SYNOPSIS

Topic: Organ Bank

The Organ Bank is a web-based application designed to streamline the process of organ donation and transplantation. This platform connects donors, recipients, and hospitals through a centralized database, facilitating efficient organ allocation and management. Donors can register their willingness to donate organs by providing necessary medical details and preferences. Recipients, on the other hand, can register their requests for specific organs, along with medical records to verify compatibility. Hospitals play a crucial role by managing organ availability, conducting compatibility tests, and updating transplant records. The system ensures transparency, reduces administrative burdens, and promotes ethical practices in organ donation and transplantation.

The donated organ is allocated to the required recipient based on a matching algorithm that considers key factors such as blood group, organ type, age, medical history, and geographic location. When a donor registers an organ for donation, the system automatically searches for registered recipients in the database who meet the compatibility criteria. If a match is found, both the donor and the recipient are notified, and the relevant hospital is alerted to proceed with the transplant. In cases where multiple recipients match the donor's criteria, the allocation prioritizes emergency cases or the longest waiting time. This automated matching ensures a fair and efficient distribution of organs, reducing delays and saving lives.

The system developed using PHP, MySQL, and HTML, features a user-friendly interface and a robust backend to handle real-time data processing and storage. HTML and CSS ensure a responsive and intuitive design for seamless interaction, while PHP powers the server-side logic, ensuring efficient communication between users and the database. MySQL is used to securely store and manage critical information, such as donor details, recipient requests, and hospital records. By leveraging these technologies, the system achieves scalability, reliability, and accessibility, catering to a wide range of users across different regions.

The relevance of this project lies in addressing the pressing global challenge of organ shortages and the inefficiencies in existing manual processes. By automating donor-recipient matching, providing real-time notifications, and maintaining secure medical records, the system reduces wait times and maximizes the utilization of available organs. Additionally, it encourages more individuals to register as donors by ensuring transparency and building trust in the process. This project not only improves healthcare outcomes but also promotes a culture of organ donation, making it a significant step toward saving lives and fostering social responsibility.

Submitted By :   **Faculty Guide:**   **Project Coordinator:**

Dona Jince   **Prof. Nisha Markose**   **Prof. Sonia Abraham**

Reg No: MAC23MCA-2024