**E- Blood Bank (Blood for Lives)**

**SRS Document**

**Users:**

* Administrators
* Donors / Consumers

1. **Introduction**
   1. **Purpose:**

The purpose of this document is to deliver a detailed depiction of the E- Blood Bank. It will explain the function and characteristics, the boundaries and purpose of the system, and all external environment restrictions under which this system must operate and react successfully.

The software System, an E- Blood Bank (EBB) will be designed for blood bank related services. The purpose of this system is to combine all databases of blood banks as well as the records of blood donation and consumption. It will help seekers to find the blood availability and donor to donate blood at a blood donation centre.

More specifically, this designed system will allow registered users to search for blood and make a request online.

* 1. **Scope:**

EBB will be always available for users where they can access the functionalities provided by the web application. The system provides secure registration and profile management facilities for users. It will have adequate searching mechanisms to get information about blood bank related facilities. The system also provides an easy solution for the registered seekers to request a specific type of blood online using the internet and also allow donors to book the schedule online for the blood donation.

* 1. **Definitions:**

SRS - Software Requirement Specification

EBB – E-Blood Bank

* 1. **Overview:**

Developing an online platform is a job that requires equal share of technological expertise and sound decision making. This website offers smoother experience to use provided services. Developers make it sure that the site is high on responsiveness and low on tech errors, which is the most favourable selling point of this web application.

Also from the service perspective, users usually get the blood bank services with ease on websites, as they get all the details available there. EBB provides seekers to find required types of blood by spending less time, besides the whole and sole purpose is to provide blood bank facilities to users with minimum efforts.

1. **Overall Description:**

BloodForLives is an online website, an outstanding way of bringing users on an online platform to provide blood bank related facilities in an efficient manner. This website provides an Interactive interface through which a user can interact with different areas of the application easily by maintaining the blood stocks as well as user’s information. EBB provides a simple interface and platform to ease the process of getting the information about blood availability online. It includes smooth functionality and efficiency that get the user’s work done. BloodForLives keeps the information about the blood stock and user data updated.

Users are classified into three parts: the Administrators, Donors and Consumers.

* **Administrator:**

He or she is a verified/ authorized person in the EBB who is allowed to organize blood donation camps and he can manage the requests for blood as well as he/she can give confirmation about blood donation status of donors. Admin is responsible for monitoring functions and procedures on the platform. Admin can manage or view all the functionalities as given below

* View or update the data of blood donation and blood seeking request.
* View and manage the appointments/events.
* **Consumer:**

He or she is a verified user of a website who is intended to get blood via EBB. The consumer must have an Email-Id and password to make a request. If the consumer is not registered, they will have to register themselves by navigating to the sign up page.

* **Donor:**

He or she is a verified user of a web application who is intended to donate blood via OBBMS. The donor must have an Email-Id and password to do donation of blood. If the donor is not registered, they will have to register themselves by navigating to the signup page.

**3.Requirements Specification**

* 1. **: Functional Requirements**

This section provides a requirement overview of the system.

* + 1. **Administrator:**
* **Database Management:** Admin can control the database and keep track of all the records of consumers, donors and blood stock details.
* **User Details:** Admin can view the personal details of the users.
* **Managing requests from Users:** Admin will be responsible for approval and rejection of the requests made by the consumers and donor for getting the blood of required type and donation of the blood respectively.
* **View blood Stocks:** Admin will keep track of blood’s stocks for the management purpose.
* **Organize a blood donation camp:** Admin can organize a blood donation camp and he can assign the dates and centers for the blood donation camp.
* **Login & Logout:** Admin will have to login to monitor and perform the functions mentioned above. Admin can logout after completion of his work.
  + 1. **Donor:**
* **Login:** For Blood donation, donors need to get authenticated by logging in to the OBBMS web application by using their registered email ID and password.
* **Blood donation:** Donors will have to make an appointment/request for blood donation. The registered donor will make a request to donate blood by choosing his/her suitable date slot and on the day of blood donation he/she will have to go to the centre and donate the blood.
* **view profile:** Donor can see the donations he/she has done in the past in the form of donation history. Also can edit/update his/her profile.
* **Logout:** After getting an appointment/request, the donor can logout himself.
  + 1. **Consumer:**
* **Login:** For Blood donation, consumers need to get authenticated by logging in to the OBBMS web application by using their registered email ID and password.
* **Blood Consumer:** Consumers will have to make an appointment/request to get the blood from the blood bank. The consumer then can visit the blood bank to get the blood.
* **View profile:** Consumer can see the blood received by him/her in the past in the form of consumption history. Also can edit/update his/her profile.
* **Logout:** After getting an appointment/request, the consumer cans logout.
  + 1. **Visitors:**
* **blood donation camp’s details:** Any anonymous user will be able to view different blood donation camps to be held in the near future.
* **Awareness about blood donation:** Any anonymous user will be able to see the posters and quotes for awareness regarding the blood donation.
* **Registration:** To donate or request the blood, the user should register themselves on OBBMS web application.
  1. **Non-Functional Requirements:**

