GEETANJALI COLLAGE-RAJKOT

Hostel Management System Documentation Name- Redemption Blood Bank

Submitted by **Uday Patadiya**

**Abstract:**

The hostel management system efficiently allocates rooms to students, ensuring each room accommodates up to a maximum of three students. It tracks room availability, student assignments, and facilitates easy management of hostel operations. This system improves organization, reduces manual errors, and enhances student satisfaction.

**Key Features:**

1. Room and Bed Management:

- Allocation and deallocation of rooms and beds.

- Room categorization based on type, capacity, and amenities.

- Real-time availability status.

2. Student Information System:

- Comprehensive student profiles including personal details, contact information, and emergency contacts.

- Integration with student ID systems.

3. Fee Management:

- Payment .

4. Inventory and Maintenance Management:

- Tracking of hostel assets and inventory.

- Maintenance request and management system.

**System Modules:**

1. **Student Registration :**

Handles the registration of new students, capturing essential details such as personal information, academic records, and guardian contact information. This module ensures that the admission process is efficient and accurate.

1. **Room Allocation Module:**

Automates the allocation of rooms based on predefined criteria such as student preferences, availability, and seniority. It allows for easy tracking of room assignments and changes.

1. **Fee Management Module**:

Manages the financial aspects of the hostel, including fee collection, payment tracking

1. **.Inventory Management Module:**

Keeps track of hostel assets and supplies, ensuring that inventory levels are maintained and requisitions are handled promptly. This module aids in the proper management of resources such as furniture, electronics, and consumables.

**Technology Stack:**

* Frontend: java.

* Backend: java.

* Database: SQL Server for data storage and retrieval.

# Database Table Details

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| **Donors Table** | | | | |
| **Column Name** | | **Data Type** | **Description** | |
| Donor\_ID | | int | Unique identifier for each donor | |
| Name | | varchar(50) | Donor's name | |
| Blood\_Group | | varchar(2) | Donor's blood group (e.g. A+, A-, B+, B-,  AB+, AB-, O+, O-) | |
| Gender | | enum('M', 'F') | Donor's gender | |
| DateofBirth | | date | Donor's date of birth | |
| ContactNumber | | varchar(20) | Donor's contact number | |
| Email | | varchar(50) | Donor's email | |
| Address | | varchar(100) | Donor's address | |
| LastDonationDate | | date | Date of donor's last blood donation | |
| **Blood Inventory Table** | | | | |
| Blood\_ID | int | | | Unique identifier for each blood unit |
| Donor\_ID | int | | | Foreign key referencing the Donor ID in the  Donors table |
| CollectionDate | date | | | Date of blood collection |
| Expiry\_Date | date | | | Date of blood expiry |
| Blood\_Group | varchar(2) | | | Blood group of the unit (e.g. A+, A-, B+, B-,  AB+, AB-, O+, O-) |
| VolumeinML | int | | | Volume of the blood unit in milliliters |
| Status | enum('available', 'eserved', 'expired') | | | Current status of the blood unit |
|  | | | | |
|  | **Blood Needs Table** | | | |
| Need\_ID | int | | | Unique identifier for each blood need |
| Recipient\_Name | varchar(50) | | | Name of the blood recipient |
| Hospital\_Name | varchar(50) | | | Name of the hospital requesting blood |
| Blood\_Group | varchar(2) | | | Blood group needed (e.g. A+, A-, B+, B-,  AB+, AB-, O+, O-) |
| QuantityinML | int | | | Quantity of blood needed in milliliters |
| NeededByDate | date | | | Date by which the blood is needed |
| Status | enum('pending', 'fulfilled', 'cancelled') | | | Current status of the blood need |

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|  | **Blood Collection Camp Table** | |
| **Camp\_ID** | **int** | Unique identifier for the blood collection camp |
| **Camp\_Name** | **varchar(50)** | Name of the blood collection camp |
| **Camp\_Location** | **varchar(100)** | Location of the blood collection camp |
| **Camp\_Date** | **date** | Date of the blood collection camp |
| **Camp\_Time** | **time** | Time of the blood collection camp |
| **Organizer** | **varchar(50)** | Name of the organization or individual who organized the camp |
| **Contact\_Person** | **varchar(50)** | Name of the contact person for the camp |
| **Contact\_Phone** | **varchar(20)** | Phone number of the contact person |
| **Contact\_Email** | **varchar(50)** | Email address of the contact person |
| **Expected\_Donors** | **int** | Expected number of donors for the camp |
| **Blood\_Units\_Expected** | **int** | Expected number of blood units to be collected |
| **Created\_By** | **varchar(50)** | User who created the camp record |
| **Created\_Date** | **datetime** | Date and time the camp record was created |
| **Modified\_By** | **varchar(50)** | User who last modified the camp record |
| **Modified\_Date** | **datetime** | Date and time the camp record was last modified |

**Benefits:**

* Efficient management of blood donors, recipients, camps, and stock details.

* Improved tracking and monitoring of blood inventory.

* Simplified donor and recipient information management.

* Facilitates timely and accurate blood transfusions for patients in need.

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