

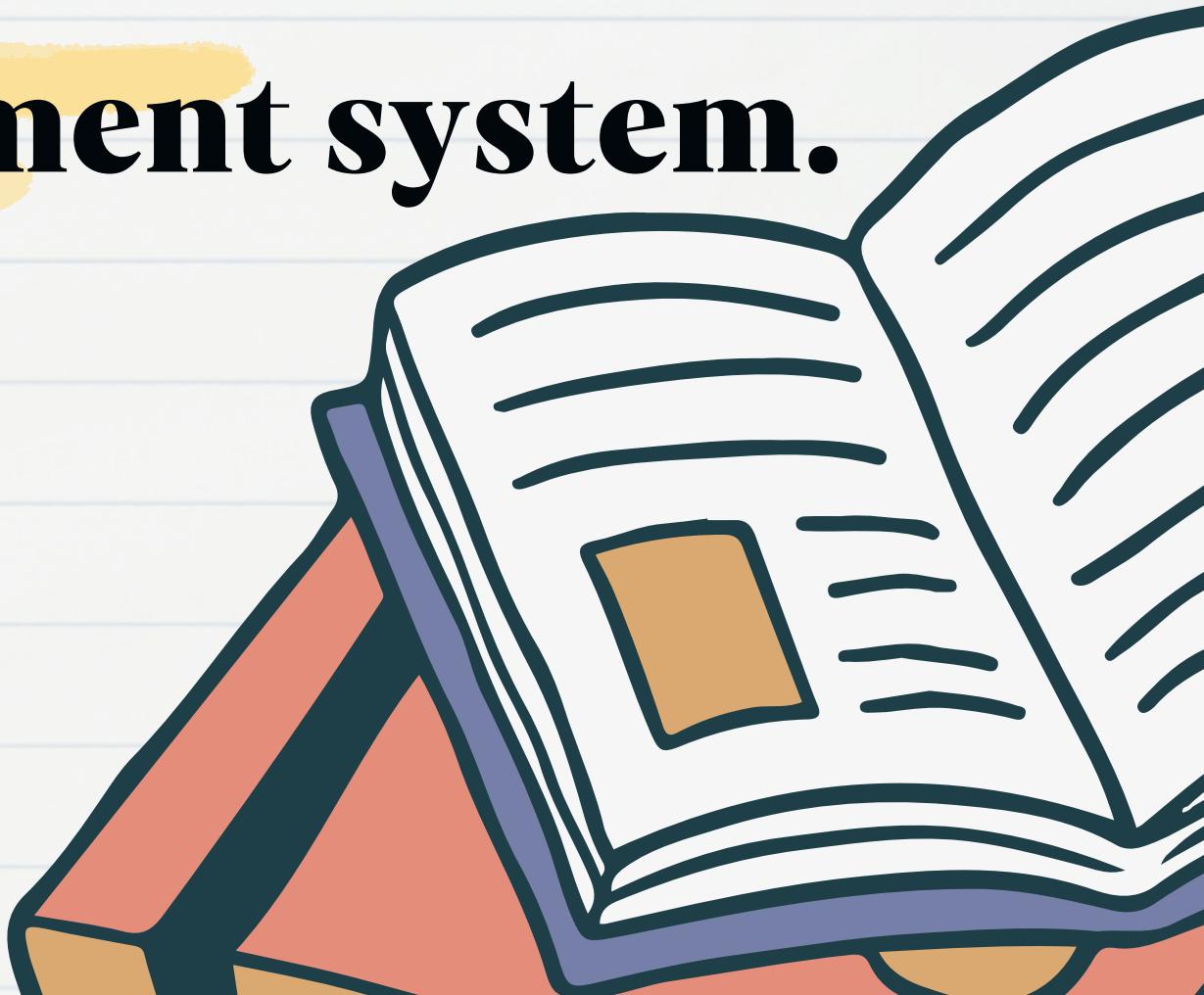


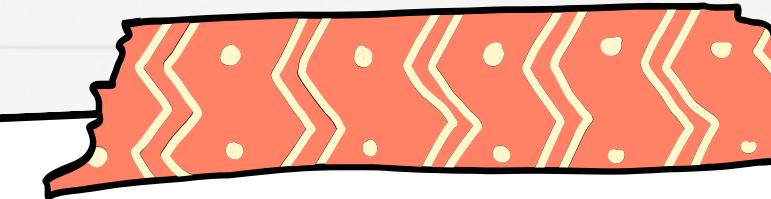
DBMS

Mini Project

Organ donation &
procurement network management system.

