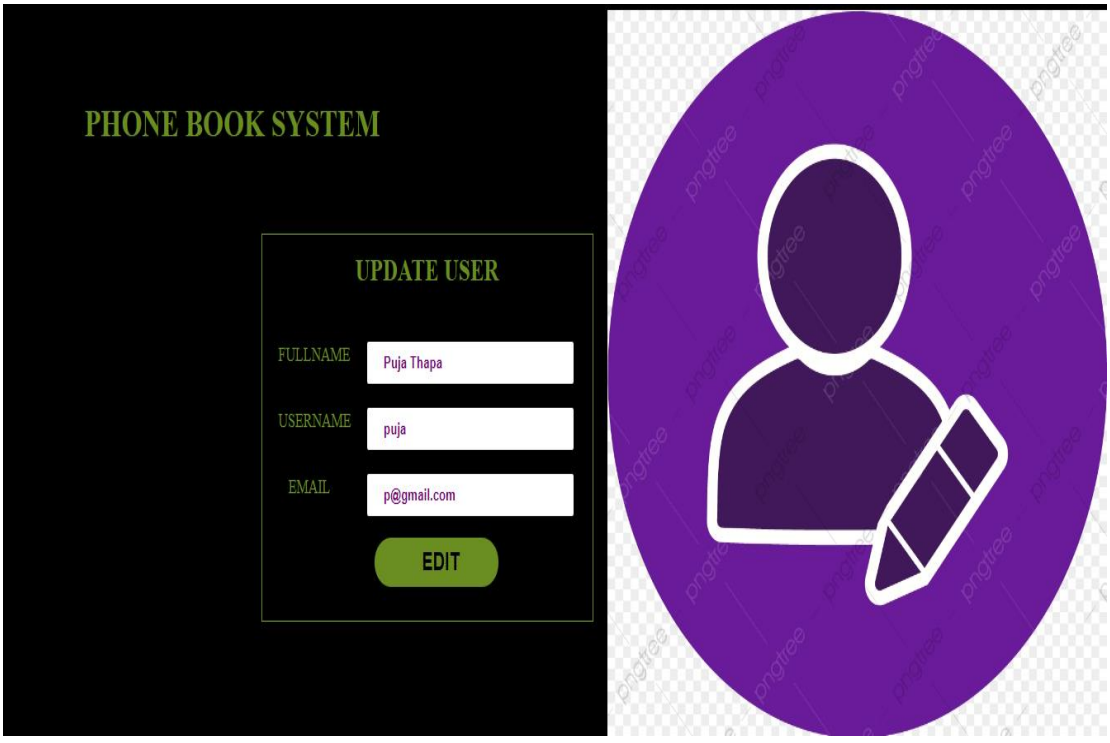




View Profile :



Update Profile :

