

“Blood and Organ Detection System”

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Abstract:

The proposed system is an organ donation decentralized app using block chain technology. It would be a web application for patients to register their information—most importantly medical ID, blood type, organ type and state. The system would work on a first-in, first-out basis unless a patient is in critical condition. Kidney transplantation is typically the most effective treatment for patients with end-stage renal disease. However, the supply of kidneys is far short of the fast-growing demand. Kidney paired donation (KPD) programs provide an innovative approach for increasing the number of available kidneys.

Keywords

Block chain decentralised, donation, Kidney exchanges, optimal matches, software.

Introduction

Donating an organ or organs is one of the most noble act of humanity, saving the lives of those who suffer serious maladies that require organ transplantation. When the human body becomes infected with disease crucial organs in the body, such as the kidney, lungs, heart, pancreas, liver, or intestines become non functional, making life unbearable usually leading to death. Anyone can become exposed to a disease. In fact, a person is added to the national organ waiting list in Saudi Arabia every ten minutes. Making an organ donation is a crucial contribution to saving lives. Organ transplantation operations began in the 1950s and revolutionized medicine, saving innumerable lives and making life easier for those who suffer long term diseases. In the case of donors, they may be alive, dead, or in some countries, brain dead. Any live person must be perfectly healthy to donate, and donation is only allowed for organs that will not affect their health, such as a kidney, liver, lungs or bone marrow. There are no maximum or minimum age limits for organ donation, but the organ must be in a good condition and its loss will not present a threat to life. In most countries minor scan only donate organs if one of their guardians gives consent.

In the case of deceased organ donations, a donor must have given their consent while they were still alive, usually by signing their name in the donation system. The Saudi Centre for Transplantation handles the processes related to organ donation and transplantation.[1][2]

Their relatives and friends start searching for a donor to help, but there is no guarantee whether he will come or not. On the other hand, there are a lot of people who are willing to help and donate. There are numbers of existing systems have become increasingly tried to activate the blood and organ donation process. However, this is still inefficient up to day. Besides, we propose to use the latest technologies and the available tools to find a modern system which fills the gap and provides an organized solution. Our system has a quick mean to find the donors easily by their nearest location, available time, and same blood type, facilitate the search process for needy people and make it easier than before. Increase number of donors by increasing the facilities provided to them and to increase the awareness of the society about the importance of blood donation. Our system facilitates the donation process in our country.

BLOCKCHAIN

Block chain is a distributed database that has the ability to manage an ever-growing list of named logs (blocks), with each block containing a time stamp and a link to the previous block. Each set of transactions is linked to a series, which gives all participants a comprehensive picture of the entire system. The series of blocks is designed so they can retain the data stored in them without modification, meaning information is stored in a cluster chain. It is therefore impossible to falsify a block or add other non genuine information without the approval of all parties involved.

SCOPE OF THE PROJECT

Organ Transplantation aims to publish manuscripts describing some of the achievements and challenges of organ transplantation as well as consequences of

innovations and the improvements in perioperative and postoperative management.

- Adaptable to meet emergency and complex need of organ.
- This is the key facilitator to healthcare system it also support the one of the major function to organ donation system
- Block chain increases the speed of the organ donation process

GOALS AND OBJECTIVES

1. Blood searching System with organ detection system
2. Adaptable to meet emergency and complex need of organ.
3. This is the key facilitator to healthcare system it also support the one of the major function to organ donation system

ADVANTAGES

1. It creates a decentralized and Distrubuted system meaning no mode in the system has overall authority.
2. Block chain is a permanent ledger ,so any unauthorized alteration will not go unnoticed.

LITERATURE REVIEW

A) Centralized systems

Centralized systems are databases that are maintained and stored in a single location. To access data, one has to connect to a server, the main computer of the database, so the data can be processed.

B) Decentralized systems

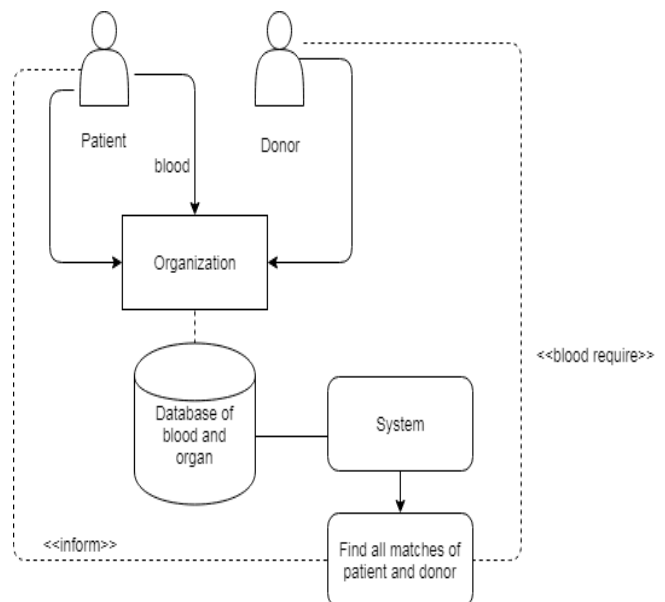
This type of database is a bit more complex. A decentralized database does not have a single location and instead pieces of information are stored in different locations which are all connected to each other. Processing data in this type of database is distributed between different nodes on a decentralized network. All the nodes have the data, which is being accessed by clients on each individual server.

C) Distributed systems

In this system the devices containing data are not connected to a single server, but instead data is distributed to different devices in the same location or spread to interconnected servers. Each node that

contains information has its own data and equal authority, which is essentially how large companies tackled the problems of centralized networks. But, as the number of users grew, this created the same problems traditional centralized systems faced. Block chain is neither centralized nor decentralized .While a block chain is definitely distributed, it is not necessarily decentralized. Centralization or decentralization simply refers to the participation rights on the distributed ledger. In a decentralized network, anyone is welcome to participate and transact. A centralized network contains various parties with known identities, validating the system because only those that are credible can participate and post to the ledger, making it an audited system. [3]

ARCHITECTURE



MODULES OF THE PROJECT

PATIENT:

A Patient is one of the module to get any if he/she wants BLOOD AND ORGAN respected matches then inform to organization and search online in system. System will gives the related matches donor information and availability status of that donor and a plantation details

DONOR:

Donor is module which gives the information regarding to blood and organ donation to respected organization by using submission donation form.

SYSTEM/ORGANIZATION:

System will gives the result with in minute to users request as per the searches. Provide perfect matches

of patient and donor to respected patient and donor. System will suggest hospital for plantation surgery.

METHODOLOGY

On Client Side

- The Application Will be built on Android Studio
- XML will be used for front end design
- Java will be used for background processing

On Server Side

- PHP will be used to provide connectivity between the android application and the database(MySql)
- JSON will be used to transmit data from server to application

CONCLUSION

The organ donation decision is a complex one, based strongly on personal beliefs. There are some factors, such as religious and cultural beliefs, that are seemingly intractable and are often cited as reasons for a refusal to donate. Donor motives directly contribute to their decision to donate, is not uniform and is influenced by multiple factors. Majority of the donors were relationship oriented donor, whose major motives were desires to relieve the suffering & save the life of their loving ones. Creating awareness to the organ donation will directly influence the donor motives and willingness. By deriving the motives many more intervention to improve the willingness to be a living organ donor can be evolved. Recruitment of living donors represents a medical and moral responsibility.

FUTURE SCOPE

In conclusion it is important to note that this project Organ transplantation is life-saving for patients with end-stage organ failure, and it is one of the greatest advancements in medicine. Management of transplant recipients definitely requires an interdisciplinary collaboration.

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