A Project Proposal on

EASY BLOOD MANAGEMENT SYSTEM

Submitted in Partial Fulfillment of the Requirements

For the Degree of **Bachelor's of Engineering in Computer Engineering**

Under **Pokhara University**

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Table of Contents

1. **Abstract…..……2**
2. **Introduction……...3**
3. **Problem Statement……4**
4. **Objectives……...5**
5. **Significance……6**
6. **Modules of easy blood management system……...7**
   - **6.1. Admin……..7**
   - **6.2. Donors……7**
   - **6.3. Donor registration……..7**
   - **6.4. Modifying donor information……7**
   - **6.5. Acceptors……8**
   - **6.6. Donor search……...8**
7. **Literature Review……..9**
   - **7.1. HTML……..9**
   - **7.2. CSS……...9**
   - **7.3. JAVASCRIPT…….....9**
   - **7.4. PHP……..9**
8. **Methodology……10**
   - **8.1. Process model……10**
   - **8.2. Tools and techniques……11**
     - **8.2.1. Tools used……...11**
     - **8.2.2. Techniques……..11**
9. **Deliverable……14**
10. **Plan Schedule……...15**
11. **Bibliography……16**

1. ABSTRACT

This easy blood management system is an online website so it is easily available to everyone. When a person want to donate blood he has to register to the system. Donor registration is very easy, to get registered to the system he has to fill up registration form. After submitting the registration form he can create username and password. Donor have to give information like blood group, contact details etc. Donor can also change his account information when he wants using his username and password. Using this easy blood management system people can search blood group available which they need. They check it out using our easy blood management website. If in case blood group is not available in blood bank they can also contact numbers of the persons who has the same blood group he needs. And he can request the person to donate the blood for saving someone's life. Our system also allows user to search the person who have the same blood group he needs and if he finds a donor in his city then we give him all details of the donor, if he doesn't find any donor then he is given the contact numbers and addresses of the lifesaving details of persons in cities.

Keywords: Donor, Acceptor, Blood, Website, Database, Management

2. INTRODUCTION

The last decade have witnessed great development in health sectors but still there's a problem of blood management for a patient when required. The victim's family sometimes suffer a lot seeking for the required blood. Even various health organizations sometimes lack the blood and that leads to be a big problem for a patient's life.

Currently we are developing a blood management website called "Easy Blood Management System". The main aim of developing this website is to provide blood to the people who are in need of blood. The number of persons who are in need of blood are increasing day by day. Using this website user can search blood groups available in the city and he can also get contact number of the donor who has the same blood group. In order to help people who are need of blood, this Easy Blood website can be used effectively for getting the detail of available blood group and user can also get contact number of blood donor having the same blood group and within the same city. So if the blood group is not available in the blood bank user can request the donor to donate the blood to him and save someone's life. Using this website people can register himself or herself who want to donate blood. To register in this system they have to enter their contact information like address, mobile number etc. It develops a response plan in order to minimize the impact of blood shortage to the health care system.

3. PROBLEM STATEMENT

The use of Easy Blood Management System nullifies the following problems faced by people to manage the required blood group for their patient.

- Sometimes blood management becomes a big problem for a patient's family. Even various organizations lack the blood.
- In the search of blood victims have to rush a lot and suffer huge mental stress.
- It's a difficult task to search a person of required blood group and contact him/her.
- Often donors do not get proper platform to donate their blood.
- The donated blood sometimes do not get utilized to proper place.
- In context of Nepal, blood banks are not available in most of places.

4. OBJECTIVES

After the investigation of the data collection process, objectives of our project Easy Blood Management System has been drawn out. Some major objectives of our website are:

- Update detailed information of blood donors and receivers which can be accessed by all users and contact with the required person.
- Develop an interactive website with user friendly search interface, data update in database and access.

