**SURANA COLLEGE**

DEPARTMENT OF COMPUTER SCIENCE

#16, SOUTH END ROAD BANGALORE



A PROJECT REPORT ON

LIFE SAVER - BLOOD BANK MANAGEMENT SYSTEM

WHICH IS A BONAFIDE WORK OF

UDAY KUMAR N [18KXSB7107]

MAHESH KUMAR M S [18KXSB7046]

Students of Bachelor of Computer Science submitted in partial fulfillment of the requirement of the award of

DEGREE IN B.C.A prescribed by BANGALORE UNIVERSITY 2020-2021

Mrs. VIDYA A Dr. A SRINIVAS

(PROJECT GUIDE) HOD (COMPUTER SCIENCE)

EXAMINER \_\_\_\_\_\_\_\_\_\_\_\_\_ EXAMINER \_\_\_\_\_\_\_\_\_\_\_\_\_\_

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BACHELOR OF COMPUTER APPLICATIONS

Under the Guidance of

Mrs. VIDYA. A

(Asst.Prof)

DEPARTMENT OF COMPUTER SCIENCE

**PROJECT SYNOPSIS**

**PROBLEM STATEMENT:**

• Scarcity of rare blood group.

• Unavailability of blood during emergency.

• Less awareness among people about blood donation and blood transfusion.

• Deaths due to lack of blood during operations.

• The Blood Bank Management System project aims to make all the procedures automated and therefore with computer system it can be more fast and accurate.

**OBJECTIVE:**

The main objective of this application is to automate the complete operations of the blood bank. They need maintain hundreds of thousands of records. Also searching should be very faster so they can find required details instantly. The system will provide the user the option to look at the details of the existing Donor List, Blood Group and to add a new Donor. It also allows the user to modify the record. The administrator can alter all the system data. It actively encourage voluntary blood donation, motivate and maintain a well-indexed record of blood donors and educate the community on the benefits of blood donation.

**EXISTING SYSTEM:**

 • The operation of the blood bank still now is maintained in the manual system.

• The operation is tedious, time consuming and space consuming.

• It creates room for errors as the data is entered manually by the persons.

• It includes the risk of the documents being lost over years and maintenance of the records is difficult.

• The data recorded during testing or while acquiring the details of different aspects of blood bank management system is not so accurate and precise.

• Maintaining the stock of blood and the daily transactions without computerization also poses a challenge.

**PROPOSED SYSTEM:**

The proposed system (Blood Bank Management System) is designed to help the Blood Bank administrator to meet the demand of Blood by sending and/or serving the request for Blood as and when required.The proposed system gives the procedural approach of how to bridge the gap between Recipient, Donor, and Blood Banks. This Application will provide a common ground for all the three parties (i.e. Recipient, Donor, and Blood Banks)and will ensure the fulfillment of demand for Blood requested by Recipient and/or Blood Bank.

**FEASIBILITY REPORT:**

A feasibility study is a test of a system proposal according to its work ability impact on organization, ability to meet user needs and effective use of resources. The objective of a feasibility study is not to solve a problem but to acquire a sense of its scope. During the study, the problem definition is crystallized and the aspects of the problem to be included in the system are determined. After the initial investigation of the system that helped to have in-depth study of the existing system, understanding its strength and weaknesses and the requirements for the new proposed system.

**Feasibility study was done in three phases documented below.**

* **Operational feasibility**: Automation makes our life easy. The proposed system is highly user friendly and is much easily able to interact with the system. Therefore the users will readily accept the system as data entry and making queries can be easily done.
* **Economic feasibility**: Economic feasibility is the most frequently used method for evaluating the effectiveness of the candidate system. If benefits outweigh the costs, then the decision is made to design and implement the system. A cost\benefit analysis was done for the proposed system to evaluate whether it would be economically viable
* **Technical feasibility**: Technical feasibility centers on the existing computer system. (Hardware/software) and to what extent it can support the proposed addition also the organization already has sufficient high-end machines to serve the processing requirements of the proposed system. So there is no need to purchase new software as the organization has necessary software i.e. Microsoft SQL Server or hardware to support the proposed system