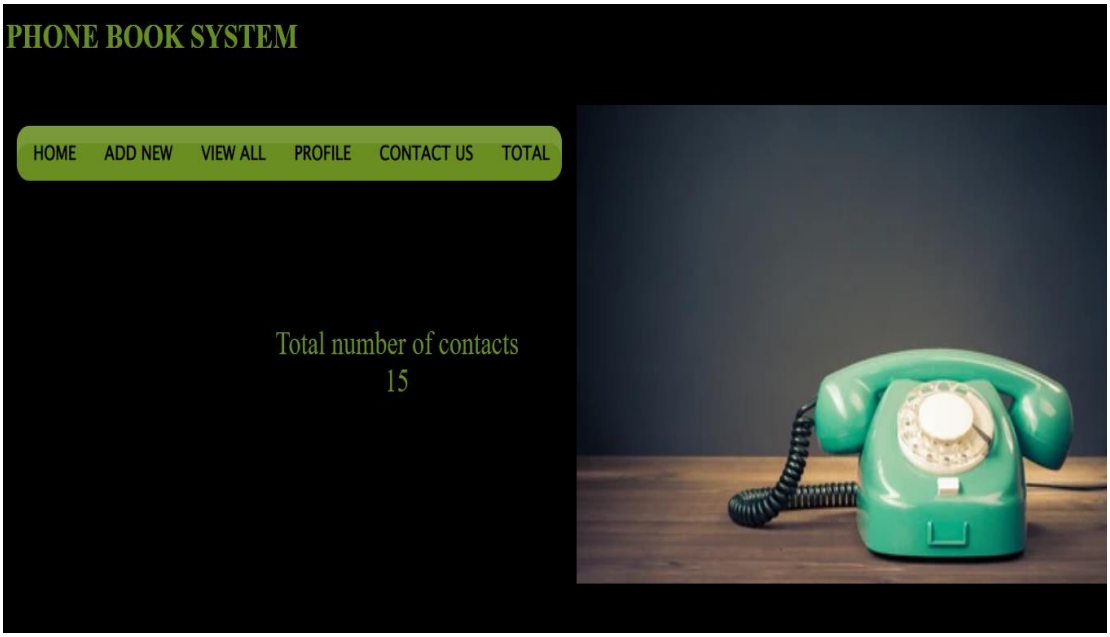


Add Contacts :

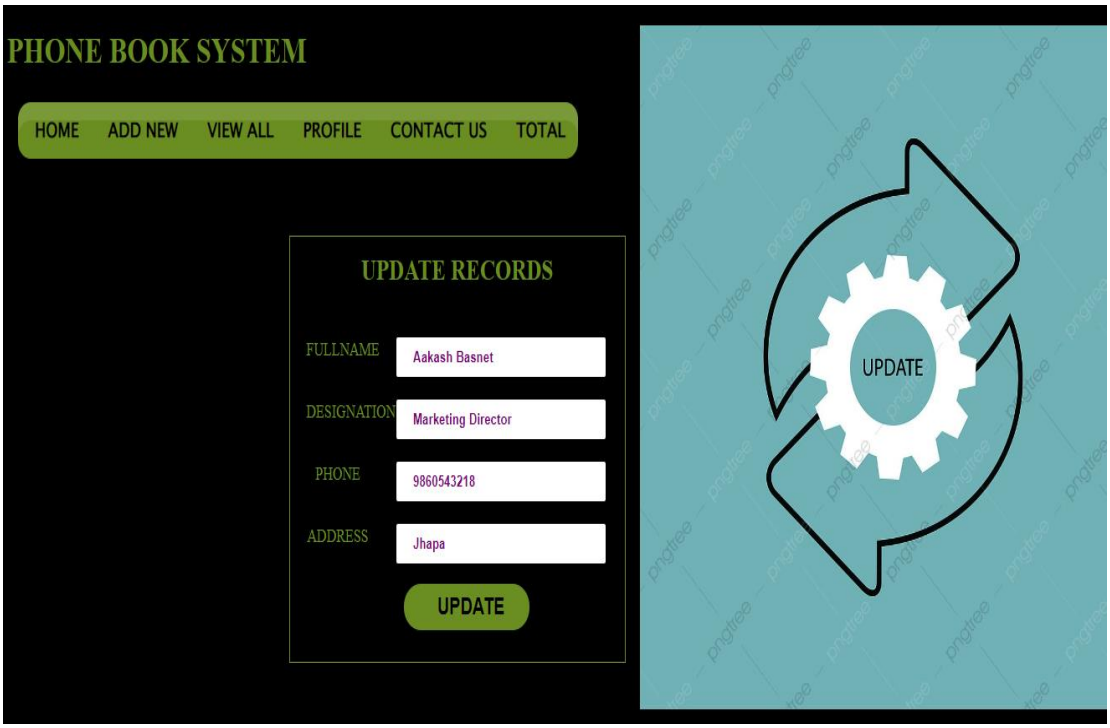
View All Contacts :