5. SIGNIFICANCE

The people in need of blood can search for the donors by giving their blood group and city name. It saves time, he can search donors online without going anywhere. Using this system user can get blood in time and can save relative's or friend's life. Our website work 24*7 so user can get information of blood donor anytime. Blood donors can also get registered and save life of other person. The main benefit of this system is the information of available blood group. When blood is need in the operation then people have very less time to get the blood available so he get the information like who can give him blood in time in his city is lifesaving. And here our system work whenever a person need blood, he get information of the person who has the same blood group he needs. It reduces the time spend on the paper work.

6. MODULES OF EASY BLOOD MANAGEMENT SYSTEM

It is to provide services for the people who are in need of blood by getting help from the donor who are interested in donating blood for the people. There are six main modules in this system.

6.1 Admin:

Admin can manage both donors and acceptors. He can add or remove any user from the system. From admin module use can change donor details, delete donor or change the password.

- Change password
- Modify donor details
- Delete donor details
- Logout

Whenever a user wants to change his or her password he can select the change password option. The system displays the form, which asks him for his old password and new password. The system then compares the old password with the existing password in the database and if they match then the password is set to the new password in the database.

6.2 Donors:

From this module user can create their account, when user create his account the user get a user id and password which identifies him uniquely. From this module user can search donor for blood and can also refer his friend to become a donor. Donor can also get information like when he donated blood or when he will be able to donate blood.

6.3 Donor registration:

In this module, people who are interested in donating blood get registered in our site and give his overall detail related to him, i.e. he fills in a registration form by giving the total details such as name, address, city, sex, weight, blood group, telephone numbers, e-mail address, etc. He is also given two fields' username and password to such that he is a registered donor and he can enter the login form with his username and password and can modify his details if needed.

6.4 Modifying donor information:

The registered donor only is able to modify his details; no other person can modify his details as there is a login form which restricts others from entering the username and password providing high security for the details given by the donor. If the donor wants to modify his details, he is forced to give his username and password to enter in. After giving the username and password it checks for the donor whether he is an existing donor or not if the username and password matches, he can then able to modify his total details. If the username and password do not exist then he gets a message as "Wrong ID and Password Entered, Try Again".

6.5 Acceptors:

This module helps user to find blood group. When user click on find a blood group system ask him to enter blood group he want to search. After entering the blood group, system searches for the availability of the blood group and give him the list of the donors who has the same blood group. Whenever a user wants to change password he can select the change password option. Then system ask the user to enter old username and password then system check the credentials and change the password. Clicking on logout button user can log out from the system.

- Find a donor
- Refer a friend
- Change password
- Find a blood group
- Logout

6.6 Donor search:

The people who are in need of blood can search in our site for getting the details of donors having the same blood group and within the same city. They can directly click on the link search a donor and can select a city name as well as the blood group which he needs. He then gets the details of the donors who exist within the city and the same blood group that he has selected. If no match was are found for the city and group selected by him he gets message "SORRY DONORS ARE NOT AVAILABLE WITH THE FOLLOWING BLOOD GROUP IN THE AREA."

7. LITERATURE REVIEW

Each programming language has their own syntax and definition. Different programming language can be used for different fields. But considering our current knowledge, time and limit credits, we choose web development. And the programming languages selected for this purpose are:

7.1. Html:

HTML is a markup language. It provides structure of a website so that web browsers know what to show.

7.2. CSS:

CSS is a Cascading Style Sheet. CSS let's web designers change colors, fonts, animations, and transitions on the web. They make the web look good.

7.3. JAVASCRIPT:

JavaScript used by all web browsers, Meteor, and lots of other frameworks.

7.4. PHP:

PHP is a server scripting languages, and a powerful tool for making dynamic and interactive web pages.

8. METHODOLOGY

8.1. Process model:

The framework we followed in developing this project is incremental model, which is a use of linear sequential model in an iterative manner. New functionalities were added as each incrementwasdeveloped.Linearsequentialmodelwasappliedtodevelopeachincrement.The phases of the linear sequential model are: Analysis, Design, Coding and Testing. The software repeatedly passes through these phase in iteration and an increment is delivered with progressive changes.

