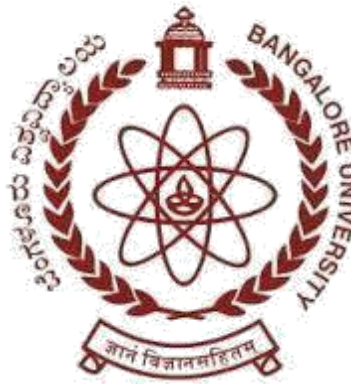


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**Database Management System Project Report**

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# **Blood Bank Management System Project**

## **Introduction**

The Blood Bank Management System is a web-based application designed to streamline and manage the operations of blood banks effectively. This system facilitates the management of blood donor information, patient details, blood inventory, and the overall administrative functions of a blood bank. Its primary goal is to provide an online service that ensures a hassle-free, transparent, and efficient blood donation and retrieval process, thereby contributing to a corruption-free environment in blood banks.

This project encompasses the functionality to store, process, retrieve, and analyze information related to blood donors, patients, and the inventory of blood units. It aims to enhance the management efficiency within blood banks and make blood-related services more accessible to the public.

## **Objectives**

The Blood Bank Management System aims to:

- Provide a transparent and corruption-free blood donation and retrieval process.
- Enhance the efficiency of blood bank operations.
- Ensure the availability of blood to patients in need through a streamlined request and approval process.
- Maintain comprehensive records of donors, patients, and blood inventory.

## **System Features**

The system manages information related to:

- Blood Groups: Different blood groups available in the blood bank.
- Available Blood Stock: Current inventory of blood units categorized by blood group.
- Donor Details: Information about individuals who donate blood.
- Patient Details: Information about patients who require blood.

# System Modules

The Blood Bank Management System comprises three primary modules:

1. Admin Module
2. Donor Module
3. Patient Module

## Admin Module

The Admin has the central role in managing the system. Admin functions include:

- Manage Blood Stock: Monitor and update the available blood stock.
- Manage Donors: Add, edit, or delete donor details.
- Manage Patients: Add, edit, or delete patient details.
- Manage Blood Donations: Accept or reject blood donation requests based on donor details.
- Manage Blood Requests: Accept or reject blood requests from patients based on the availability of blood stock.
- Logout: Securely log out from the system.

The Admin has the authority to:

- Approve or reject blood donation requests after verifying donor information.
- Approve or reject blood requests from patients based on their details and the availability of blood units in stock.
- Maintain and update donor and patient records, ensuring the accuracy and integrity of the system.

## Donor Module

Donors are individuals willing to donate blood. They must register in the system to become eligible for donations. Features available to donors include:

- Donate Blood: Submit a request to donate blood.
- Manage Donation History: View and manage the history of previous blood donations.

- Check Donation Status: Track the status of blood donation requests (accepted or rejected by Admin).
- Logout: Securely log out from the system.

After registering, donors can submit requests to donate blood. The Admin reviews these requests and updates the donor dashboard accordingly. Approved donors will be notified to donate blood at a designated donation camp.

## Patient Module

Patients are individuals in need of blood due to medical conditions. They must register in the system to request blood. Features available to patients include:

- Make Blood Request: Submit a request specifying the required blood units, blood group, and medical condition.
- Check Request Status: Monitor the status of blood requests (accepted or rejected by Admin).
- Logout: Securely log out from the system.
- Upon submitting a blood request, the Admin reviews it and updates the patient dashboard based on the available blood stock and patient details.

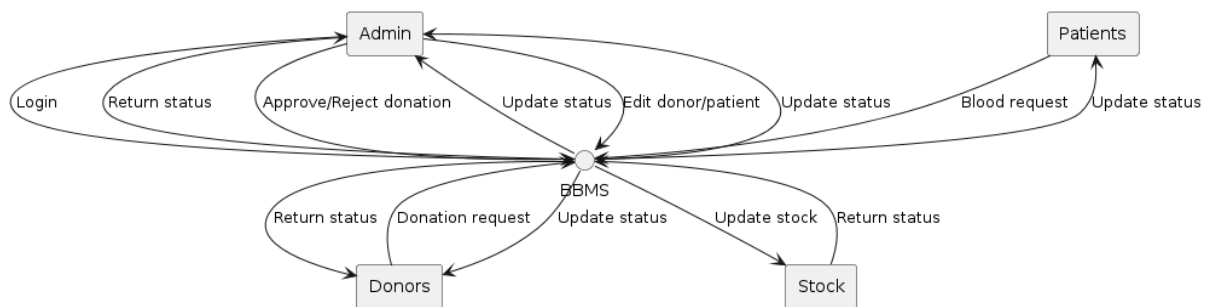
## Technologies Used

The project employs the following technologies:

- Frontend:
  - HTML: For structuring the web pages.
  - CSS: For styling the web pages.
  - JavaScript: For client-side scripting and interactivity.
  - jQuery: For simplifying JavaScript tasks and AJAX interactions.
- Backend:
  - PHP: For server-side scripting and processing requests.
  - MySQL: For database management and storing information.

