**BLOOD BANK MANAGEMENT SYSTEM**

**Business Requirement Specification (BRS)**



**TEAM MEMBERS:**

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**Introduction**

The Blood Bank Management System is a project designed to support blood banks in collecting blood from various sources and distributing it to those in need. This software streamlines blood bank operations by automating daily transactions and providing quick access to information when needed.

**Product Scope**

The Blood Bank Management System is developed to suit the requirements of all types of blood banks and is adaptable for future expansion. The initial implementation will focus on a single blood bank, and upon successful deployment, it can be extended to other blood banks across the city.

**Purpose**

The Blood Bank Management System is designed to meet specific business goals and objectives:

1. Enhancing efficiency in blood collection, storage, and distribution.
2. Streamlining operations to ensure timely availability of blood to patients.
3. Ensuring transparency in maintaining records of donors, patients, and inventory.
4. Supporting scalability for managing multiple blood banks in the future.

**Key Characteristics**

The BRS serves as a bridge between the business team and the development team, ensuring the system aligns with organizational goals.

* It defines the scope, business processes, and high-level requirements of the BBMS.
* Focuses on the broader organizational impact, including improved service delivery, reduced operational delays, and enhanced trust among stakeholders.

**Key Business Objectives**

1. **Efficiency and Transparency:**
   * Automate donor registration, inventory management, and request processing.
   * Provide real-time visibility of blood stock levels for quick decision-making.
2. **Accurate Record Management:**
   * Maintain detailed and secure records of donors, blood collections, requests, and distributions.
3. **Streamlined Blood Requests:**
   * Match blood requests with inventory seamlessly to minimize delays and save lives.
4. **Future Scalability:**
   * Design a scalable system capable of supporting multiple blood banks across different regions.

**2. Resource Planning**

**Human Resources:**

* **Developers:** To design, develop, and deploy the system functionalities.
* **System Analysts:** To understand business requirements and translate them into technical specifications.
* **UI/UX Designers:** To create a user-friendly interface for smooth interactions by all stakeholders.
* **Project Manager:** To manage the project timeline, resources, and deliverables.

**Technical Resources:**

* **Framework:** Django (Python-based) for robust backend development**.**
* **Database:** PostgreSQL or MySQL for storing and managing data.
* **Hosting Platform:** Render or similar reliable services for deploying the system.
* **Testing Tools:** Tools like Selenium and JMeter to ensure performance, reliability, and usability.

**3. Budget Estimation**

**The budget for developing and deploying the blood bank management system includes:**

* **Development Costs**: Salaries for developers, designers, and other team members.
* **Infrastructure Costs:** Expenses for hosting platforms, databases, and development tools.
* **Maintenance Costs:** Regular updates, server monitoring, and support services.

**4. Milestones**

**Milestone 1: Requirement Gathering**

* Finalize the CRS, URS, and BRS documents.

**Milestone 2: System Design**

* Create prototypes, wireframes, and architecture diagrams for core system functionalities.

**Milestone 3: Development Phase**

* Implement user modules, including:
  + Admin: Inventory and request management.
  + Donor: Registration, donation requests, and history tracking.
  + Patient: Registration, blood request submissions, and status monitoring.

**Milestone 4: Testing Phase**

* **Conduct thorough testing for:**
  + Functional Requirements: Verify features like inventory management, request approval, and user dashboards.
  + Non-Functional Requirements: Ensure system performance, security, and reliability.

**Milestone 5: Deployment**

* Host the system on the designated platform (e.g., Render).
* Ensure smooth deployment and conduct user acceptance testing (UAT).

**Milestone 6: Maintenance and Support**

* Provide regular updates to address bugs and add features as needed.
* Offer support for user queries and system enhancements.