S.NO	NAME	DESIGNATION	PHONE	ADDRESS	PERFORMANCE
1	Aakash Basnet	Marketing Director	9860543218	Jhapa	EDIT DELETE
2	Binisha Poudel	Receptionist	9823754088	Lalitpur	EDIT DELETE
3	Dipendra Shah	Manager	012200567	Bhaktapur	EDIT DELETE
4	Hari Silwal	Project Manager	9808543342	Jhapa	EDIT DELETE
5	Kiran Shrestha	Secretary	9845543213	Bhktapur	EDIT DELETE
6	Kusum Thapa	Project Manager	9841543219	Lalitpur	EDIT DELETE
7	Malina Deshar	System Administrator	9810543211	Bhaktapur	EDIT DELETE
8	Manoj Shrestha	Receptionist	019966287	Jhapa	EDIT DELETE
9	Radika Silwal	Receptionist	017789235	Bhaktapur	EDIT DELETE
10	Rima Sikdel	Secretary	014466237	Lalitpur	EDIT DELETE
11	Samir Tamang	Data Administrator	9823764044	Jhapa	EDIT DELETE
12	Sandesh Thapa	Accountant	9813543214	Lalitpur	EDIT DELETE
13	Simon Sharma	Accountant	9841543215	Bhaktapur	EDIT DELETE
14	Simran Rai	Marketing Director	016622093	Lalitpur	EDIT DELETE
15	Sunita Lama	Accountant	9845543221	Jhapa	EDIT DELETE

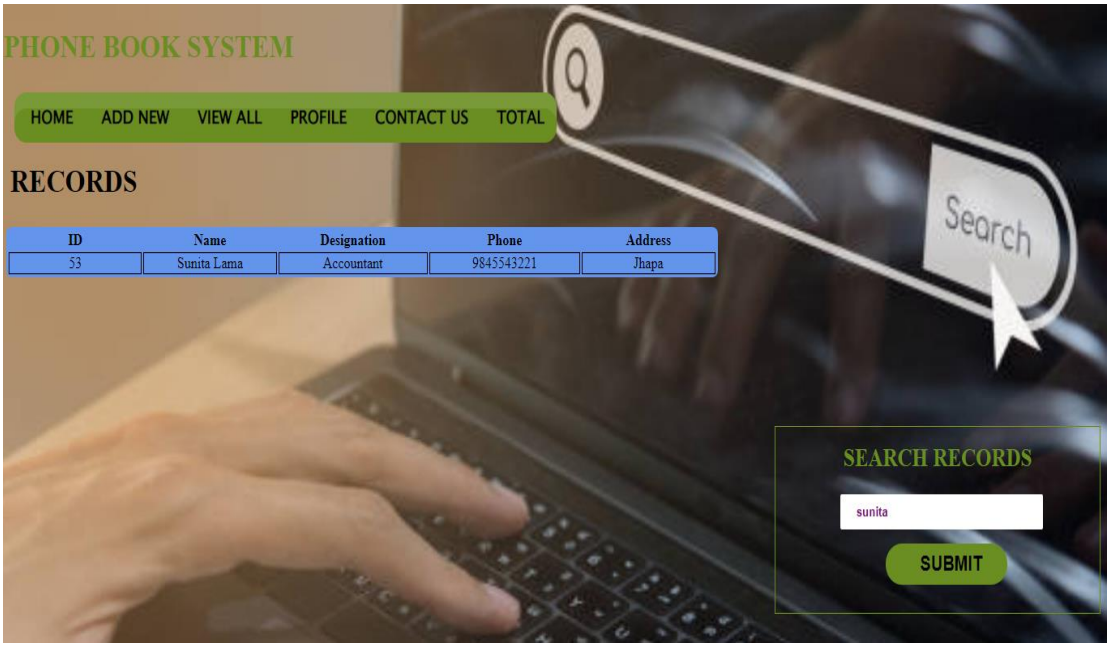
Total Contacts :



Update Contacts :



Search Records :