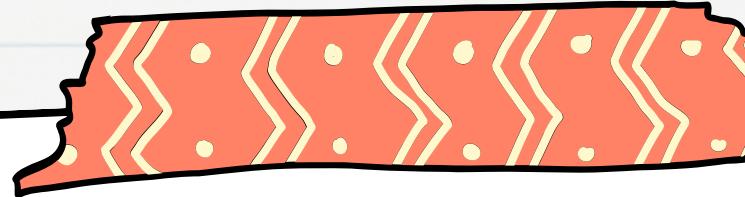
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Problem Statement

Despite advancements in medical technology, the organ transplantation process faces numerous challenges, including inefficient communication and coordination between organ procurement organizations, transplant centers, hospitals and thus require a well-organized network to ensure timely matching of donors with recipients, proper allocation of organs, and seamless coordination of transplant procedures. However, existing systems often lack integration, leading to delays, mismatches, and missed opportunities for lifesaving transplants. Therefore, there is a pressing need for a comprehensive organ donation and procurement network management system to streamline the entire process and improve outcomes for patients awaiting organ transplants.



Abstract

The Organ Donation and Procurement Network Management System is a centralized software solution aimed at optimizing the organ donation and transplantation process. It facilitates efficient coordination and communication among organ procurement organizations, transplant centers, hospitals, and government organizations. Key features include user authentication and authorization, limited to government-certified hospitals for account registration, donor and recipient registration, organ procurement and allocation exclusively initiated by hospitals, government oversight on donor-recipient pairing and transplantation approval, and collection of statistical data on transplantation transactions. By leveraging technology to streamline workflows and ensure compliance with regulations, the system enhances the efficiency of organ donation and transplantation, leading to improved patient outcomes and increased opportunities for lifesaving transplants.

Modules

User Management

- Handles user authentication and authorization.
- Accounts are only registered by government-certified hospitals.
- Ensures that only hospitals are eligible to request donation or procurement transactions.
- Government organizations oversee the pairing of donors and patients and can approve transplantation operations.

Donor and Recipient Registration

- Allows eligible users (government-certified hospitals) to register donors and recipients.
- Collects and stores necessary information for matching donors with recipients.

Transaction Management

- Facilitates donation and procurement transactions initiated by hospitals.
- Manages the entire process from request to approval.
- Tracks the status and history of transplantation transactions.

Modules

Government Oversight

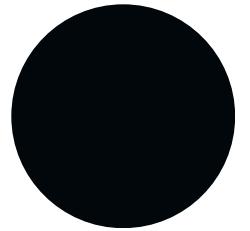
- Monitors donor-recipient pairing and transplantation operations.
- Ensures compliance with regulations and guidelines.
- Approves transplantation operations based on predefined rules and criteria.

Statistical Data Collection

- Collects and analyzes statistical data on transplantation transactions.
- Provides insights into transplantation trends, success rates, and other relevant metrics.
- Helps in decision-making and policy formulation.

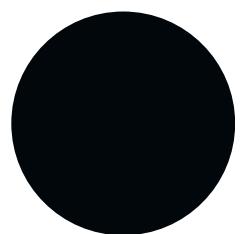


Technology used



Front-end:

Python frameworks are employed for front-end development, facilitating user interface design and interaction.. Python manages user authentication, registration, and role-based access control.



Backend:

MySQL is utilized for backend database management, with schemas designed for storing user information, transaction records, donor and recipient data, government approvals, and statistical information.