

'ORGAN READY' for Organ Donation

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ABSTRACT: Organ Ready is an Android application that is designed to work on a variety of handheld and mobile devices. These devices may be smartphones or tablets running a specific version of the Android Operating System. The application provides an easy and intuitive way of connecting people who are in need of an organ transplant and the people who are willing to donate their organs.

The application also connects people with hospitals and organ banks in order to get access to organs easily and seamlessly. This application can also be used by different hospitals and organ banks to connect with each other in order to provide recipients with organs as fast as possible. It would provide a way for patients to register their information including blood type, organ type and state. The system would work on a first-cum, first-serve basis. The application ranks the potential donors and the potential recipients based on the organ compatibility. This is achieved by using the machine learning technology to predict the compatibility.

Information which contains the details about donors & receivers is grouped into an easy and compact application for the benefit of the needy. This app is built using Android Studio released by the Google. This app serves as an easier & contacting way to access details and documentaries related to the organ donation. It includes a link to government & hospitals for queries. It also contains the information regarding donors, needy, hospital. We have discussed about various concepts in encouraging people through a modern way of helping by an app. It encourages the hospital which is in need of organ & which are able to donate. This app provides a platform for the social help work also. Through this we can say, this app provides a technical way of support by latest technology in saving lives.

I. INTRODUCTION

Organ donation is when a person allows healthy transplantable organs and tissues be removed, either after death or while the donor is alive, and transplanted into another person. Some organs and tissues can be donated by living donors, such as a kidney or part of a lung, but most donations occur after the donor has died.

As of August 1, 2016, there are 120,004 people waiting for life-saving organ transplants in the US. Of these,

96,645 await kidney transplants. While views of organ donation are positive there is a large gap between the numbers of registered donors compared to those awaiting organ donations on a global level. Organ donors are usually dead at the time of donation, but may be living. For living donors, organ donation typically involves extensive testing before the donation, including psychological evaluation to determine whether the would-be donor understands and consents to the donation. On the day of the donation, the donor and the recipient arrive at the hospital, just like they would for any other major surgery. For dead donors, the process begins with verifying that the person is hopelessly dead, determining whether any organs could be donated, and obtaining consent for the donation of any usable organs.

This physician has nothing to do with the transplantation process. Verification of death is often done multiple times, to prevent doctors from overlooking any remaining sign of life, however small. After death, the hospital may keep the body on a mechanical ventilator and use other methods to keep the organs in good condition. Donors and their families are not charged for any expenses related to the donation. Even in today's world of 21st century, there are a lot of difficulties in accessing organ donors quickly and conveniently. There have been many instances where recipients miss out on the chance to receive an organ transplant just because of their being a system with a lot of problems. In most of these cases, many lives could have been saved had the organs reached the recipients in a timely manner. To overcome this problem of dealing with a haphazard and an inefficient way of donating Organs, we have decided to offer an efficient solution to the problem. We have come up with an Android application named Organ Ready which is designed for people who wish to donate their organs and for people who wish to receive them. Organ Ready allows for effective and unobtrusive way of finding organ donors and recipients. Donor can find potential recipients using the application so they can interact with one another later on. Donors and recipients can also connect with hospitals, organ banks and other medical organizations in order to donate or check availability of organs. Hospitals and organ banks can also use the app to connect with each other and help deliver organs. A donor or a medical facility can enter details about the organ and a list of potential recipients will be generated. This list is sorted by a compatibility rate.

Based on the data collected online and from various hospitals, our application will predict the compatibility rate of the organs and show the chances of a successful transplant. The compatibility rate is used to tell the user more about the effects of the transplant. The list is generated using machine learning. A machine learning model is trained using the organ donation dataset for various organs. This allows the model to make predictions accurately when data from a different source is supplied.

II. EXISTING APPS AND THEIR LIMITATIONS

There are apps released on the basics of organ donation. There are few examples to be shown in specific. The app named "Organ Donation App" is an app used for organ donation. This app makes a query from people into action, thus saving multiple lives. It also provides link to register as an organ donor. The next app is, "E-Donor Card App", it has many form to be filled to the time of emergency, it does not make any clear contact with the donors and needy. Launched by Multi Organ Harvesting Aid Network (MOHAN) Foundation, a non-governmental organization that promotes and supports deceased organ donation and transplantation in India, the app enables willing users to get access to a donor card which enables them to pledge their organs and tissues after their death in a simple way. Most of the team members involved in designing and implementing the project are experts in the field of organ donation and know the challenges people face.

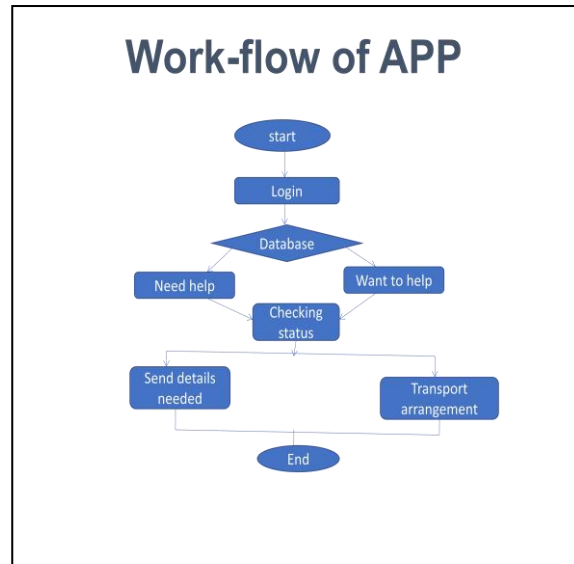
There are many kinds of app based on organ donors but these are the app which is discussed above are important. There are some common set of disadvantages faced by the people who are using these apps like. Lack of proven and effective ways to make organs available for the masses. Organ Donor Shortage, Lack of education and awareness. Hence, our app has been programmed with the help of android studios software to overcome this set of disadvantages. Hence, the proposed app is said to be user friendly along to give a helping hand for the learners around the by giving more boon to the society.

