**A Project Report On**

**Blood Bank Management System**

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| **Type of Project** | **:** | **Web Development** |
| **Languages used** | **:** | **MERN Stack** |
| **Date of Submission** | **:** | **06 Feb 2025** |

**1. Introduction**

The **Blood Bank Management System** is a web-based platform designed to efficiently manage blood donors, their details, and the availability of blood. The system streamlines the process of donor registration, updating records, and managing blood requests. It ensures transparency, easy access to donor information, and effective communication between users.

**2. Technologies Used**

The system is developed using modern web technologies:

* **Frontend:** React.js for the user interface with custom styling using CSS.
* **Backend:** Node.js with Express.js for handling server-side operations.
* **Database:** MongoDB for storing donor details.
* **API Communication:** Axios for making API requests to the backend.

**3. Objective**

**The primary objective of the Blood Bank Management System is to create an organized and efficient system for blood donation and management. The key objectives include:**

* **Facilitating easy registration and management of blood donors.**
* **Ensuring real-time access to donor details and blood availability.**
* **Providing an interactive and user-friendly platform for donors and administrators.**
* **Enhancing communication between blood banks, donors, and recipients.**
* **Implementing a secure and scalable system for managing blood donation records.**
* **Enabling seamless CRUD operations for donor management.**

**4. Features and Functionalities**

**For Donors:**

* Register and log in to the system.
* Add personal details, including name and blood group.
* Update or delete their information.
* View a list of registered donors.

**For Admin:**

* Manage donors by adding, updating, and deleting records.
* Oversee the blood donation process.
* Generate donor reports.

**5. System Workflow**

1. **User Registration:** Donors provide their details, which are stored in the database.
2. **Blood Donor Management:** Users can add, update, or delete donor information.
3. **Database Operations:** All donor data is stored and retrieved from MongoDB.
4. **Frontend-Backend Communication:** React.js makes API calls to the Express.js backend to fetch and manage data.

6.Output Screens :