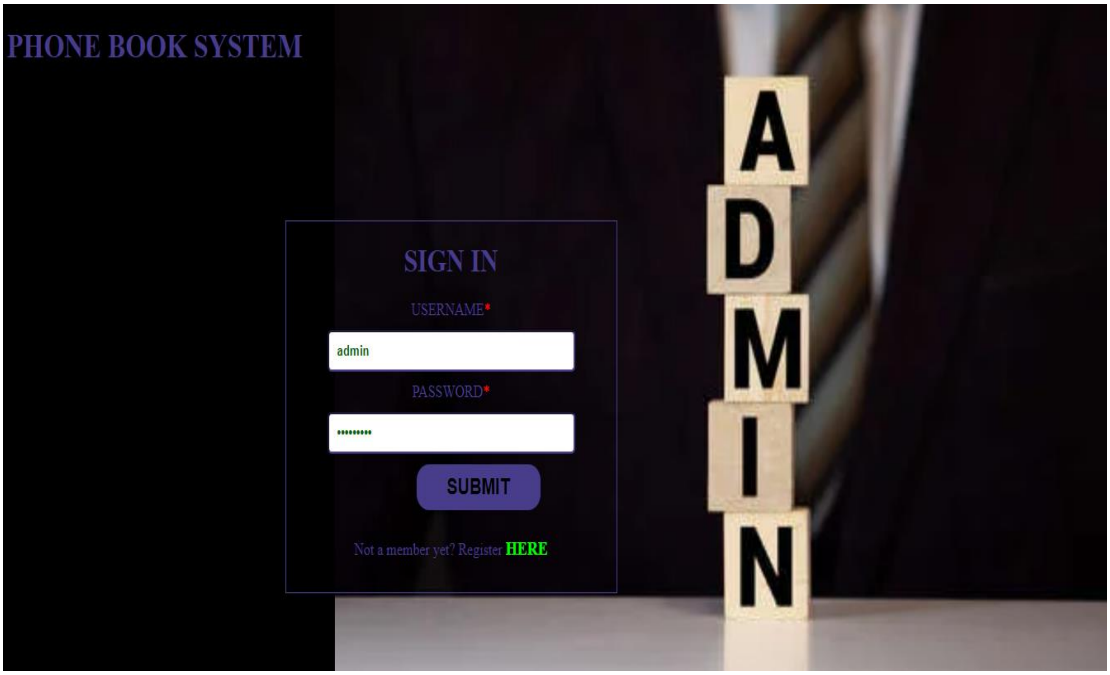


Change Password :

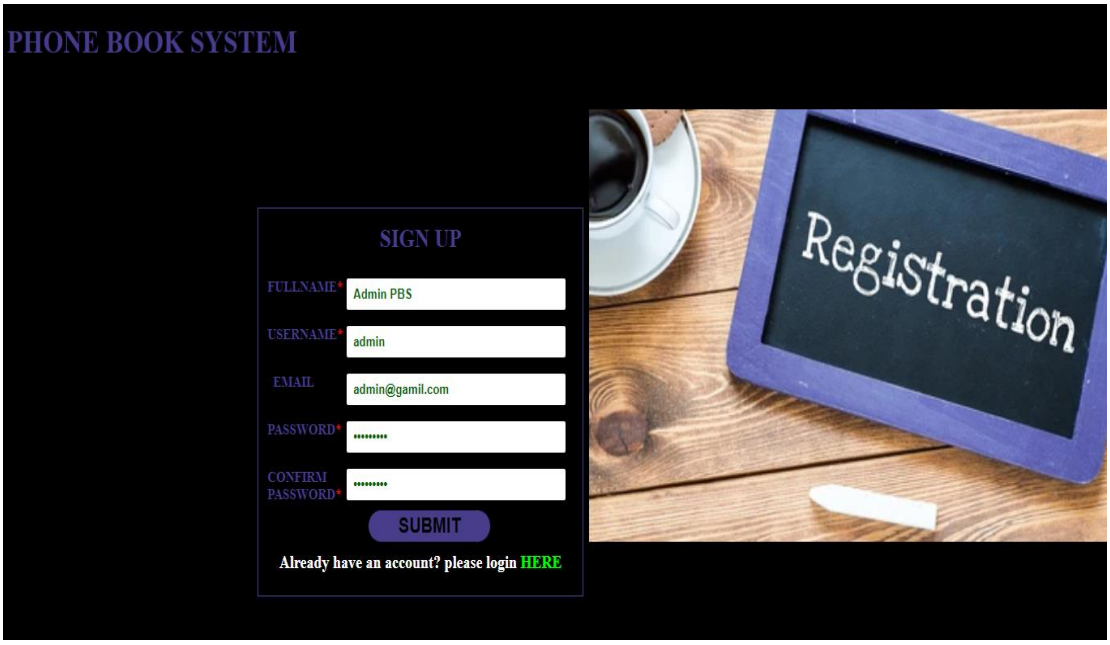
Contact Us :

