

Introduction

1.1 Introduction to DBMS and SQL

A **database-management system** (DBMS) is a collection of interrelated data and a set of programs to access those data. This is a collection of related data with an implicit meaning and hence is a **database**. The collection of data, usually referred to as the database, contains information relevant to an enterprise. The **primary goal** of a **DBMS** is to provide a way to store and **retrieve database** information that is both **convenient** and **efficient**. By data, we mean known facts that can be recorded and that have implicit meaning. For example, consider the names, telephone numbers, and addresses of the people you know

Database systems are designed to manage large bodies of information. Management of data involves both defining structures for storage of information and providing mechanisms for the manipulation of information. In addition, the database system must ensure the safety of the information stored, despite system crashes or attempts at unauthorized access. If data are to be shared among several users, the system must avoid possible anomalous results.

Existing DBMS provide various functions that allow management of a database and its data which can be classified into four main functional groups:

- **Data definition** – Creation, modification and removal of definitions that define the organization of the data.
 - **Update** – Insertion, modification, and deletion of the actual data.
 - **Retrieval** – Providing information in a form directly usable or for further processing by other applications. The retrieved data may be made available in a form basically the same as it is stored in the database or in a new form obtained by altering or combining existing data from the database.
 - **Administration** – Registering and monitoring users, enforcing data security, monitoring performance, maintaining data integrity, dealing with concurrency control, and recovering information that has been corrupted by some event such as an unexpected system failure.
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1.2 Some of the Most Important SQL Commands

- **SELECT** - extracts data from a database
- **UPDATE** - updates data in a database
- **DELETE** - deletes data from a database
- **INSERT INTO** - inserts new data into a database
- **CREATE DATABASE** - creates a new database
- **ALTER DATABASE** - modifies a database
- **CREATE TABLE** - creates a new table
- **ALTER TABLE** - modifies a table.

1.3 Problem Statement

The problem occurred before having computerized system are file lost due to misplace and other reasons and lose of files due to natural events and difficult in searching and maintaining multiple records and manual records leads to physical space consumption and all the above factors leads to cost consumption of managing records.

1.4 Aim and Objective

Main aim in developing Blood Bank management System is to computerize the manual process of adding a given patient info and employee info. So that we can get an instantaneous information about what we require and easily accessible.

- Build a computerized Blood Bank Management System database.
 - Provide login facilities.
 - Add and remove data from database.
 - Provide security to doctor portal.
 - Eliminate all the drawbacks of existing system in new system
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1.5 Report Outline

The Blood Bank Management System consist of how we have computerized the record keeping system of agency and has been explained in forms of chapters in the project report. And some of the chapters in the report are:

1. Introduction:

It deals with introduction to DBMS and SQL and some of important aspect sql statements and problem statement, aim and objective and finally report outline.

2. Software Requirement Specification:

It deals with how we have to setup the experiment and what all are the software and hardware requirement of the software application in detail.

3. System Design Analysis:

It deals the design aspect of the project and it also shows how we have designed the system in form of UML diagrams like ER Diagram, Schema Diagram and Data flow diagrams.

4. Implementation:

It deals with the aspect how we have implemented the system design into modules and it also gives us an idea of sample code used in the designing the system.

5. Output Snapshots

It gives us the graphical view of each and every module we have used in the project and also possible output samples.

Chapter 2

Software Requirement Specification

2.1 Experimental Setup

For the development of Blood Bank Management System (HMS).First we require project problem statement based on it we develop requirement specification as described in below topic 2.2. After we develop the tables, attributes required for project we develop schema diagram and entity relationship diagram based on relationship and attributes we decide what language we use for frontend based on it we decide our IDE and suitable backend like MYSQL, ORACLE, and SQLite etc.

My Blood Bank Management System uses Java for frontend and suitable Netbeans IDE for it is. I have used an MYSQL client as database as backend for my project.

MySQL Client is used as database as it easy to maintain and retrieve records by simple queries which are in English language which are easy to understand and easy to write through MySQL Workbench.

To set up a project here are the steps to be followed:-

1. Open the netbeans app >right click on the given project >select the required project and run the project >choose a folder in the project and enter the required values> save the given details.
2. After entering the details, go to the services and right click on the database and and see for the required database to be connected to the project and run the given project so that we can get the details of required person by entering the valid data.

2.2. Specific Requirements

2.2.1 SOFTWARE REQUIREMENTS

OPERATING SYSTEM : WINDOWS 7,8,10

SOFTWARE REQUIREMENTS : NETBEANS IDE 8.2

DATABASE : MYSQL SERVER

2.2.2 HARDWARE REQUIREMENTS

PROCESSOR : x86 COMPATIBLE PROCESSOR
WITH 1.7 GHz CLOCK SPEED

MEMORY : 1GB RAM OR MORE

HARD DISK SPACE : 20GB OR MORE

I/O DEVICES : KEYBOARD (104 KEYS STANDARD)
MOUSE (2/3 BUTTON, OPTICAL/MECHANICAL)

