Chapter 1

Introduction

1.1 Overview

The proposed Blood Bank management system helps the people who are in need of a blood by giving them all details of blood group availability or regarding the donors with the same blood group. The people in need of blood can search for the donors by giving their blood group and city name. It saves time as he can search donors online without going anywhere. Using this system user can get blood in time and can save his relative or friend life. Our website work 24x7 so user can get information of blood donor any time. Blood donor 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 if 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.

Centralized Storage:
A centralized storage is a storage that is located, stored, and maintained in a single location. This location is most often a central computer or database system, for example a desktop or server CPU, or a mainframe computer. In most cases, a centralized database would be used by an organization or an institution.[3]

Distributed Architecture:
In a distributed architecture, components are hosted on different platforms and communicate through a network. Distributed architecture is a field of computer science that studies distributed systems. A distributed system is a model in which components located on networked computers communicate and coordinate their actions by passing messages.[4]

Distributed Client Server:
A Client-Server Architecture consists of two types of components: clients and servers. A server component perpetually listens for requests from client components. When a request is received, the server processes the request, and then sends a response back to the client. Servers may be further classified as stateless or stateful.
Clients of a stateful server may make composite requests that consist of multiple atomic requests. This enables a more conversational or transactional interactions between client and server.[5]

Storage:
Computer data storage, often called storage or memory, is a technology consisting of computer components and recording media used to retain digital data. It is a core function and fundamental component of computers.[6]

1.3 Applying Software Engineering Approach

The goal of system design is to produce a model or representation that exhibit, commodity and delight. It provides information about the application domain for the software to be built. It fully describes the internal details of each software. Here are some advantages of incremental model:-

1. Each iteration passes through the requirements, design, coding and testing phases.
2. Software will be generated quickly during the software life cycle.
3. It is flexible and less expensive to change requirements and scope.
4. Customer can respond to each built and errors are easy to be identified.
5. Easier to test and debug during a smaller iteration.

