Gift of Life: The Power of Organ Donation

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Abstract*: Organ donation as we all know is a good cause and can save many lives but in a developing country like India it is still not that popular. Although the rate of donation has been increasing from the past few years but it is still not enough as only 0.01% of people donate their organs after death . The main reason is lack of awareness and this android application is to create awareness among people. Organ donation is the donation of an organ of the human body, from a living or dead person to a living recipient in need of a transplantation. Transplantable organs and tissues are removed in a surgical procedure following a determination, based on the donor's medical and social history, of which are suitable for transplantation. This android application will help user to get organ donor and doctors. This system has two entities namely, Admin and User. Admin can login Admin can view all Doctors and they can add, update and delete Doctors. Admin can view and assign Doctor, Donor and note of the meeting details etc. User can register and login. they can view and manage all previous donations. The application offers a simple yet comprehensive interface for users to register their willingness to donate organs after death, specifying the organs they are willing to donate. All the data is being stored in the Database. Our application mainly fulfils the purpose of urgency of an organ when required by the patient and puts all the functionality and connection between our donor and recipient.*

Keywords: Organ donation

I. INTRODUCTION

It is known that India has performed the second largest transplants in the year 2019(first being United States), but India still lags a lot. Only 0.01% of people donate their organs after death and the number of live donors is more in India [1]. Cadaver donations are only about five percent of the total donations that take place. Some of the main causes are lack of awareness, religious and superstitious beliefs and strict laws. Some people are interested in this social cause but don't have enough knowledge as to what to do and how to donate. Another factor is, people are not literate enough to know the importance of this cause. So, we are providing our nation with an Organ Donation Android Application to spread awareness and give an easy facility to our people to save life.

II. ADVANTAGES

Organ donation is a noble cause of providing hope for a second life in patients who are suffering from organ failure. The following are the importance of donating an organ. Saving the lives of many members, as one cadaver donation can provide life support to 8 members suffering from end-stage organ damage

III. FUNCTIONAL REQUIREMENTS

System feature Proposed system consists of 4 modules:

a) Feature point extraction: Feature points of each Dataset parameters gets detected.

b) Feature correspondence matching: Matching of selected feature points across var- ious parameters.

c) Point estimation: Position estimation and vision system orientation during navigation.

d) Position refinement: Location estimate based, accurate location derivation

EXTERNAL INTERFACE REQUIREMENT

User Interface To identification of Reviews and summarization of product.

Hardware Interfaces:
- RAM : 4GB
- RAM minimum required is 8 GB.
- Hard Disk : 256 GB
- Processor : Intel i5 Processor Software Interfaces
- Programming Language : Java
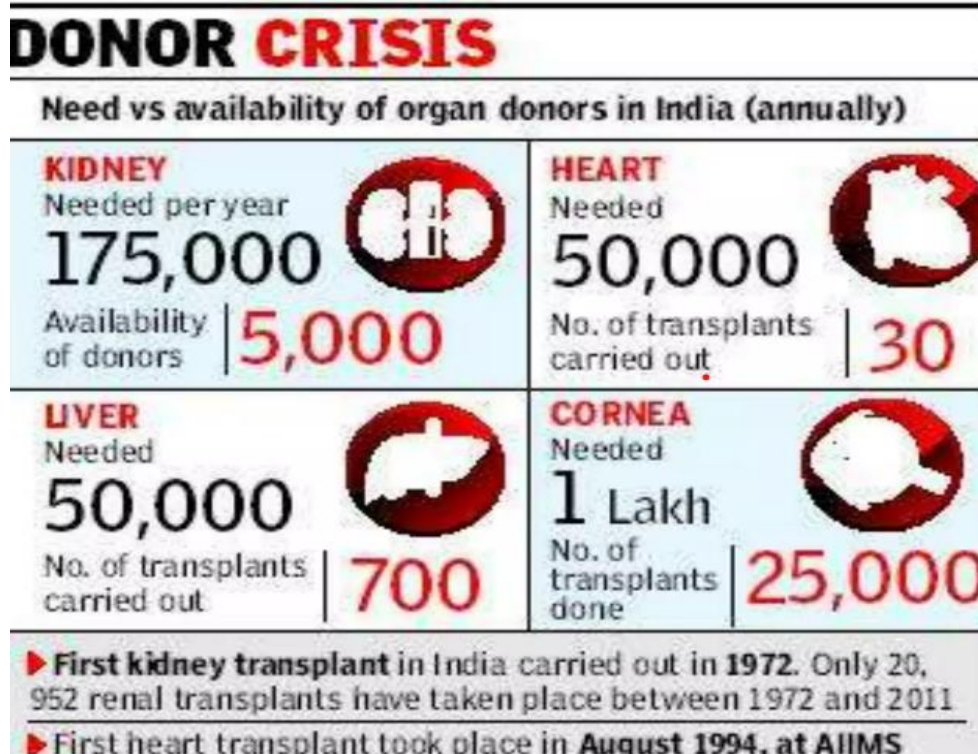- Operating System : Windows 10