Chapter 3

System Design Analysis

3.1 Data Flow Diagram

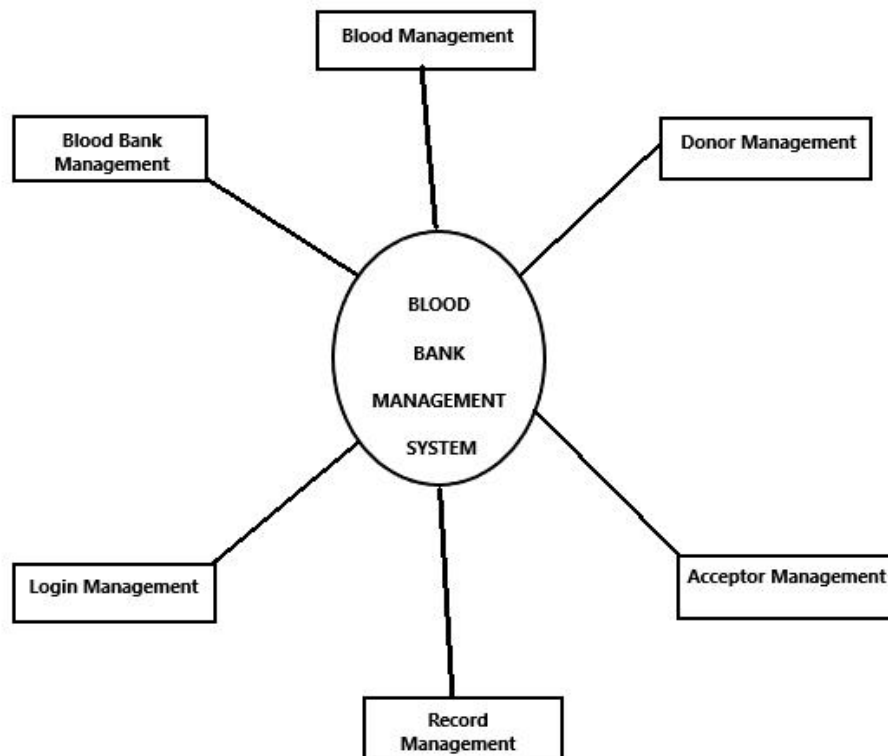


FIG 3.1 Data Flow Diagram

3.2 ER-DIAGRAM

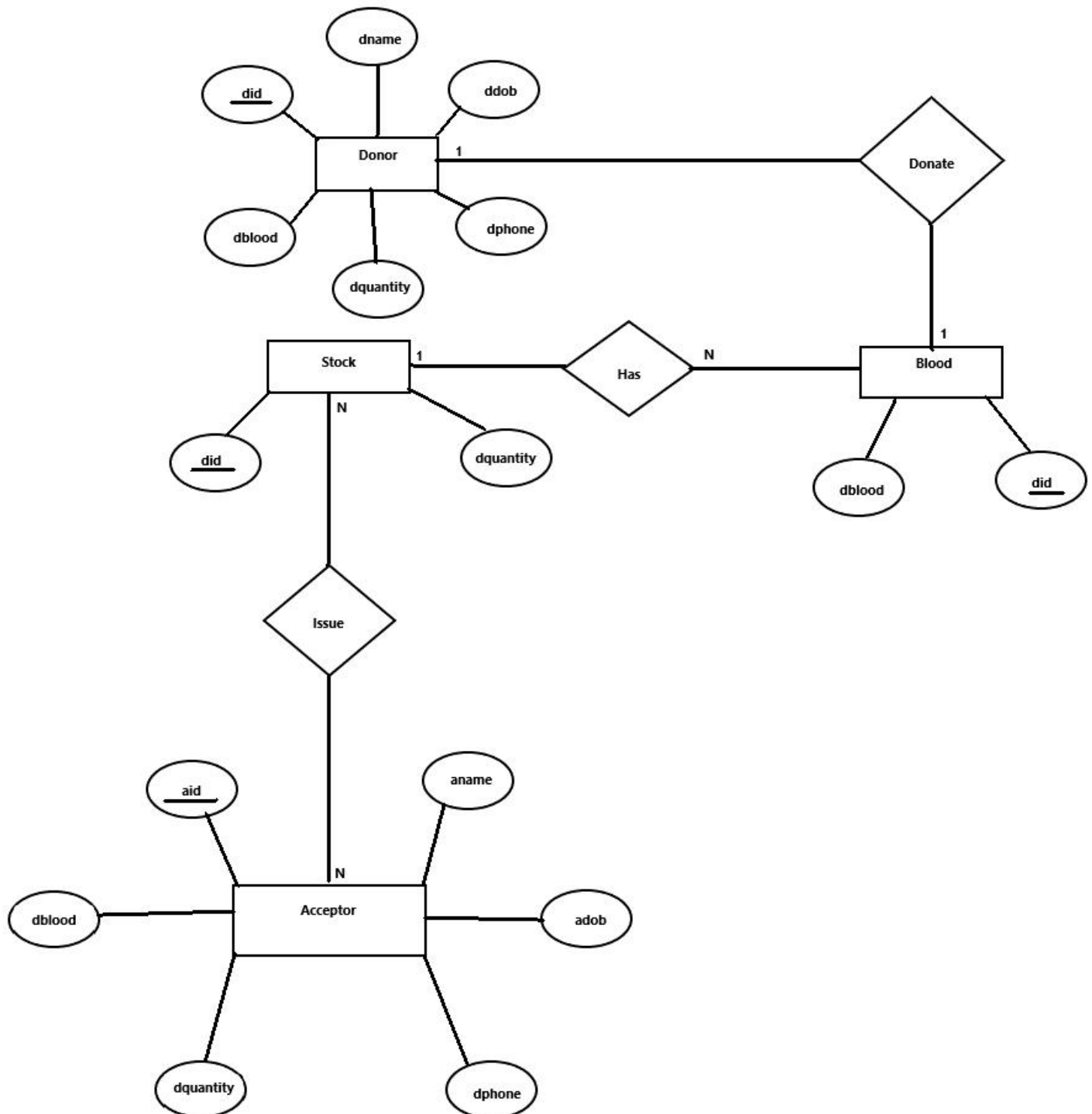


FIG 3.2 ER-DIAGRAM

3.3 SCHEMA DIAGRAM

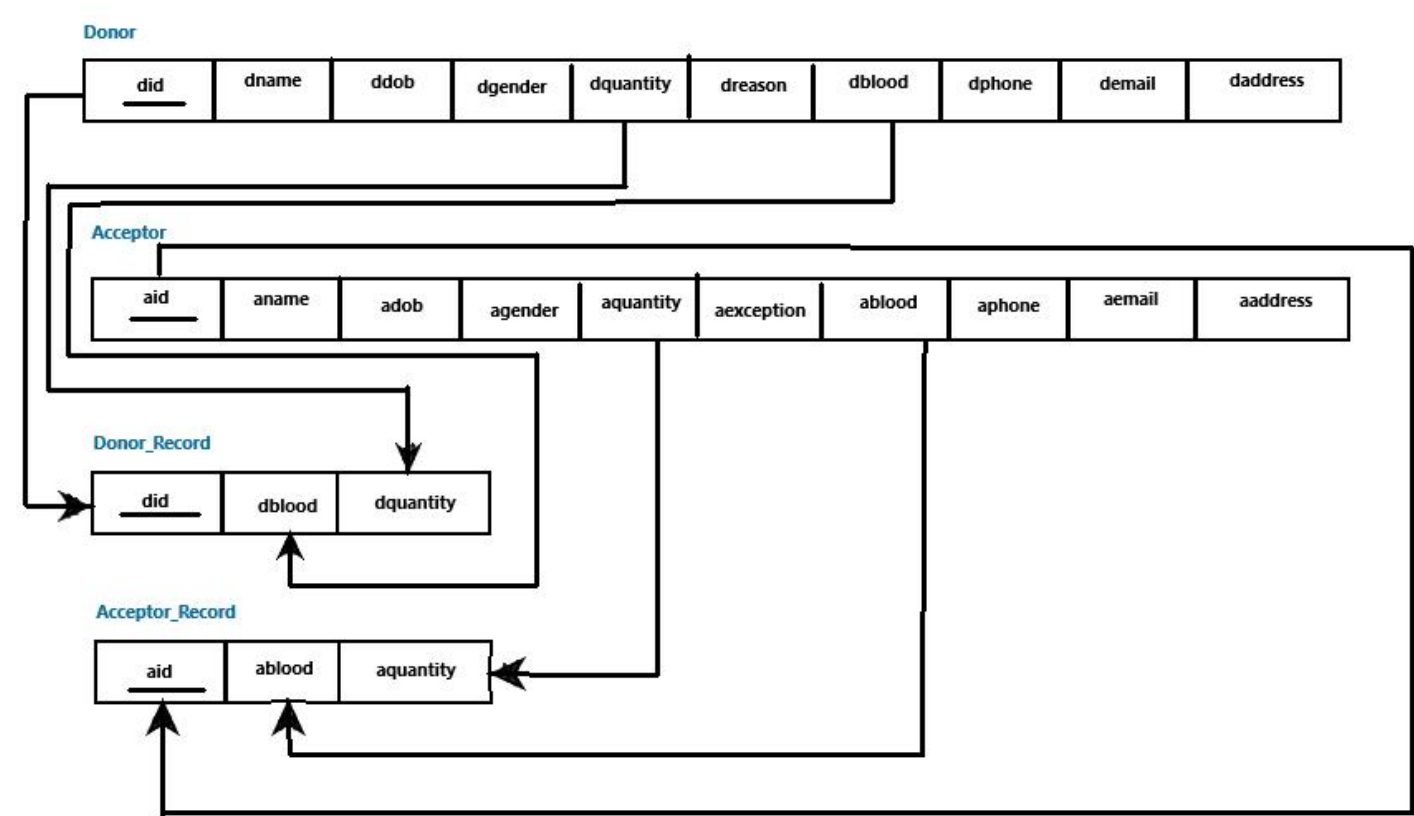


FIG 3.3 SCHEMA DIAGRAM

Chapter 4

Implementation

4.1 Description of Modules

The Blood Bank Management System consist of 7 modules and all the modules that are present in this consist of similar operation that is adding, searching and updating

These operation are used to manipulate the data in the database and based on the requirements the additional functionality like one stored procedure and trigger are implemented.

The modules present in the Blood Bank Management System are:-

- Donor
 - Acceptor
 - Add Donor and Acceptor
 - Search Donor and Acceptor
 - Blood
-

4.1.1 Donor Module

In Donor module consists of other modules which will be further used for adding new donor entry with basic and important data and also searching a particular donor on bases of donor id and donor name.