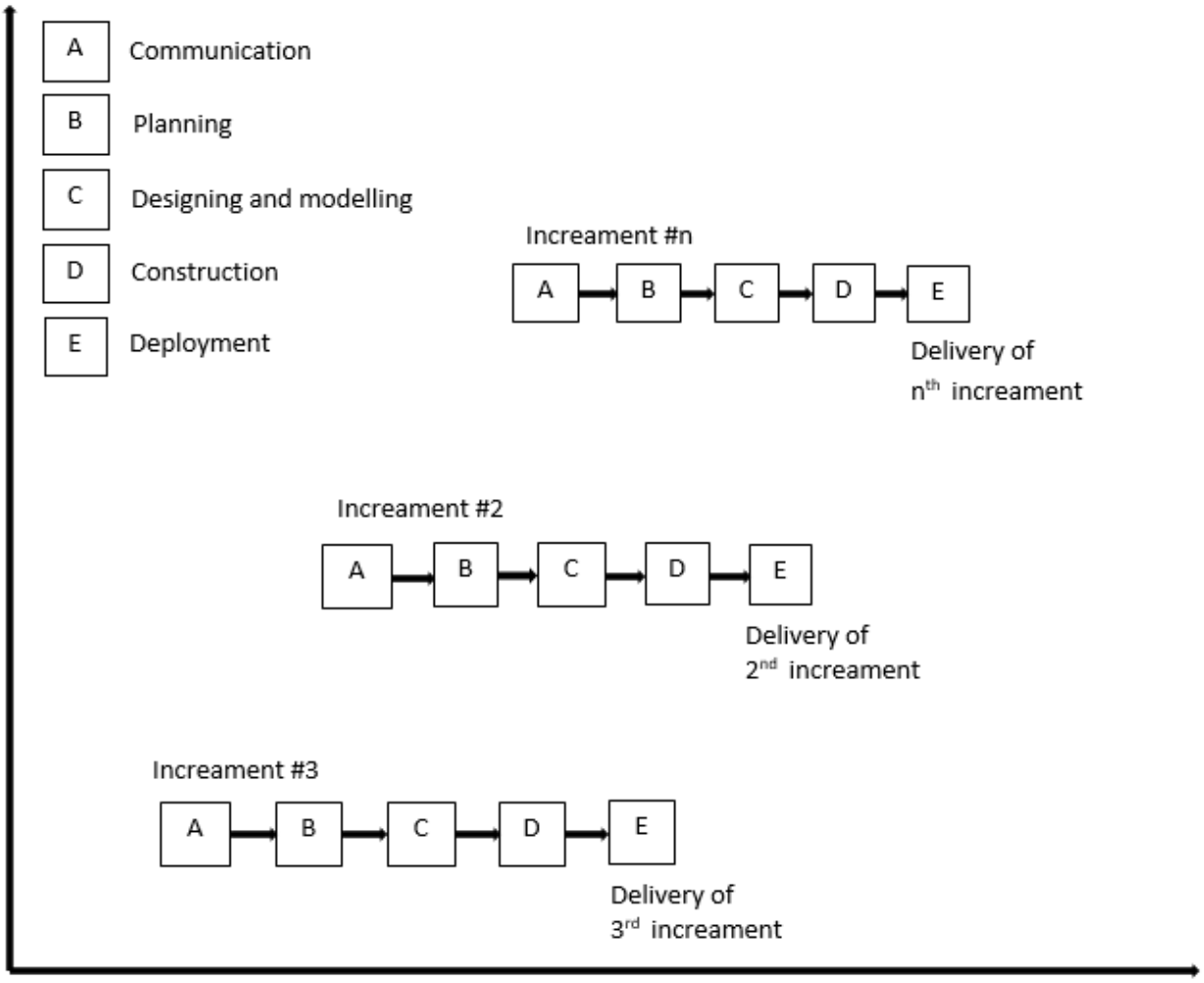

Fig.1.1: Incremental Model

1.3.1 Communication

This is the first step where the user initiates the request for a desired software product. He contacts the service provider and tries to negotiate the terms. He submits his request to the service providing organization in writing.

1.3.2 Planning and Requirement Analysis

Requirement analysis is the most important and fundamental stage in SDLC. It is performed by the senior members of the team with inputs from the customer, the sales department, market surveys and domain experts in the industry.

1.3.3 Designing and Modeling

Based on the requirements specified in SRS, usually more than one design approach for the product architecture is proposed and documented in a DDS.

1.3.4 Construction

This step is also known as programming phase. An estimate says that 50% of whole software development process should be tested. Software testing is done while coding by the developers and thorough testing is conducted by testing experts at various levels of code such as module testing, program testing, product testing, in-house testing and testing the product at user's end.

1.3.4 Deployment

Once the product is tested and ready to be deployed it is released formally in the appropriate market. The product may first be released in a limited segment and tested in the real business environment (UAT).

Chapter 2

Literature Survey

2.1 Blood Donation app 'National Blood Banks Directory' was developed in the year 2016 for the purpose of donating and receiving the blood. This app contains state/city wise list of Blood banks. This app is useful for particular area not universally. In fig. 2.1.1. Telephone is not mentioned for contact.
It is very important for donor to know basic details about the receiver and also to contact with the receiver the contact number is required. So the contact no plays important role in Blood bank System. In fig. 2.1.2. Telephone is mentioned for contact.[7]

Fig.2.1: Screenshot of Blood Banks India Directory for Nagaland State

Fig.2.2: Screenshot of Blood Banks India Directory for Maharashtra State

2.2 In the Fig.2.2.1 the app ‘Blood Banks India Directory’ displays only the Blood Banks which helps the user to communicate with only blood bank but the user should allow to communicate with another user.[7] In the Fig.2.2.2 the app ‘Nepal Blood Donors’ requires email ID and the password or our Facebook account which loses security. Therefore our app allows user to create there new login details. This helps to maintain a security.[8]