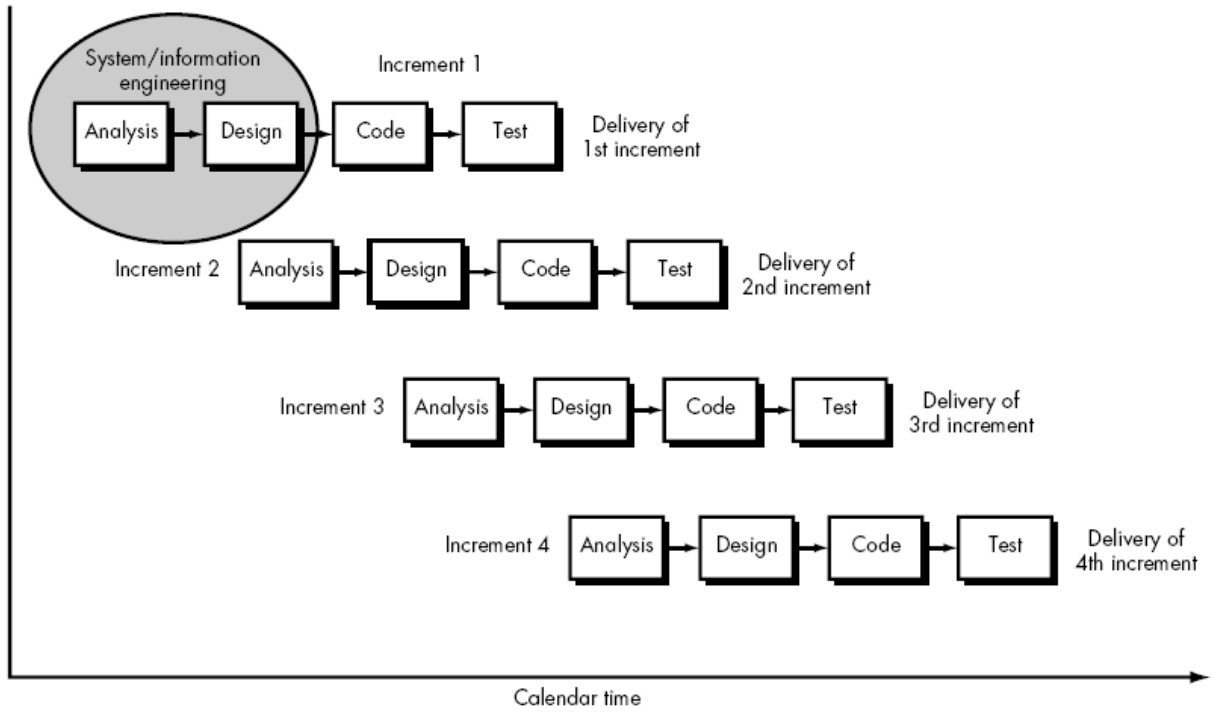


Figure 1: Incremental Model

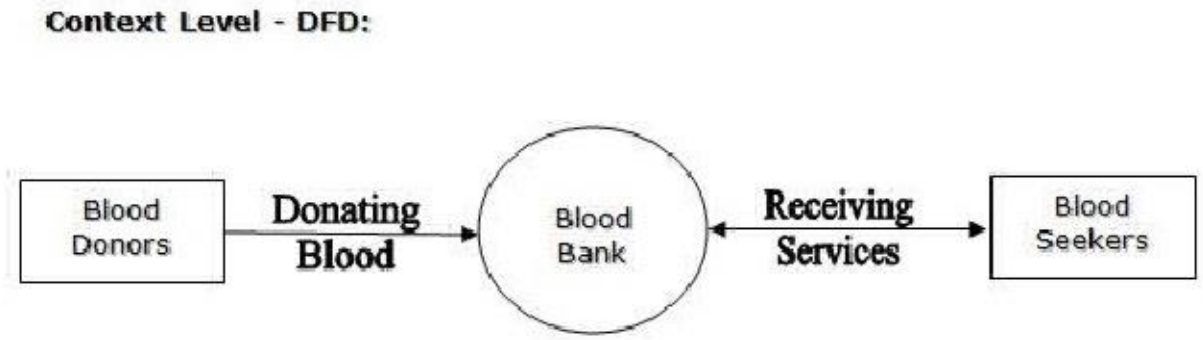
Analysis Phase: In this phase, analysis was done in order to find out the requirements of the system. The outcome of this phase is a SRS which is an acronym for "System Requirement Specifications".