Following Non-Functional Requirements will be there in the insurance to the internet:

* Secure access to Users confidential data.
* 24x7 availability.
* Better component design to get better performance at peak time.
* Various other Non-Functional requirements are:

1. **Security:**
   * System use shall not cause any harm to human users.
   * This web-based application will be password protected and any update of any entries of data will be carried out by privileged users.
   * System shall use a secured database.
   * Users can just read information but they cannot edit or modify anything except their personal information details. Only the System Administrator will do system administration and maintenance work.
2. **Data Integrity:**
   * All the data in the EBB must be accurate and reliable.
3. **Maintainability:**
   * EBB must have a high level of maintainability.
4. **Portability:**
   * The application must be easily portable on any system.
5. **Error Handling:**
   * The system should handle expected and unexpected errors in ways that prevent loss in information and long downtime periods.

**6)** **Serviceability:**

* + If any issue arises in the EBB, it should be programmed in such a way that developers can service it again easily.

**4. External Interface Requirements**

* 1. **Donor’s Interface:**

# **Login:**

# This interface will consist of two compulsory fields namely, E-mail Id and Password. There will also be options for “New User Registration” which will redirect to the “Registration” page and a “Forgot Password” option in case a user forgets the password. If the password entered is correct the Main User Interface opens up else an error message is displayed and the user will be redirected to the login page again.

# **Registration:**

# The user will enter his personal details like First Name, Last Name, Email ID, Password, Confirm Password, Phone Number, etc. Users will be warned about any mistakes on data format or any other constraints by validation notes and error messages. When the button "save" button is clicked, the server will check if the Email is already used and alert the user. If everything is entered correctly and saved then a new user will be created.

# **Edit Profile Details:**

# If any member wants to change his personal information, he/she can enter his profile by clicking on his name at the top right of the main page and he will be directed to the personal details editing page.

# **Blood Donation Registration**

# If any member wants to donate blood then he/she will click on the “Donate Blood” button. After that he/ she will be navigated to the next page for the slot selection and registration. After filling the details and selecting the slot his/her blood donation request will be sent to the administrator and the donor will have to go to the donation center on the chosen date and have to donate the blood.

* 1. **Consumer’s Interface:**

# **Login:**

# This interface will consist of two compulsory fields namely, E-mail Id and Password. There will also be options for “New User Registration” which will redirect to the “Registration” page and a “Forgot Password” option in case a user forgets the password. If the password entered is correct the Main User Interface opens up, else an error message is displayed and the user will be redirected to the login page again.

# **Registration:**

# The user will enter his personal details like First Name, Last Name, Email ID, Password, Confirm Password, Phone Number, etc. Users will be warned about any mistakes on data format or any other constraints by validation notes and error messages. When the button "save" button is clicked, the server will check if the email is already used and alert the user. If everything is entered correctly and saved then a new user will be created.

# **Edit Profile Details:**

# If any member wants to change his/her personal information, he/she can enter his/her profile by clicking on his name at the top right of the main page and he/she will be directed to the personal details editing page.

# **Search Blood:**

# The User can search the type of blood he is looking for, by clicking on the “Search” button.

# **Blood Request:**

# When an authenticated user creates a request clicking on the button “Need Blood” then He/She will be navigated to the next page where he/she will have to fill in the needed details after that his/her request will be sent to the administrator and administrator will either approve or reject the request. In case of approval he/she will get the blood.

* 1. **Administrator’s Interface:**

The administrator will have a different login id using which he can access his/her account and perform all of his/her roles and responsibilities mentioned below.

* Access and view the user’s database.
* Maintain the user and blood bank database.
* Organize the blood donation camp.
* Can approve or reject the request for blood by blood seekers depending on the situation.
* Can approve or reject the request of blood donor’s status depending on the situation.
  1. **Hardware Interfaces:**

| **Processor** | Intel i3 processor or above. |
| --- | --- |
| **RAM** | 4 GB or above. |
| **Hard Disk** | 256 GB or above. |

* 1. **Software Interfaces:**

**Client-Side Requirement:**

| **Operating System** | Windows or any equivalent OS. |
| --- | --- |
| **Web Browser** | Google Chrome or any compatible browser. |

**Technologies Used:**

| **Frontend** | React JS |
| --- | --- |
| **Backend** | Spring Boot |
| **Database** | MySQL |

* 1. **Assumptions and Dependencies:**
* The users must have basic knowledge of computers and the English language.
* Each user must have an E-mail Id and password.
* There must be an Administrator.
* Internet connection is a must.
* Proper browsers should be installed in the user’s system.
  1. **Communication Interfaces:**

The system shall use the HTTPS protocol for communication over the internet and for the intranet communication will be through TCP/IP protocol suite. The user must have an SSL certificate licensing registered web browser.