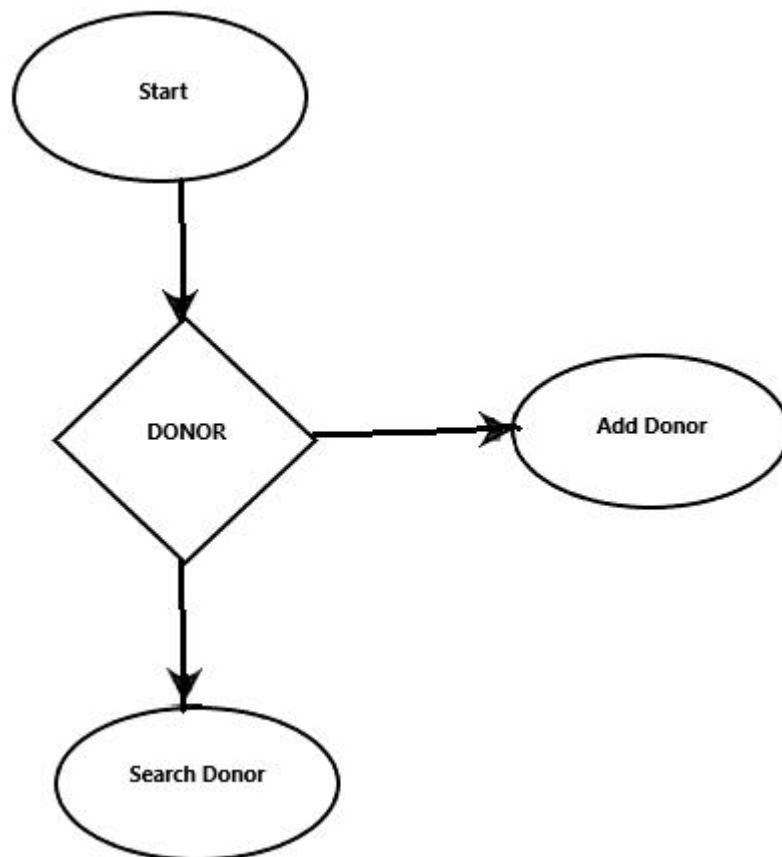


Fig 4.1.1 Data flow diagram for Donor

4.1.2 Acceptor Module

In Acceptor module consists of other modules which will be further used for adding new Acceptor entry with basic and important data and also searching a particular Acceptor on bases of Acceptor id and Acceptor name.

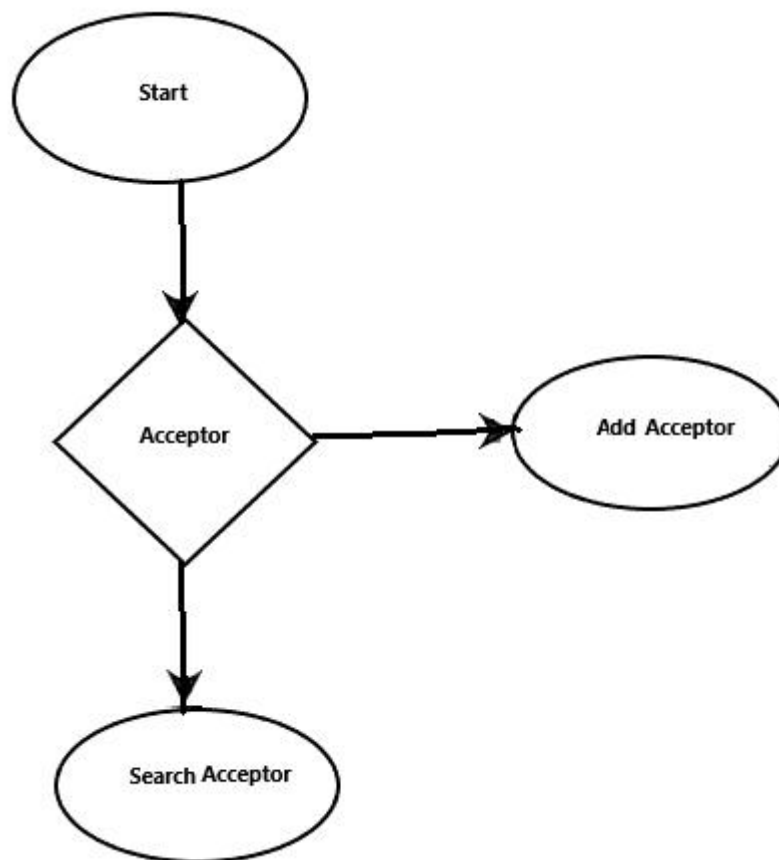


Fig 4.1.2 Data flow diagram for Acceptor

4.1.3 Add Donor And Acceptor Module

In this module we are provided with a form that consists of fields to fill correct details of Donor/Acceptor . After the data is added and saved then this module access the database of respective type , then the data is stored in the database