Design Phase: In this phase the SRS was translated into the system's design. Context Diagram, DFD, ER – Diagram, Use Case Diagram and Class Diagram were developed.

Coding Phase: In this phase coding was done according to the design and a working system was developed by the end of this process.

Testing Phase: In this phase, the system was tested. With each testing a list of changes to the system developed, was suggested and the changes were applied to the software and the software was delivered as a successive increment until a satisfying system was achieved.

Data Flow Diagram (DFD): It is a graphical representation of the flow of data through an information system, modeling its process aspects. A DFD is often used as a preliminary step to create an overview of the system without going into great details, which can later be elaborated. DFDs can also be used for visualization of data processing (structured design).



Fig; DFD for easy blood management system

8.2. Tools and Technique:

8.2.1. Tools Used

- Sublime Text3
- Photoshop

8.2.2. Techniques

Browsers:

Browsers are the interpreters of the web. They request information and then when they receive it, they show us on the page in a format we can see and understand.

Google Chrome - Currently, the most popular browser brought to you by Google

Firefox - Open-source browser supported by the Mozilla Foundation

Internet Explorer - Microsoft's browser. You will most often here web developers complain about this one.

Html:

HTML is a markup language. It provides structure of a website so that web browsers know what to show.

CSS:

CSS is a Cascading Style Sheet. CSS let's web designers change colors, fonts, animations, and transitions on the web. They make the web look good.

Programming Languages:

Programming languages are ways to communicate to computers and tell them what to do. There are many different programming languages just like there are many different lingual languages. One is not better than the other. Developers typically are just proficient at a couple so they promote those more than others. Below are just some of the languages and links to their homepages.

JavaScript – It is used by all web browsers, Meteor, and lots of other frameworks.

PHP-It is a server scripting languages, and a powerful tool for making dynamic and interactive web pages.

Frameworks:

Frameworks are built to make building and working with programming languages easier. Frameworks typically take all the difficult, repetitive tasks in setting up a new web application and either do them for you or make them very easy for you to do.

Bootstrap - a UI (user interface) framework for building with HTML/CSS/JavaScript.

Databases:

Databases are where all our data is stored. It's like a bunch of filing cabinets with folders filled with files. Databases come mainly in two flavors: SQL and NoSQL. SQL provides more structure which helps with making sure all the data is correct and validated. NoSQL provides a lot of flexibility for building and maintaining applications.

MySQL - is another popular open-sourced SQL database. MySQL is used in WordPress websites.

Client (or Client-side):

A client is one user of an application. It's you and me when we visit http://google.com. Clients can be desktop computers, tablets, or mobile devices. There are typically multiple clients interacting with the same application stored on a server.

Server (or Server-side):

Server is where the application code is typically stored. Requests are made to the server from clients, and the server will gather the appropriate information and respond to those requests.

Front-end:

The front-end is comprised of HTML, CSS, and JavaScript. This is how and where the website is shown to users.

Back-end:

The back-end is comprised of our server and database. It's the place where functions, methods, and data manipulation happens that we don't what the client's to see.

9. DELIVERABLE

Project will deliver at the end:

- The proposed method maintenance of schedule erroneous and it is very easy to operate.
- An individual can easily find the required blood group.
- It keeps the information of database secured by providing access using login interface.
- It provides the necessary basic details of the donor and acceptor with the help of database.

