**Phase 1 Report: Requirements Analysis for the Online Blood Donation Management System**

This report details the work completed in the initial phase of the project, focusing on a comprehensive analysis of the system requirements.

**1. Introduction**

The **Online Blood Donation Management System** is being developed as a web-based "Blood Donation Agent" to act as a centralized hub for blood-related information. Our primary objective in this phase was to define the project's scope, identify the necessary functionalities, and validate the project's feasibility before moving to the design and implementation stages.

**2. Requirements Analysis**

This stage was critical for understanding what the system needs to do. We identified both functional and non-functional requirements to ensure the final product meets user expectations.

**2.1 Functional Requirements**

We defined the system's core features based on the distinct roles of the users:

* **User Management**: The system must allow for the registration of different user types:
  + **Donors**: Individuals who wish to donate blood can register, update their details, and search for organizations.
  + **Organizations**: Blood banks or other institutions can register, search for donors, and make blood requests.
  + **Call Center**: Employees with specific access rights to manage blood requests and assign donors.
  + **Admin**: The central authority with full control over all data, including user accounts, blood groups, and locations.
* **Blood Request Management**: The system must allow for online blood requests from general consumers.
* **Search Functionality**: Users should be able to search for donors, organizations, and specific blood information based on criteria like location and blood group.
* **Data Updates**: The system must allow authorized users to update and edit their information, ensuring data accuracy.
* **Reporting**: The Admin should be able to generate various reports on donors, operators, and blood requests.

**2.2 Non-Functional Requirements**

We also defined crucial qualities the system must possess:

* **Security**: The system must provide a high level of security with different authentication levels for each user role. A strong password mechanism is required.
* **User-Friendliness**: The application must be easy to navigate with a simple and interactive user interface.
* **Data Integrity**: The database must be designed to eliminate data redundancy and ensure consistency. The normalization to 3NF is a key part of this.
* **Accessibility**: The system should be accessible from various browsers.
* **Scalability**: The system should be designed to support a growing user base and be flexible enough for future developments.

**3. Feasibility Study**

A feasibility study confirmed the project's viability:

* **Technical Feasibility**: The required technology (PHP, XAMPP server, MySQL) is readily available and sufficient to build the system.
* **Operational Feasibility**: The project aligns with user requirements and will be easily adopted.
* **Economic Feasibility**: The project is a sound investment as it leverages existing resources and requires minimal additional expenditure.

**3.Use Case Diagram:-**

**4. Conclusion**

This phase successfully established a strong foundation for the project. We have a clear understanding of the requirements and have validated the project's feasibility. The next phase will focus on translating these requirements into a detailed system design and beginning the development process.