**Software Requirements Specification (SRS)**

**Project:** Blood Donation App  
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**1. Introduction**

**1.1 Purpose**

The purpose of this document is to provide a comprehensive overview of the requirements for the Blood Donation App. This app is designed to facilitate the donation process for donors and help recipients find the blood they need.

**1.2 Scope**

The Blood Donation App aims to connect blood donors with recipients in need, manage appointments and track donation history. The app will serve two primary user types: donors and recipients.

**1.3 Definitions, Acronyms, and Abbreviations**

* **SRS:** Software Requirements Specification
* **Donor:** A user who donates blood.
* **Recipient:** A user who receives blood donations.
* **BloodRequest:** A request made by a recipient for a specific type and quantity of blood.
* **DonationCenter:** A facility where blood donations are collected and processed.

**1.4 Overview**

This document includes descriptions of the system's functionality, user interfaces, and technical specifications.

**2. Overall Description**

**2.1 Product Perspective**

The Blood Donation App is a standalone mobile application designed to facilitate the blood donation and acquisition process. It interacts with a backend system for data storage and processing.

**2.2 Product Functions**

* User registration and authentication
* Profile management for donors and recipients
* Blood donation scheduling and tracking
* Blood request creation and tracking
* Location services for finding donation centers
* Community engagement features

**2.3 User Classes and Characteristics**

* **Donors:** Users who donate blood. They can manage their donation schedules, view donation history, and receive notifications.
* **Recipients:** Users who need blood. They can request blood, track the status of their requests, and receive notifications.
* **Administrators:** Users who manage the app's backend, including donation centers, blood inventory, and user data.

**3. Specific Requirements**

**3.1 Functional Requirements**

**3.1.1 User Authentication and Profile Management**

* Users must be able to register and log in using email and password.
* Users can update their profiles with personal information, contact details, and health data.

**3.1.2 Donor Functionalities**

* **ScheduleAppointment:** Donors can schedule, view, and cancel appointments.
* **ViewDonationHistory:** Donors can view their past donations and upcoming appointments.
* **UpdateHealthInfo:** Donors can update their health information and eligibility status.

**3.1.3 Recipient Functionalities**

* **RequestBlood:** Recipients can submit blood requests, specifying blood type, quantity, and urgency.
* **ViewRequestStatus:** Recipients can track the status of their blood requests.
* **UpdateMedicalInfo:** Recipients can update their medical information.

**3.1.4 Donation Center Functionalities**

* **RescheduleAppointment:** Donation Centers can reschedule appointments for donors.
* **MarkAppointment:** Donation Centers can mark appointments as canceled or completed.
* **UpdateInventory:** Donation Centers can update blood inventory, including the type and quantity of available blood.

**3.1.5 Location Services**

* Users can search for nearby donation centers and view details such as address, contact information, and operating hours.

**3.1.6 Community Engagement**

* **Donor-Recipient Communication:** Enable messaging between donors and recipients.
* **Community Forums:** Provide forums for users to share experiences and tips.