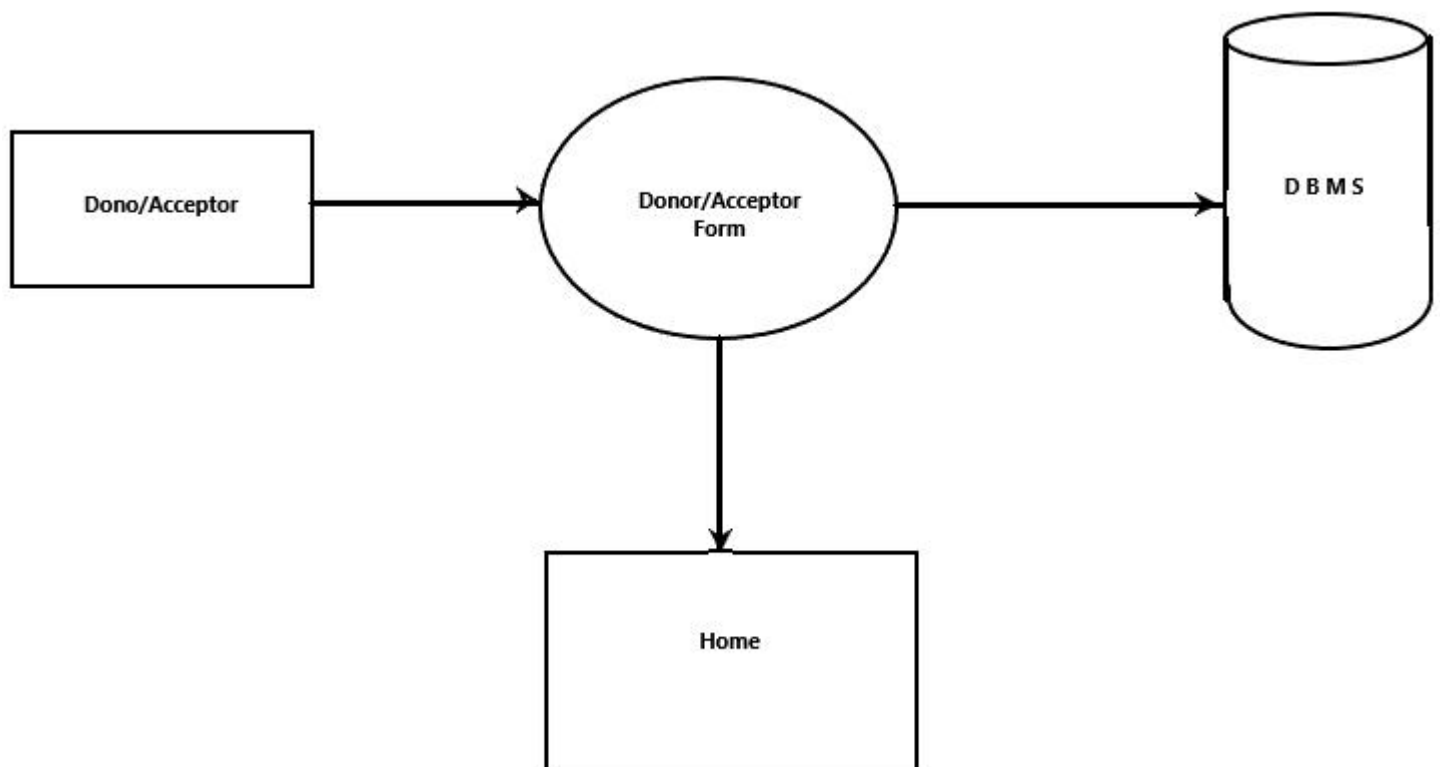


Fig 4.1.2 Data flow diagram for Add Doctor And Acceptor

4.1.4 Search Donor And Acceptor Module

This module is used after the addition of Donor/Acceptor data to the Database. Here we can search a entry with Donor/Acceptor id or a name . The working of this module is that when a search is done the data is sent to the database which consists of id or a name of Donor/Acceptor and the matching entry is shown to the user.

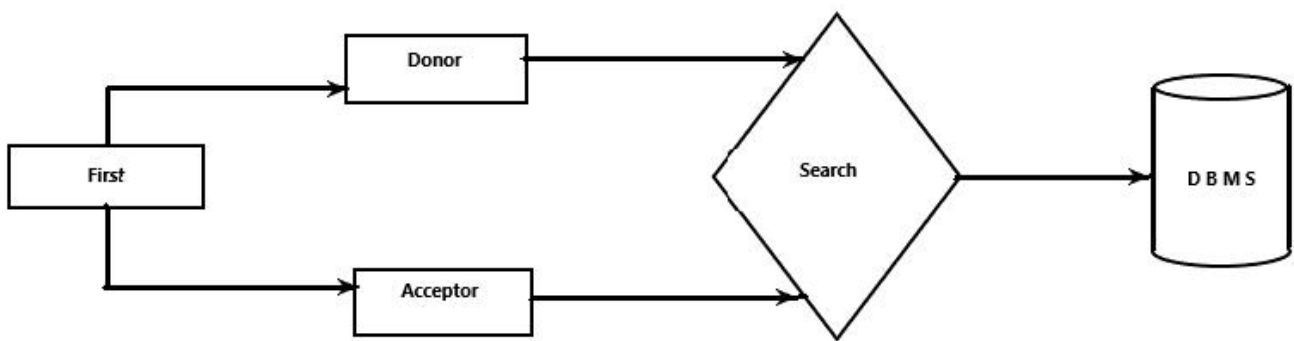


Fig 4.1.4 Data flow diagram for Search Donor And Acceptor

4.1.5 Blood Module

This module is used for viewing all the records available in the database. In other words when user triggers this module the program access the database and retrieve all information from database to program and the program shows the data to the user.