Admin Interfaces :

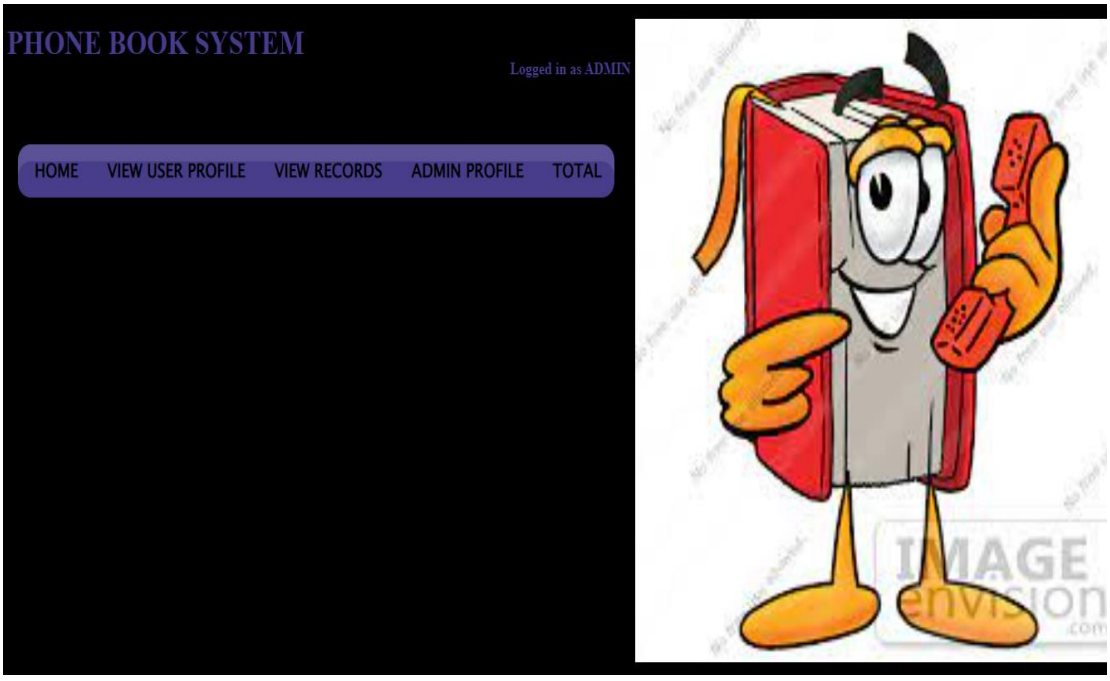
Home/ Login Page :



Registration Page :