III. PROPOSED APP- Organ Ready

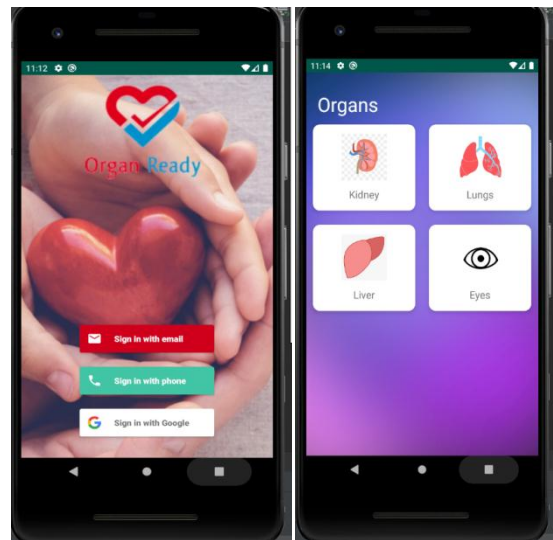
Organ Ready is an Android Application that is intended to overcome the difficulties surrounding organ donation in the currently existing world. It provides an intuitive user interface as well as an easy and effective way to connect with other users who are willing to donate their organs. This will be done by using Machine Learning which will predict the compatibility rate of organs based on the data entered by the user. This compatibility rate will help the users in selecting potential donors. On the other hand, this will allow the donors to decide on the potential recipients. Organ Ready can also be incorporated into the systems of various hospitals and organ banks in order to check the availability of organs so that the organs can be delivered quickly.

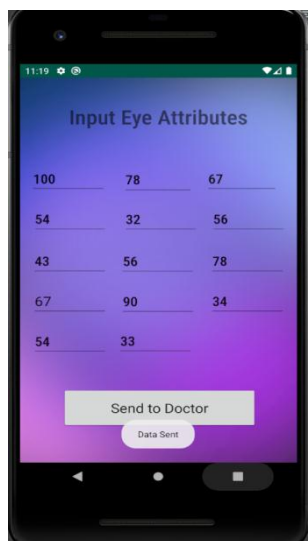
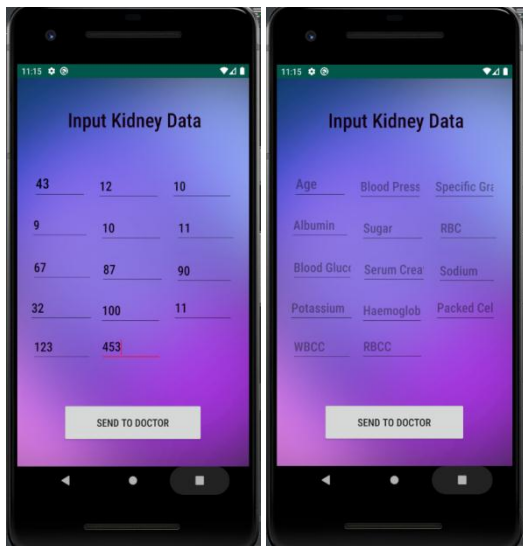
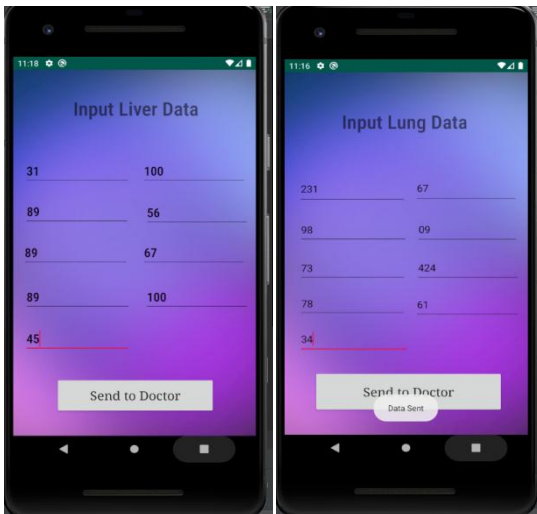
Our application will create a huge social impact by helping to overcome this issue which exists in the society.

DATA FLOW DIAGRAM OF OUR NEW APP "Organ Ready".



OUTPUT SCREENSHOTS:





IV. ADVANTAGES:

1. It provides a successful user interface.
2. Modernised way of helping needy.

3. Makes the hospitals across the countries proactive.
4. Will have a record of saving lives and encourages the users.
5. Gives reference to hospital and needy with a well-defined database.
6. It gives a link to a hospital where the mission to be done & can work out logical issues among people.
7. It is helpful in clearing confusions and arranging transport issues.

V. CONCLUSIONS

The developments through Android in various forms, mobile applications are used widely used on the various mobile devices vigorously. Android mobile applications are evolving rich and fast user experience. The ultimate goal is to provide a successful user interface to the users in an efficient manner at ease. This app provides the donor around the world to understand and the needy via hospitals.

The app, “Organ Ready”, gives a hand in problems along with solution of happiness by saving lives around the world. It helps the user in applying what they learnt in their life time about human soul & protects one’s life. This app will be most welcomed by the hospitals around the world. The app encourages people of world to donate organ via hospitals help towards the goal of motivation. This makes the world interactive since it is a modernized application. It provides an excellent user interface which encourages user to express their qualities. By this, we can approach an easier way and honourable way of saving one’s life.

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