NON FUNCTIONAL REQUIREMENT
- **Performance Requirements** The performance of the functions and every module must be well.
- The overall performance of the software will enable the users to work efficiently.
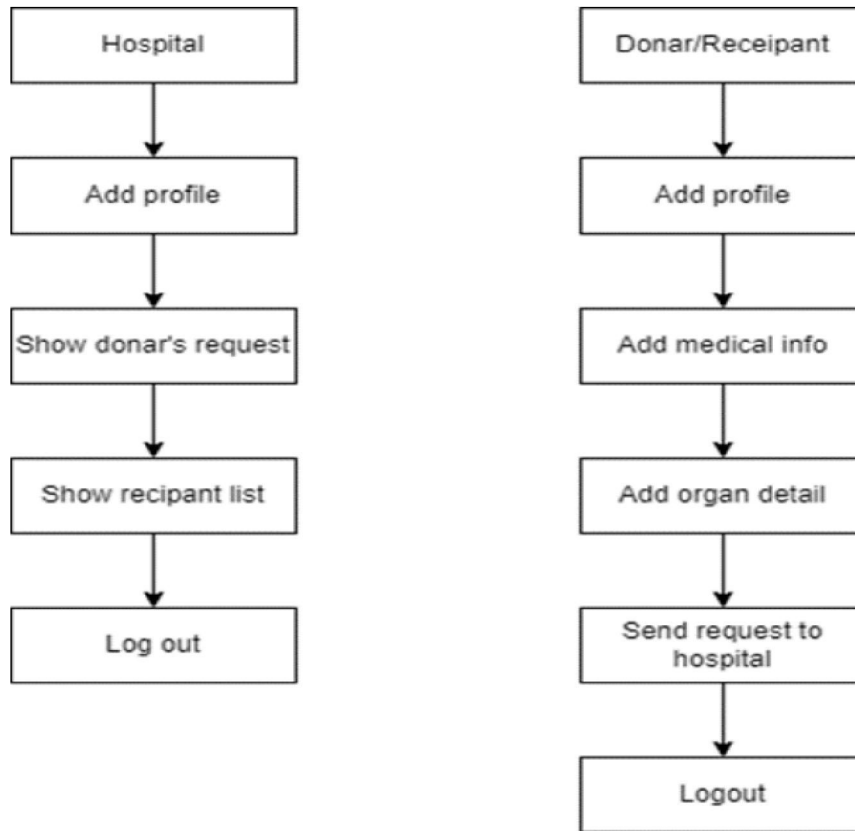- Performance of encryption of data should be fast.

Performance of the providing virtual environment should be fast Safety Requirement. The application is designed in modules where errors can be detected and fixed easily. This makes it easier to install and update new functionality if required.

IV. DESCRIPTION OF PROBLEM

- Over 5 lakh people in our country face death due to lack of organs, this is due to lack of awareness and connection between the donors and seekers [2]
- In India the rate of organ donation per million is comparatively very low than other countries around the globe.
- People are not ready to donate due to misconceptions and there are very less donors as compared to seekers in our country. There is no such be a revolutionary step for saving the lives of our people.

DONOR CRISIS

Need vs availability of organ donors in India (annually)

KIDNEY Needed per year **175,000** Availability of donors **5,000**

HEART Needed **50,000** No. of transplants carried out **30**

LIVER Needed **50,000** No. of transplants carried out **700**

CORNEA Needed **1 Lakh** No. of transplants done **25,000**

▶ **First kidney transplant** in India carried out in **1972**. Only 20, 952 renal transplants have taken place between 1972 and 2011

▶ First heart transplant took place in **August 1994**, at AIIMS

IV. SYSTEM ARCHITECTURE

V. FUTURE WORK

We hope that our system will bring a significant change in our locality. A new, updated and expanded edition of our project is to implement the cloud computing function to increase the rise of blood donors, and to translate the system into Regional language because it is local for every state so it can have dual languages. This work is not a one-time job but is a continuous work to be adopted for further research and the system can be used in various "what-if" scenarios. This work may be extended to interconnect all the blood donors societies in the India.