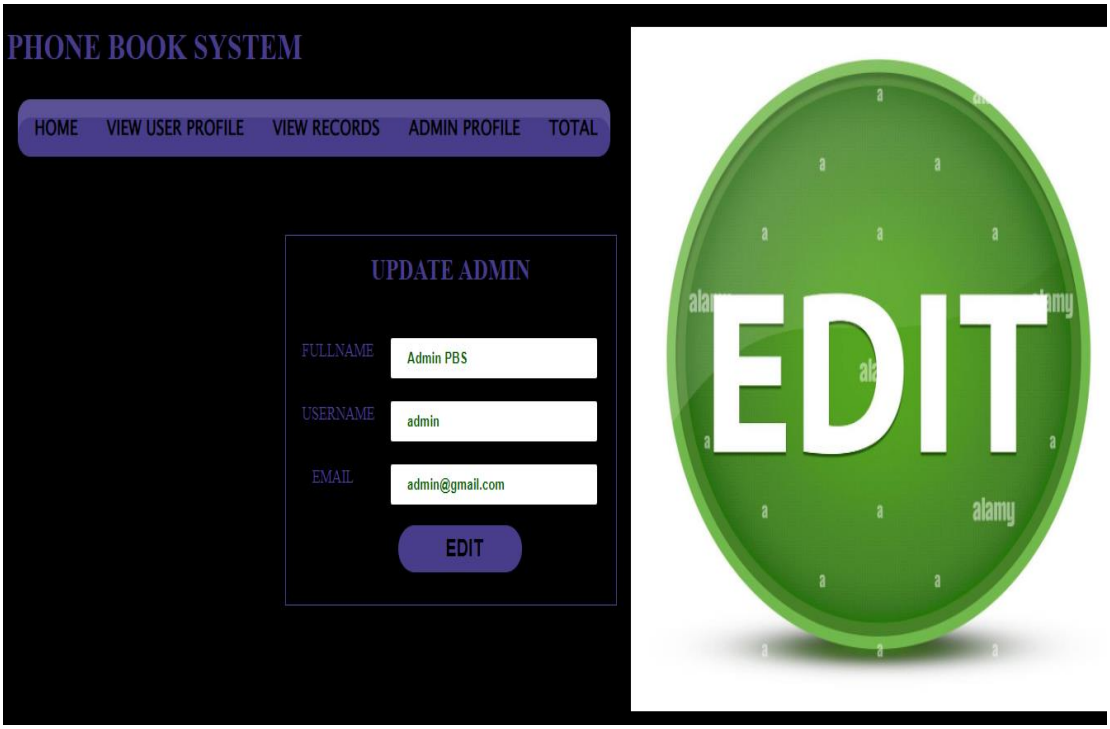


Dashboard :

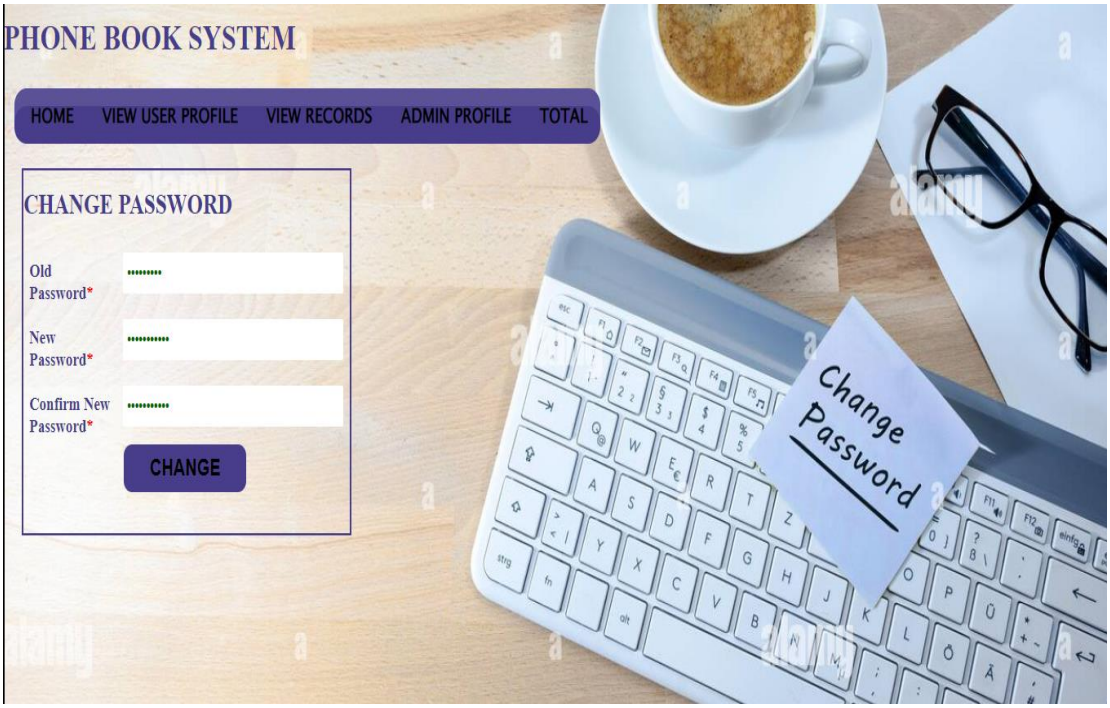


View Admin Profile :