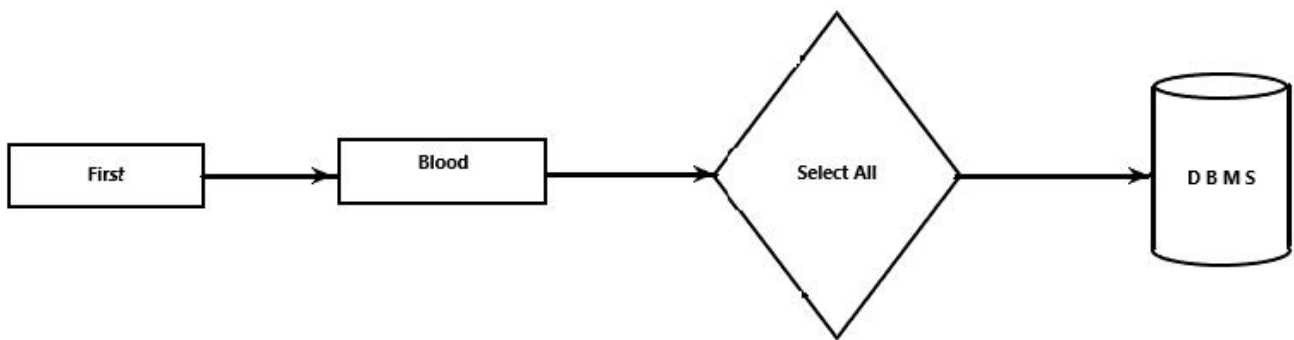


Fig 4.1.5 Data flow diagram for Blood

Chapter 5

Output Snapshots

5.1 Snapshots

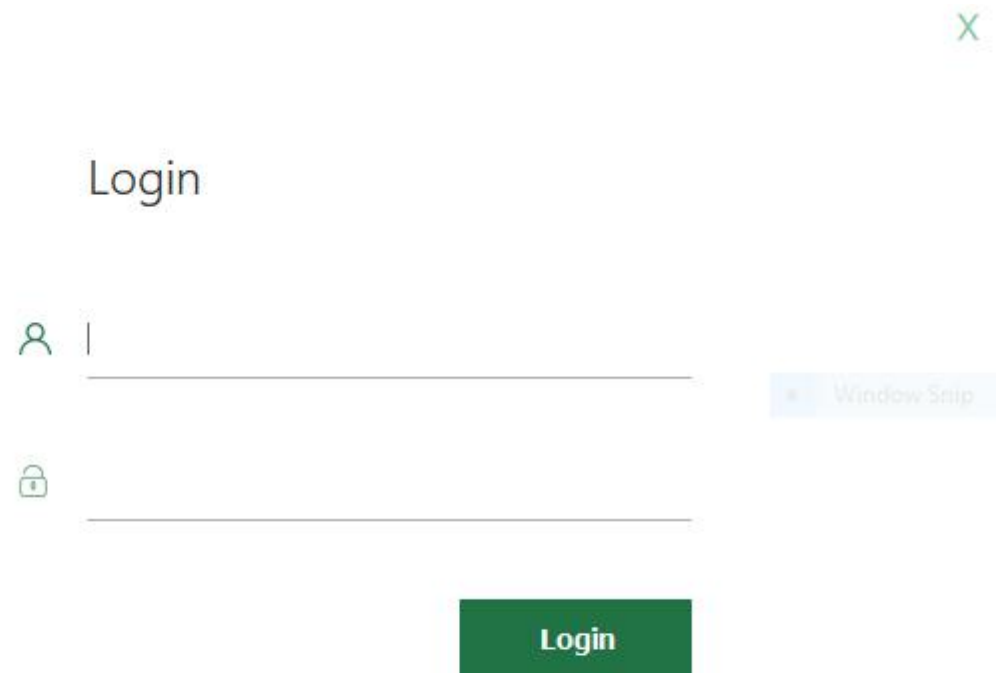


Fig 5.1.1 login page

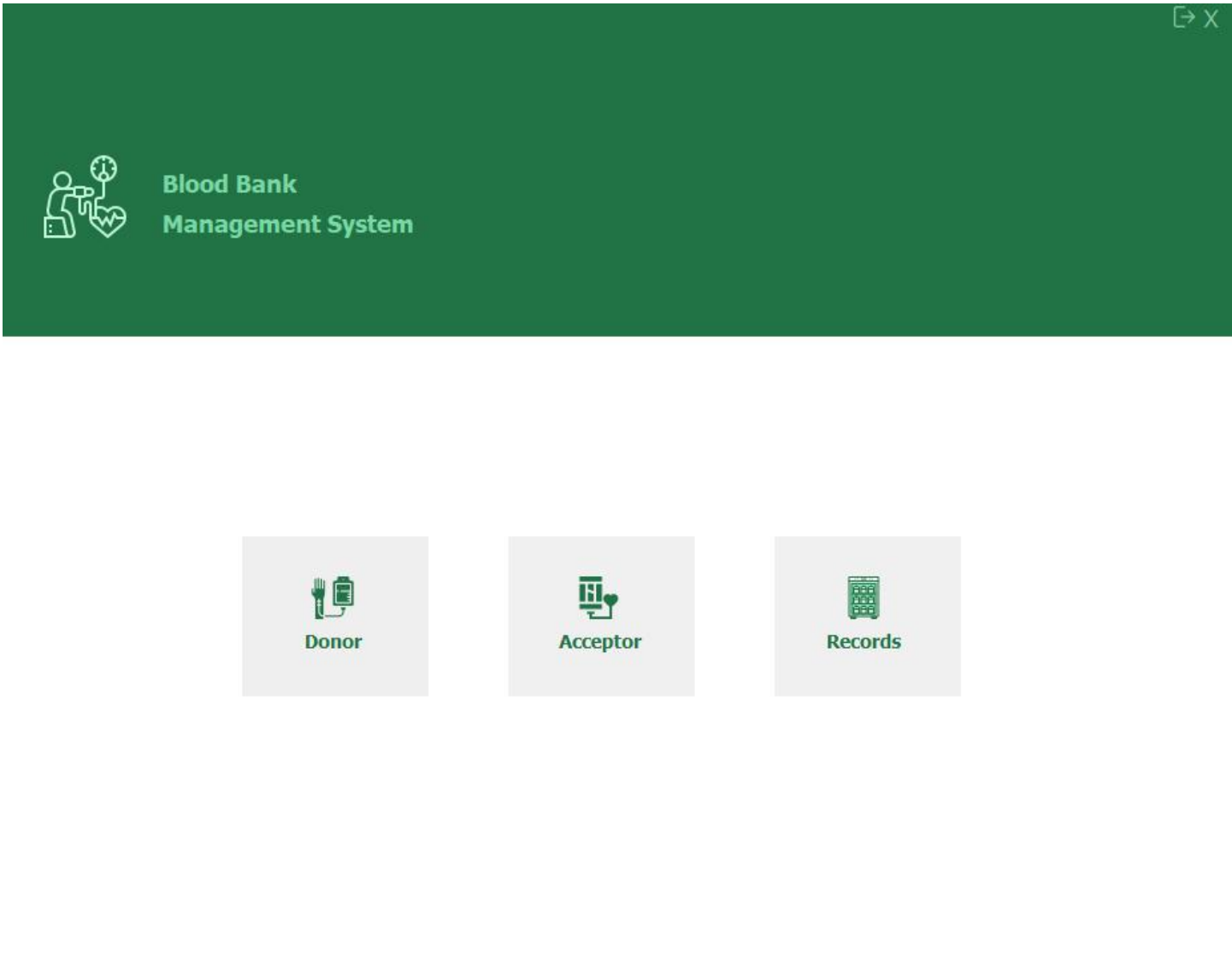


Fig 5.1.2 Home page

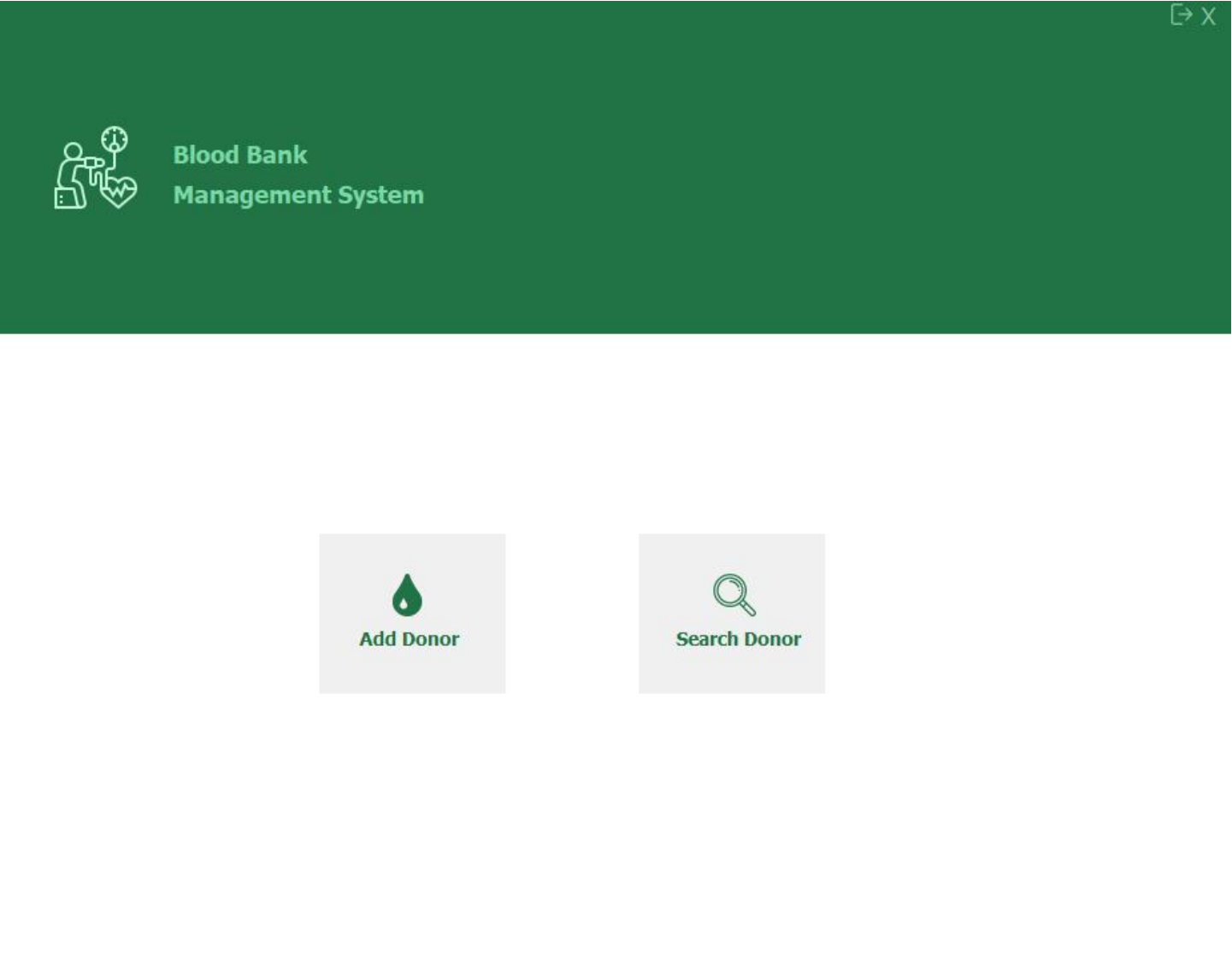



Fig 5.1.3 Donor page



Blood Bank
Management System

➔ X

Donor Form

Donor Id

Name

DOB

Gender

Male

Female

Quantity

Exception

Blood

Phone No

E-Mail


Address

Clear

Save

Note : Please make sure you are HEALTHY and ELIGIBLE to donate blood

Fig 5.1.4 Add Donor page



Blood Bank

Management System

➔

X

Search Donor

Search By

☐ Donor ID

☐ Name

Enter The Required Data

Search

Delete

ID	Name	DOB	Gender	Quantity	Exception	Blood	Phone	Email	Address
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Fig 5.1.5 Search Donor page

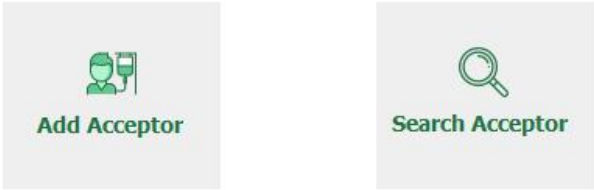



Fig 5.1.6 Acceptor page



Acceptor Form

Acceptor Id	<input type="text"/>	Phone No	<input type="text"/>
Name	<input type="text"/>	E-Mail	<input type="text"/>
DOB	<input type="text"/>	Address	<input type="text"/>
Gender	<input type="radio"/> Male <input type="radio"/> Female		
Quantity	<input type="text"/>		
Reason	<input type="text"/>		
Blood	<input type="text"/>		
		<input type="button" value="Clear"/>	<input type="button" value="Save"/>