- Software and Tools:
  - Text Editor: VSCode
  - XAMPP: A local server environment for PHP & MySQL (Apache, Mysql running)

## DFD Diagram



## Database Schema

### Admins Table:

FIELD	TYPE	DESCRIPTION
id	INT	Primary key
name	VARCHAR	Admin Name
email	VARCHAR	Admin email
password	VARCHAR	Admin password
mobile	BIGINT	Admin mobile number

Donor's Table:

FIELD	TYPE	DESCRIPTION
id	INT	Primary key
name	VARCHAR	Donor Name
email	VARCHAR	Donor email
password	VARCHAR	Donor password
mobile	BIGINT	Donor mobile number

Patient's Table:

FIELD	TYPE	DESCRIPTION
id	INT	Primary key
name	VARCHAR	Name
email	VARCHAR	Patient email
password	VARCHAR	Patient password
mobile	BIGINT	Patient mobile number

Donation Table:

FIELD	TYPE	DESCRIPTION
id	INT	Primary key
donor_id	INT	Foreign Key(Donor)
blood_group	VARCHAR	Donor blood group
no_units	INT	Number of Units Donated
disease	VARCHAR	Disease Information
status	INT	Donation status

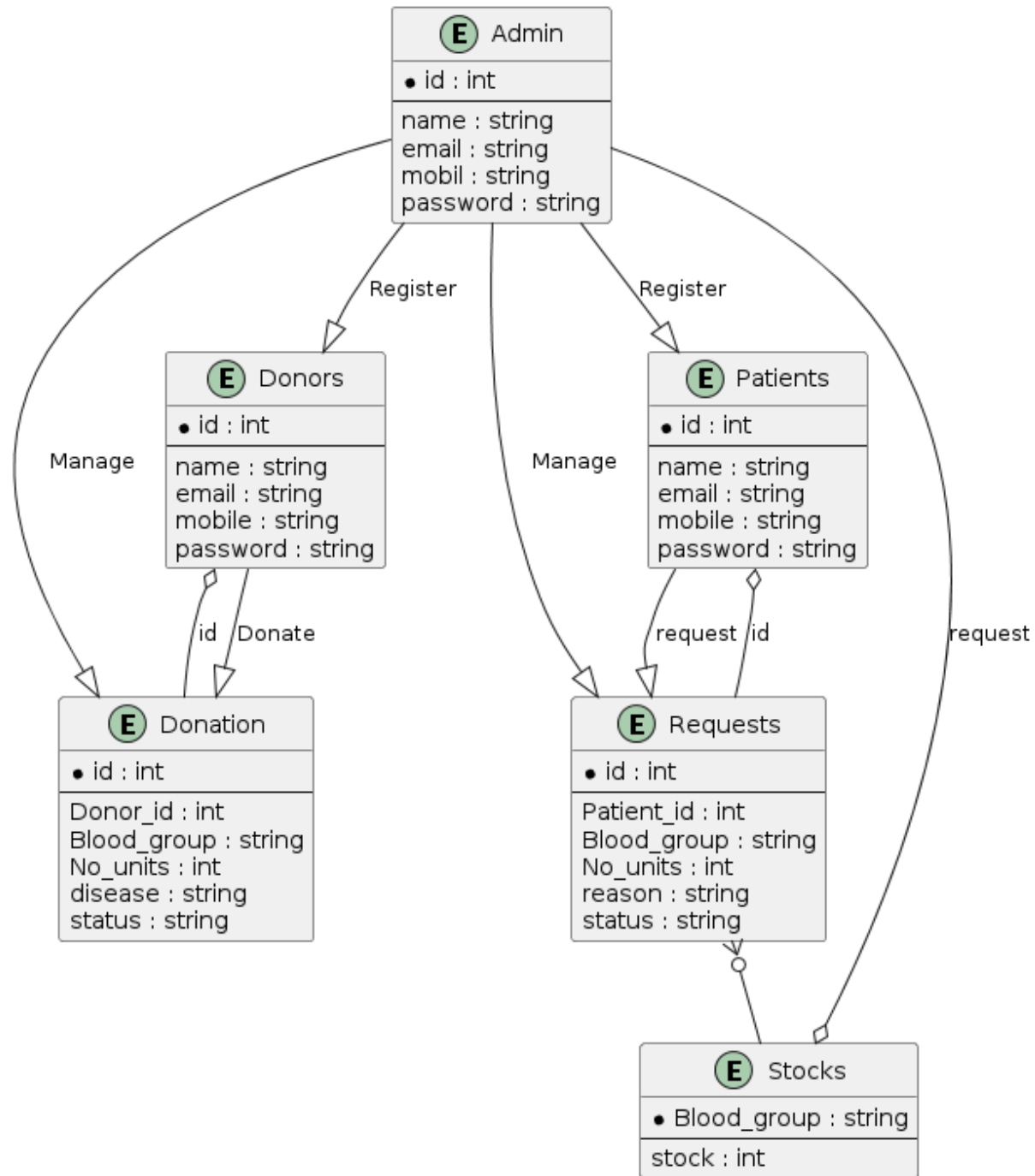
Request's Table:

FIELD	TYPE	DESCRIPTION
id	INT	Primary key
patient_id	INT	Foreign Key(Patients)
no_units	INT	Number of Units Requested
blood_group	VARCHAR	Required Blood group
reason	VARCHAR	Reason to request
status	INT	Donation status

Stock's Table:

FIELD	TYPE	DESCRIPTION
sno	INT	Serial number
blood_group	VARCHAR	Blood group type
stock	INT	Available stock units

## ER diagram





## **Conclusion**

The Blood Bank Management System project provides a comprehensive solution to manage the operations of blood banks effectively. By automating the processes of managing donors, patients, and blood inventory, the system ensures a more organized and transparent approach to blood donation and distribution. This project contributes significantly to making blood bank management more efficient and accessible to those in need.