Fig.2.3: Screenshot of Blood Banks India Directory

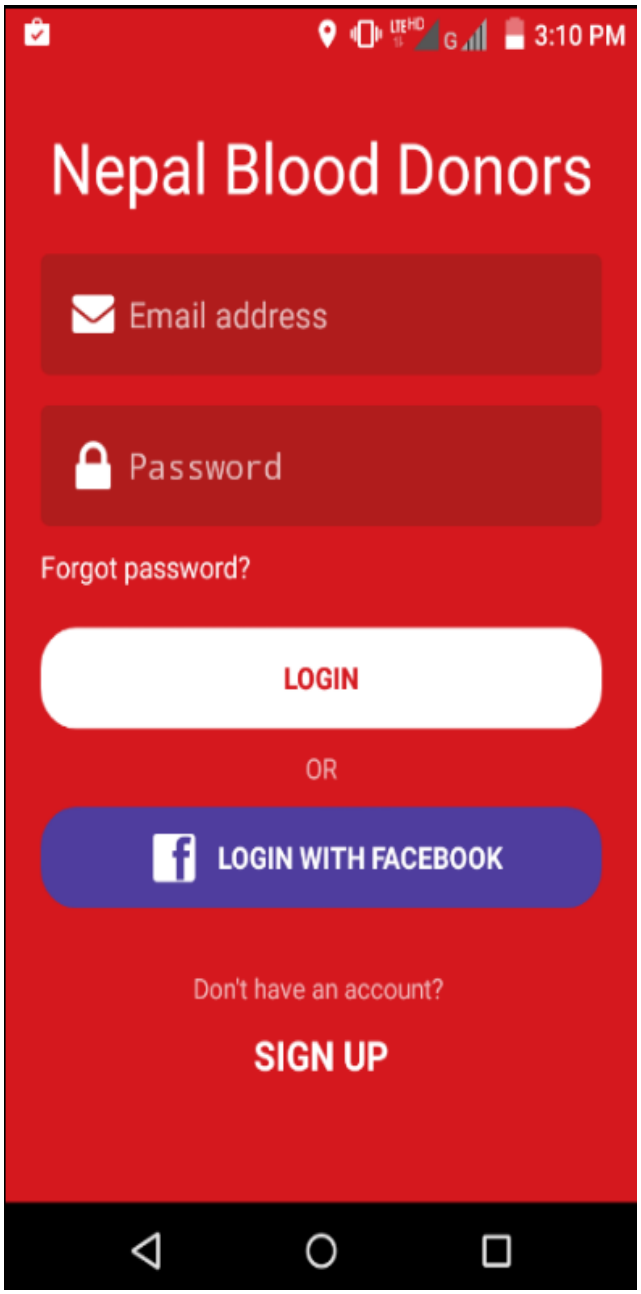

Fig.2.4: Screenshot of Nepal Blood Donors

2.3. Some apps have location tracking system which may not be useful when donor's GPS is off. If donors GPS is off the receiver will not be able to communicate with the donor and in the case if the GPS is on there are rare conditions to find the donor as shown in Fig.2.3.1. and the GPS reduce the battery.