To avoid confusion, the family name must be written as the last part of each author name (e.g. John A.K. Smith).

Each affiliation must include, at the very least, the name of the company and the name of the country where the author is based (e.g. Causal Productions Pty Ltd, Australia).

TABLE I

S No.	Year	Total Transplant Sum
1	2014	6916
2	2015	8348
3	2016	9022
4	2017	9539
5	2018	10340
6	2019	12666

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In India, not many android applications are available. There are hardly 2 to 3 apps that are currently being used or being made but still not available for the users on any app store. which will help the donor to know that someone around him is in need of an organ or not. The genuineness of the seeker and the donor will be checked by the admin or a group of people. All the details and the uploaded reports of the users will be saved in the real time database. We are using the Firebase Real-time Database because it allows a secure access to the database directly from the client-side code. For about 160,000 patients who need organs, there are only 12,000 donors available. While there are no exact figures but while researching, we get to know that there is a need of about 1.5 to 2 lakh kidney transplants a year, but only about 8,000 transplants happen. Also, as about 40,000-50,000 liver transplants require a year, about 1,700-1,800 happen each year. Estimates also say that about 15,000 heart transplants are required a year but only about 250 heart transplants happen every year. These figures are so heartbreaking to see. Due to existing myths surrounding brain death and lack of awareness, people tend to waste the opportunity of saving the life of others, due to which there is a waste of organ donation.

Less than one in every five organs transplanted in India come from a deceased donor.Of the 15,556 organ transplants that happened in India in 2022, only 2,765 organs came from deceased donors despite efforts being made over the years to increase cadaver organ donations. Though the numbers have gone up — from 837 cadaver donations in 2013 to 2,765 in 2022 — lack of awareness and social and religious beliefs remain the biggest impediments in organ donation from brain dead patients who do not have any hopes of revival.

In a move towards one nation one (cadaver organ) waiting list, top health ministry sources Thursday announced that the government has decided to remove the domicile requirement for registration of organ seekers and make the process more equitable. It is also planning to do away with the age cap of 65 years for prospective cadaver organ recipients and the registration fees of Rs 5000-10,000 charged by states.

VI. PROPOSED SYSTEM

This project is aimed at developing an Android application for training and placement cell. In the existing system every work is done manually and also student detail is maintained in a excel sheets. Maintaining and managing a large amount of data is a difficult task. So to overcome the drawbacks of existing system the proposed system is developed.

The features included in the proposed system are: International Journal of Pure and Applied Mathematics Special Issue 2014.

● It provides an easy way for the training and placement officer to upload information and update the details in the students' database.

● Students will receive notification about the campus drive.

● Training and placement officer will upload information about the campus drive.

VI. LITERATURE SURVEY

This paper describes the solution for a problem which occurred in existing manual system. The major problem in existing manual system is searching and updating of the student data. Also it would be difficult for the training and placement officer to filter the list of the students based on the criteria of the campus drive. The proposed system includes the processes like registration, update, and searching of the student data. There are mainly two users: Training and placement officer (TPO) and student. The admin is the master user. Admin has the more number of priorities than the other users. Students can register and can also view or edit their academic or personal details. A list of placed students will also be updated by the administrator.

VII. CONCLUSION

After the system has been studied, designed, developed and tested, the following conclusions were created. The Developed system can guarantee to keep the records safe which is stored in the database. It generates reports that provide description details including various number of student placed in the company. The analysis of placed students recruited by the company will be made available in this application. Though this project provides a better way for the training and placement department, some more additional features can be added for the betterment of the application in future. The list of students should be automatically filtered based on the criteria of campus drive. The student as well as Training and placement officer should be able to communicate by sending message via this application. Test link should be uploaded so that the students may be able to test their technical skills.

This application will be the most user-friendly platform to enroll people in such good activity and will save many lives of the people who are dying due to lack of organ donation. It will create a long-term lifesaving role for every citizen in our country. Our prime target is to provide organs to the seeker when they are in need and make it a life saver platform for those who are dying due to the lack of organs and also targets the human race and spreads the concept of saving life after one's death.

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