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**INTRODUCTION TO PROJECT**

**Project Overview**

The Blood Donation Agent is to create an e-Information about the donor and organization that are related to donating the blood. Through this application any person who is interested in donating the blood can register himself in the same way if any organization wants to register itself with this site that can also register. Moreover if any general consumer wants to make request blood online he can also take the help of this site. Admin is the main authority who can do addition, deletion, and modification if required.

**Project Description**

This project is aimed to developing an online Blood Donation Information. The entire project has been developed keeping in view of the distributed client server computing technology, in mind. The Blood Donation Agent is to create an e-Information about the donor and organization that are related to donating the blood. Through this application any person who is interested in donating the blood can register himself in the same way if any organization wants to register itself with this site that can also register. Moreover if any general consumer wants to make request blood online he can also take the help of this site. Admin is the main authority who can do addition, deletion, and modification if required.

**FEASIBILITY STUDY**

Preliminary investigation examine project feasibility, the likelihood the system will be useful to the organization. The main objective of the feasibility study is to test the Technical, Operational and Economical feasibility for adding new modules and debugging old running system. All system is feasible if they are unlimited resources and infinite time. There are aspects in the feasibility study portion of the preliminary investigation:

* Technical Feasibility
* Operation Feasibility
* Economic Feasibility

**Technical Feasibility**

Technical feasibility deals with the necessary technology exist to do what is suggested or not. The proposed equipment have the technical capacity to hold the data required to use the new system.

The system can be upgraded if developed. It deals with whether there exists technical guarantees of accuracy, reliability, ease of access and data security.

**Operational Feasibility**

Proposed projects are beneficial only if they can be turned out into information system. That will meet the organization’s operating requirements. Operational feasibility aspects of the project are to be taken as an important part of the project implementation.

**Economic Feasibility**

A system can be developed technically and that will be used if installed must still be a good investment for the organization. In the economic feasibility, the development cost in creating the system is evaluated against the ultimate benefit derived from the new systems. Financial benefits must equal or exceed the costs.

**SYSTEM ANALYSIS**

**Software Requirement Specification (SRS)**

The software, Site Explorer is designed for management of web sites from a remote location.

**Introduction**

**Purpose:** The main purpose for preparing this document is to give a general insight into the analysis and requirements of the existing system or situation and for determining the operating characteristics of the system.

**Scope:** This Document plays a vital role in the development life cycle (SDLC) and it describes the complete requirement of the system. It is meant for use by the developers and will be the basic during testing phase. Any changes made to the requirements in the future will have to go through formal change approval process.

**The modules involved are:**

1. **Administration:**

In this module the Administrator has the privileges to add all the Blood Groups, Blood Type, Organization, Type, Country, State, City, and Location. He can search all the info about the Organization, Donor.

**User Account:** AccountID, Username, Password, UserDesc, RoleID, Active

**Functionality:** Association User Account with UserRole, Organisation, personal Details,

Employee deatails., BloodDonation Details.

**Alerts:** All fields are mandatory, select user role, Select role id, and Select role name

1. **User**

**Functionality:** Association user role with user Account

**BDA State:** StateID**,** StateName**,** StateCode**,** StateDesc**,** CountryID**,** Active

**Functionality:** Association state with city and Address

**Alerts:** Select State id, Select state name

**Country:** CountryID**,** CountryName**,** CountryDesc**,** CountryCode**,** Active

1. **Personal Details:**

UserAccountID, FirstName, MiddleName, LastName, Email, DOB, Weight, Gender, ImageURL, BloodGroupID, BloodType, BloodType, AddressID, ContactNo, Office, ContactNo\_ Residence, MobileNo, Active

1. **Donor:**

Donor is that person who is interested in donating their blood so they can register themselves through this website. If any requirement comes then they will be contacted and they can donate their blood. Along with it they can search for the various organization locations wise and can also make request for blood if needed

**Donation Frequencies:** Frequency ID**,** Frequency**,** Description

**Functionality:** Association Donor Frequencies with Blood donation preferences.

**Alerts:** Select Frequency Id

**Donor Preferred Organization:** User Account ID, Organization ID**,** Active

# **FRONT END**

## HTML

**Hypertext Markup Language** (**HTML**) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web.Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document. HTML elements are the building blocks of HTML pages.

**CSS**

**Cascading Style Sheets** (**CSS**) is a style sheet language used for describing the presentation of a document written in a markup language like HTML.CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts.This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

## BOOTSTRAP

**Bootstrap** is a free and open-source front-end framework for designing websites and web applications. It contains HTML and CSS based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions. Unlike many earlier web frameworks, it concerns itself with front-end development only.

**JAVASCRIPT**

**JavaScript** often abbreviated as **JS**, is a high-level, interpreted programming language. It is a language which is also characterized as dynamic, weakly typed, prototype-based and multi-paradigm.

# **BACK END**

**NODE.JS**

**Node.js** is a very powerful JavaScript-based framework/platform built on Google Chrome's JavaScript V8 Engine. It is used to develop I/O intensive web applications like video streaming sites, single-page applications, and other web applications. Node.js is open source, completely free, and used by thousands of developers around the world.

**MONGODB**

**MongoDB** is a free and open-source cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with schemata. MongoDB is developed by MongoDB Inc., and is published under a combination of the Server Side Public License and the Apache License.

# **TOOLS TO BE USED IN DEVELOPMENT**

**Visual Studio Code** is a source code developed by Microsoft for Windows, Linux and macOS. It includes support for debugging, embedded Git control, syntax highlighting, intelligent code completion, snippets, and code refactoring. It is also customizable, so users can change the editor's theme, keyboard shortcuts, and preferences. It is free and open-source,although the official download is under a proprietary license.

## Google Chrome

**Google Chrome** (commonly known simply as **Chrome**) is a freeware web browser developed by Google LLC.It was first released on September 2, 2008 for Microsoft Windows, and was later ported to Linux, macOS, iOS and Android. Google Chrome is also the main component of Chrome OS, where it serves as a platform for running web apps.

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# **HARDWARE AND SOFTWARE REQUIREMENTS**

## HARDWARE REQUIREMENTS

Hardware requirements include that hardware which is required for its working. It includes:

* 4 GB RAM minimum, 8 GB RAM recommended.
* 1.5 GB hard disk space + at least 1 GB for caches.
* 1024x768 minimum screen resolution monitor.

## SOFTWARE REQUIREMENTS

The technical specifications of requirements for the software are as follows:

### **Windows:**

* Microsoft Windows 10/8/7 (incl.64-bit)
* 1 GB RAM minimum
* 2 GB RAM recommended
* Node.js
* MongoDB

### **Mac:**

* Mac OS X 10.8 or higher
* 1 GB RAM minimum
* 2 GB RAM recommended
* Node.js and MongoDB

### **Linux:**

* 512 MB RAM minimum, 1 GB RAM recommended
* Node.js and MongoDB

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