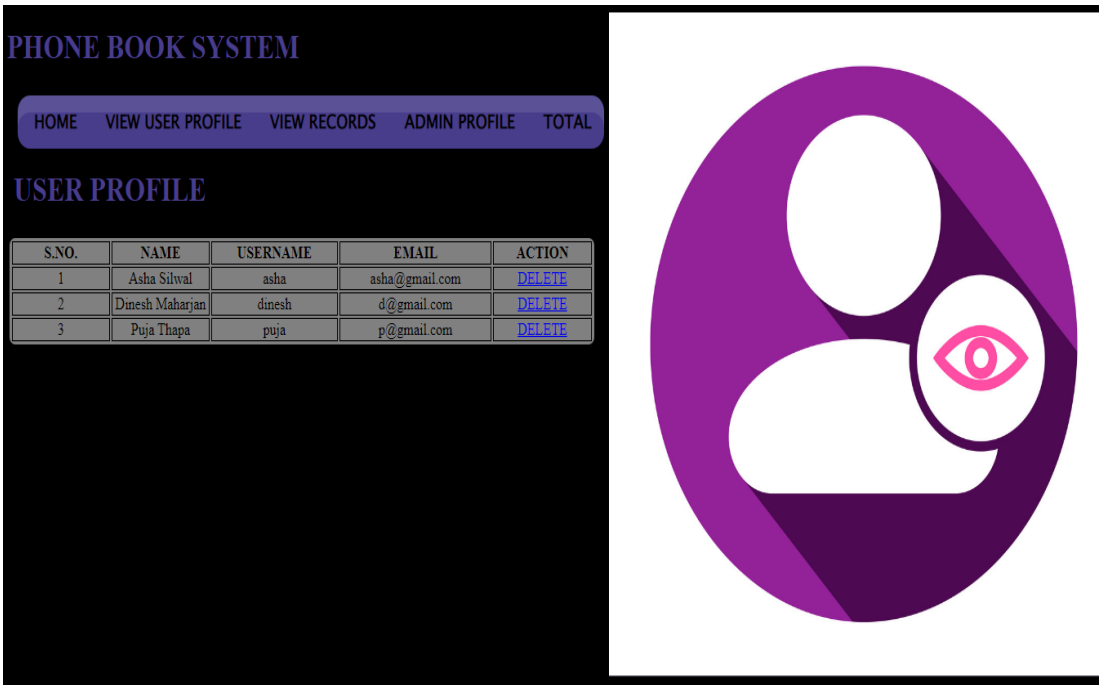
Edit Admin Details :



Change Password :