**MODULES :**

Admin module :

* Manage users( View and Delete the User),
* Complete access to view and alter the user details

User module :

Hospital module :

* Upload donated blood details
* Available blood units
* Update the Profile
* access the blood requests

Receiver module :

* request for blood
* Update the Profile
* Blood request status(Pending or Accepted)

**REQUIREMENT SPECIFICATION:**

**Hardware Requirements:**

Hardware is a set of physical components, which performs the functions of applying appropriate, predefined instructions.

The hardware requirements given here is minimal requirements for the project to run.

* Processor : Intel Pentium processor and above
* Processor Speed : 300 MHz and above
* Ram Size : 4GB or above
* Hard Drive : 32 GB or above
* Input Device : Mouse, Keyboard
* Output Device : Monitor

**Software Requirements:**

The software is a set of procedures of coded information or a program which when fed into the computer hardware enables the computer to perform the various tasks.

* Operating System : Microsoft Windows 10
* Front End : HTML, Bootstrap, PHP
* Bank End : XAMPP- sever,MYSQL
* Client side : CSS(cascading style sheet)

**Overview of Tools/Software:**

**1 XAMPP server:**

XAMPP server is a free and open source cross platform web server solution stack package developed by Apache friends,consisting mainly of the Apache HTTP server, Maria DB database, and interpreters for scripts written in the PHP and Perl programming language, XAMPP stands for that makes it extremely easy for developers to create a local web server for testing and deployment purpose.since most actual web server deployments use the same components as XAMPP, its makes transitioning from a local test server to a live sever extremely easy as well.

**2 HTML:**

HTML stands for Hyper Text Mark-up Language, which is the most widely used language on Web to develop web pages. Hypertext refers to the way in which Web pages (HTML documents) are linked together. Thus, the link available on a web-page is called Hypertext. As its name suggests, HTML is a Mark-up Language which means you use HTML to simply "mark-up" a text document with tags that tell a Web browser how to structure it to display.

**3 Bootstrap:**

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components. Bootstrap is a HTML, CSS & JS Library that focuses on simplifying the development of informative web pages. The primary purpose of adding it to a web project is to apply Bootstrap's choices of colour, size, font and layout to that project

**4 PHP:**

PHP is a intuitive,sever side scripting language it allows developers to build logic into the creation of web page content and handle data returned from a web browser.php also contains a number of extension that make it easy to interact with databases,extracting data to be displayed on a web page and storing information entered by a web site visitor back into the database.It is also be used for command line scripting and client GUI applications.IT requires MYSQL connection between front end and back end components to write to the database and fetch.

**5 MySQL:**

MySQL is the most popular Open Source Relational SQL Database Management System. MySQL is one of the best RDBMS being used for developing various web-based software applications. The SQL phrase stands for Structure Query Language. MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQL is developed, marketed and supported by MySQL AB, which is a Swedish company.

1. **Purpose**

This blood bank system project document completely describes what the system should do without describing how the software will do it. The basic goal of requirement phase is to produce the SRS, which describes the complete external behaviour of the system.

1. **Scope**

The project has a wide scope, as it is not intended to a particular organization. This project is going to develop generic software, which can be applied by any business’ organization. Moreover, it provides facility to its users. Also, the software is going to provide a huge amount of summary data.

1. **Developer’s Responsibility**

The developer is responsible for:

1. Developing the system.
2. Installing the software on the client’s hardware.
3. Making interface between  receivers and donors (I.e hospitals).
4. Maintaining the system for a period of two years after installation.

**Product Description**

**Blood Bank Management System** (BBMS) is a web based system that can assists the information of blood  during its handling in the **blood bank**. In this project receivers can request blood from donors and donors can donate blood to the required users. In this project three major modules that have been provided are receivers module, donors module and admin module.