Fig 5.1.7 Add Acceptor page



Blood Bank

Management System

➔

X

Search Acceptor

Search By

☐ Acceptor ID

☐ Name

Enter The Required Data

Search

Delete

ID	Name	DOB	Gender	Quantity	Reason	Blood	Phone	Email	Address
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Fig 5.1.8 Search Acceptor page

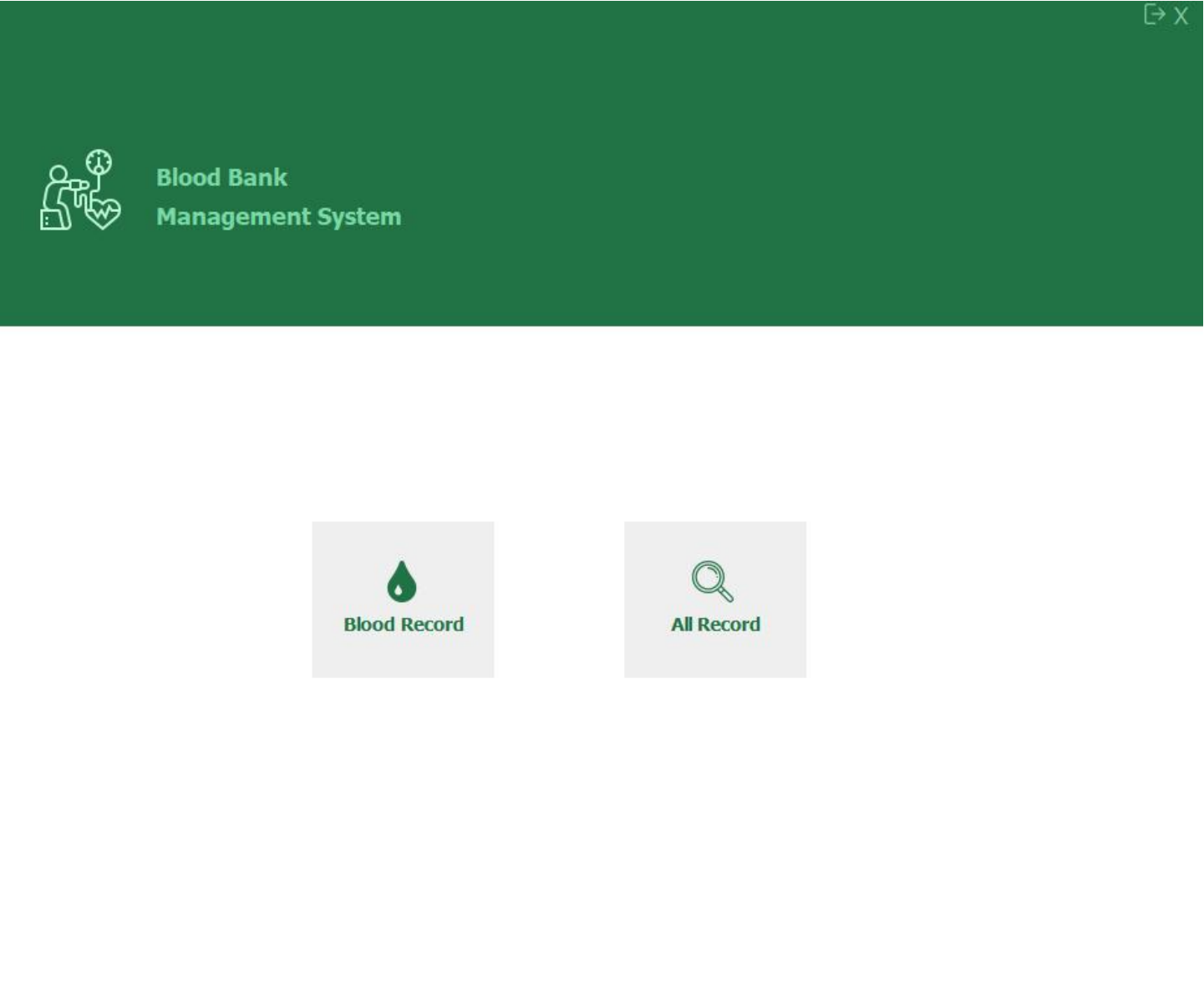


Fig 5.1.9 Records page



Show Available Blood

Blood	Quantity
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Fig 5.1.10 Blood Record page



Donor Details

ID	Name	DOB	Gender	Quantity	Exception	Blood	Phone	Email	Address
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Acceptor Deatails

ID	Name	DOB	Gender	Quantity	Reason	Blood	Phone	Email	Address
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Fig 5.1.11 All Records page

Chapter 6

Conclusion

The project entitled as **Blood Bank Management System** is the system that deals with the Issues related to a particular Blood Bank.

- This project is successfully implemented with all the features mentioned in system requirements specification.
- The application provides appropriate information to users according to the chosen service.
- The project is designed according to the daily needs of the Blood Bank and Their working according to the system of their requirement.
- Deployment of our application will certainly help the Blood Bank to reduce unnecessary losing of the data and they will be able to search the Donor or Acceptor the id generated while the admission or the selection of the Blood.

Awareness and right information about any Blood Bank is essential for both the development of Blood Bank as well as staffs . So this serves the right purpose in achieving the desired Requirements of both the communities.