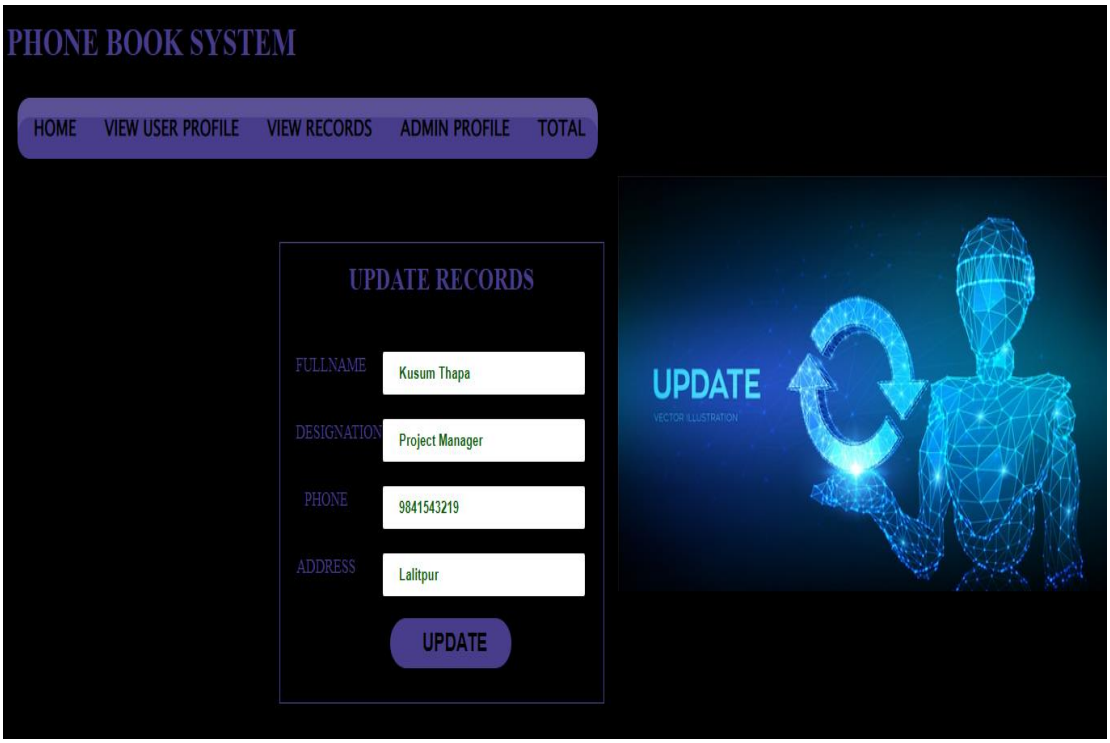


View User Profile :

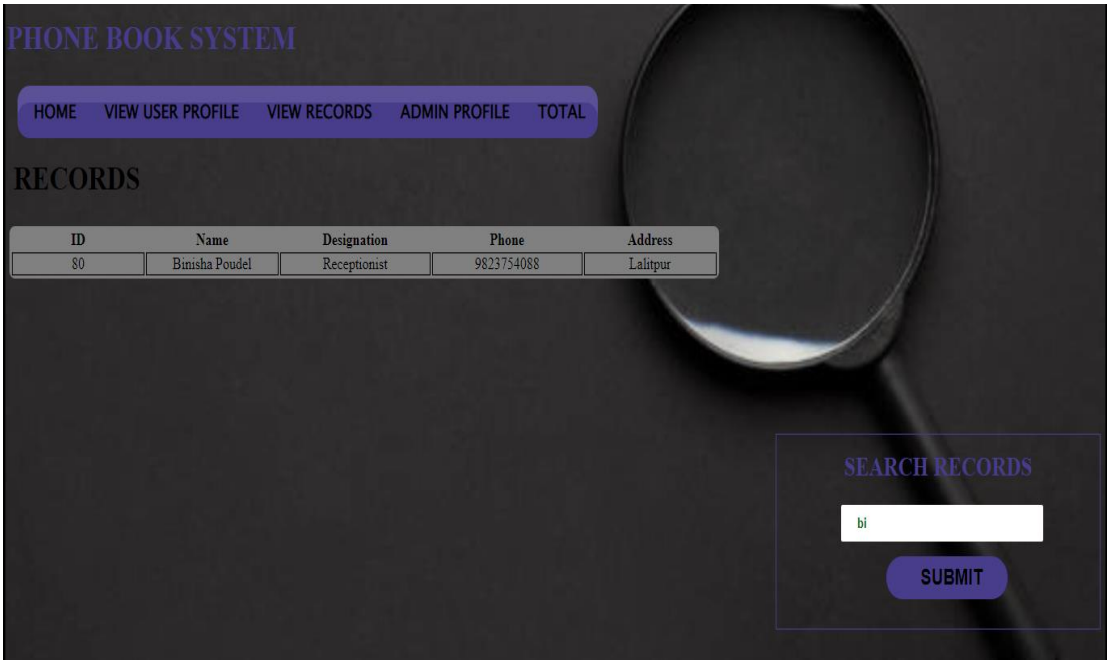


View Contact Lists :

Update Contact Details :



Search Contacts :



Total Contacts :