10. PLAN SCHEDULE

The project schedule has been designed as per requirements and constraints involved. This project is scheduled to be completed in about 2 months. Requirement analysis have been given more emphasis. Research and database management is to be done first and well documented. Debugging and Testing is to be done prior to the completion of the project.

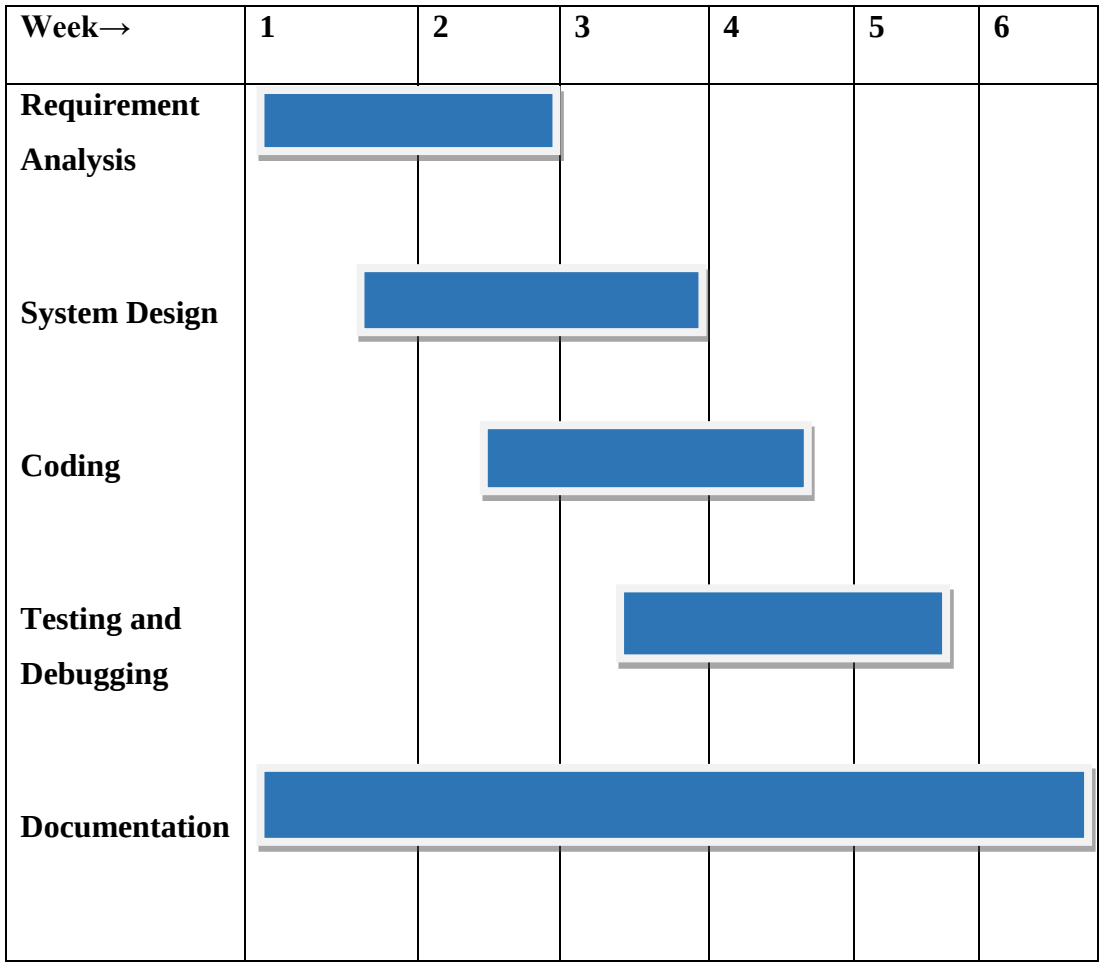


Fig: Gantt chart

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