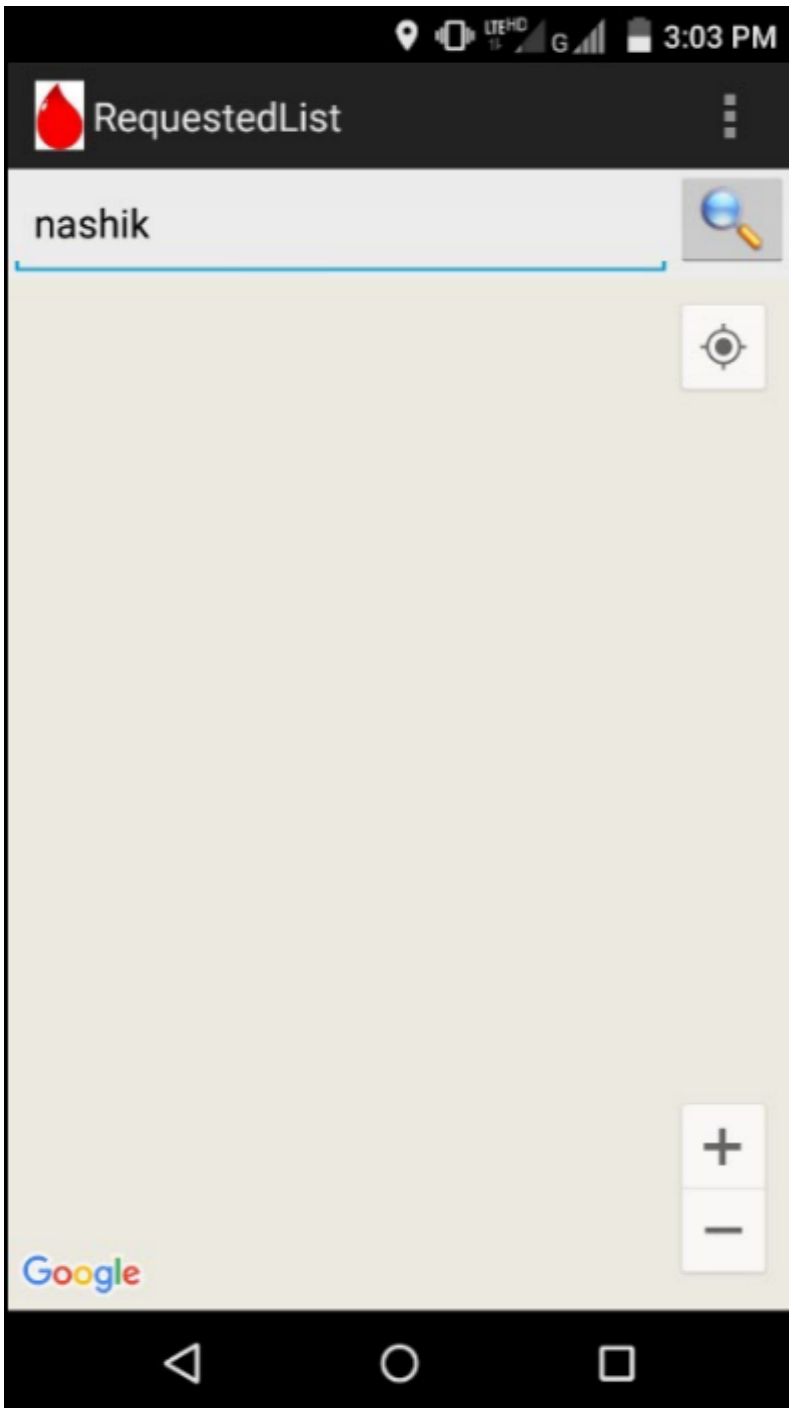

Fig.2.5: Screenshot of Donate Blood Save Life's

Chapter 3

Requirement Analysis

3.1 Functional Requirements:

3.1.1 Software Requirements:

1) Platform: Windows XP

Platform is any hardware used to host an application or service. [9]

2) Language: PHP

A programming language is a formal computer language designed to communicate instructions to a machine, particularly a computer. Programming languages can be used to create programs to control the behavior of a machine or to express algorithms.

3) Mobile Client: Android

Mobile server is a computer system(computer hardware and operating system), that responds to requests across a computer network to provide, or help to provide, a network service, while being easily portable in a laptop form factor.

4) IDE/Tool: Eclipse IDE

An integrated development environment (IDE) is a software application that provides comprehensive facilities to computer programmers for software development.

3.1.2 Hardware Requirements:

1) Processor: Pentium IV

A processor is the logic circuitry that responds to and processes the basic instructions that drive a computer.

2) RAM: 64 MB

Random-access memory (RAM) is a form of computer data storage which stores frequently used program instructions to increase the general speed of a system.

3) Storage: 20 GB

Computer data storage, often called storage or memory, is a technology consisting of computer components and recording media used to retain digital data. It is a core function and fundamental component of computers.[6]

4) Mobile Phone: Android Phone

A telephone with access to a cellular radio system so it can be used over a wide area, without a physical connection to a network.

5) Monitor: 15”

A computer monitor or a computer display is an electronic visual display for computers.

3.2 Non-Functional Requirements:

1) Person: A person is required for the transaction of blood.

2) Blood Bank: Blood bank update the user information with medical tests also can add new user and new bank.

3) Admin: Admin manages all the transactions between User, Blood Bank and donor which helps the app to execute effectively.