DBMS PROJECT

ORGAN DONAR-RECIPIENT SYSTEM

By:

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ABOUT:

The **Organ Donation and Transplant Management System** is a life-saving database solution designed to coordinate and streamline the organ donation and transplant process across multiple hospitals. The system maintains detailed records of donors, recipients, organs, transplant procedures, and associated medical staff, ensuring effective tracking, prioritization, and matching.

Traditionally, organ donation and transplantation processes involve complex manual coordination between hospitals, doctors, donors, and recipients, often resulting in delayed matches or mismanaged organ availability. To overcome these challenges, this system enables structured storage and efficient retrieval of critical information for hospitals and transplant coordinators.

The objective is to ensure timely organ allocation, maintain transparency in the donation-transplantation chain, and reduce organ wastage by improving data visibility and integration across stakeholders.

The system will also:
 ● Maintain real-time organ availability linked with donor details.
 ● Prioritize organ allocation based on recipient status and medical urgency.
 ● Record detailed transplant outcomes and involved medical staff.
 ● Support the classification of donation types (living/deceased) and donor status.

By digitizing and normalizing organ donation records, this system supports better decision-making, improved survival outcomes, and accountability in transplant services.

ENTITIES USED:
 ● **Hospital**: This entity stores hospital details including name, location, and contact, serving as the operational hub for donations and transplants.
 ● **Donor**: This entity represents individuals donating organs, capturing demographic data, organ types donated, donation type, and status.
 ● **Recipient**: This entity represents individuals in need of organs, including organ needed, blood group, priority level, and hospital linkage.
 ● **Organ**: This entity tracks each organ unit, linking to donor, storage hospital, availability status, and storage date.
 ● **Transplant**: This entity represents each transplant event with linked donor, recipient, organ, transplant date, surgeon, and outcome.
 ● **MedicalStaff**: This entity records medical personnel involved in the transplant process, linked to their respective hospitals.

● **TestRecords**: This entity captures medical test data for both donors and recipients, supporting eligibility and compatibility decisions.