**Goals**

* The proposed system is more efficient, fast, reliable, user friendly.
* Login of the Receivers and Donors using username and password there by provides security to the software.
* Receivers and Donors can create his accounts easily by filling up details in the registration page.
* The Receiver can request for blood by searching required blood group.
* The Donors (hospitals) can add blood group and donate to the requested receivers.
* The system also gives the brief detail about the donors and receivers which are in this blood bank.
* The system also provides logout system facility.
* Manage large number of Receivers and donors details with ease.

**Objective of App store Management**

* The main objective of the system is to donate and receive blood.
* It will Reduced manual work as most of the work done by computer.
* It helps Receivers to find required blood group by searching option.

The main objective of the system is to provide a secure system. Our system is password protected and it only allows authorized users (receivers and donors) to access various functions available in the system.

**Usage Scenario**

The E-notes Point project provides usage scenario for the software. It has organized information collected during requirements elicitation into use-cases.

1. User Profiles

There will be three levels of users:

* Admin level
* Receiver level
* Donor level

1. Use Cases

* Admin level

The admin can view, update and delete the data of Receivers and Donors.

* Receiver level

The Receiver can request for blood from donor and also cancel the request.

* Donor level

The donor can donate blood to receiver by approving and can cancel by rejecting.

Data objects and description:

During the requirement analysis phase, the development team examines the system. After examining all the process and feasibility, the following points were considered while designing the database:

* It should store the registered information of both receivers and donors.
* It should store the received and donated blood group.

Functional Requirements

* Edit profile
* Add blood group
* remove blood group
* Request for blood
* Cancel requested blood
* Manage users
* Manage blood groups
* Admin

Non-Functional Requirements

Usability

The user interface of the system will be user friendly so it will be easy for the user to use the system.

Reliability

The system would be easy to maintain and able to carry further extensions occurred.

Performance

The system should provide the services in considerable time interval.

Security

The information provided by the user should authenticated which protect the system from external attack and spamming.

**Data Dictionary**

Receiver Register Table

|  |  |  |  |
| --- | --- | --- | --- |
| **COLUMN NAME** | **DATATYPE** | **PRIMARY KEY** | **NOT NULL** |
| id | integer | Yes | Yes |
| rname | Varchar(100) | No | yes |
| remail | Varchar(100) | yes | Yes |
| rpossword | Varchar(100) | No | Yes |
| rphone | Varchar(100) | No | Yes |
| rbg | Varchar(100) | No | Yes |
| rcity | Varchar(100) | No | Yes |

Hospitals Register Table

|  |  |  |  |
| --- | --- | --- | --- |
| **COLUMN NAME** | **DATATYPE** | **PRIMARY KEY** | **NOT NULL** |
| id | integer | Yes | Yes |
| hname | Varchar(100) | No | yes |
| hemail | Varchar(100) | yes | Yes |
| hpossword | Varchar(100) | No | Yes |
| hphone | Varchar(100) | No | Yes |
| hcity | Varchar(100) | No | Yes |

Contact Table

|  |  |  |  |
| --- | --- | --- | --- |
| **COLUMN NAME** | **DATATYPE** | **PRIMARY KEY** | **NOT NULL** |
| id | integer | Yes | Yes |
| name | Varchar(100) | No | yes |
| email | Varchar(100) | yes | Yes |
| message | Varchar(100) | No | Yes |

bloodrequest Table

|  |  |  |  |
| --- | --- | --- | --- |
| **COLUMN NAME** | **DATATYPE** | **PRIMARY KEY** | **NOT NULL** |
| reqid | integer | Yes | Yes |
| hid | Varchar(100) | yes | yes |
| rid | Varchar(100) | No | Yes |
| bg | Varchar(100) | No | Yes |
| status | Varchar(100) | No | Yes |