**Report of the Project Blood Bud**

The blood bud is an online web application that helps a person to find blood donors in the case of emergency or requirement.

This application uses basic technologies of Full-Stack Development such as NODEJS, JavaScript, and MongoDB to fulfill the requirements

What is the need?

Every day 12,000 people in India die due to the sheer lack of donated blood. India collects 11 million units of blood but needs 15 million units, so there's a deficit of 4 million units. There are people who are interested to donate blood but don’t know here and who is in urgent need. Donating blood in miscellaneous donation camps may lead to blood smuggling and illegal sale of blood.

We lost one of our friends due to lack of blood donor which inspired us to come up with this project.

How will this application work?

This application has a dynamic database that has the information of students, their blood groups and email Ids. Whenever a person requires blood of a specific group he/she can raise a request here which results in sending mails/ messages to the donors with exact same blood group providing basic information such as who is the patient, hospital name, number of units required, and phone number of person who raised the request. With this the donor can contact the requester and save a life.

Other Implementations and their negative aspects

1. Blood Donors

This is a web application that sends messages about the nearest blood cams to the people who are willing to donate blood. This turned out to be a well working app. But here there are only the cams that will be mentioned to the donors if any patient requires blood urgently this application is not in a state of helping them. Most of the web applications are a subset or analogues to this.

1. Friends 2 Support

This is a web based application that is available in play store as well as a webpage in Google. Here it takes information from the person who requires blood such as blood group and region where he is which results in displaying of all the donors and their phone numbers available in the locality with the exact same blood group. This app was a good initiation for the promotion of blood donation but it has a very huge disadvantage that is there is not authentication. Any person by just entering the data will get the details of the donors in the record. The reveling of personal information such as phone numbers and locations might affect the security of the donors. In the era of white collar crimes reveling personal information might be a risk factor.

As well as this can be leading to blood smuggling and illegal sale of blood, as there are no precautionary measures taken up nor a body that can be help responsible.

How Is Our App Better?

Our App has the student database which is more precise as students in universities are well aware of their blood group and health conditions. We would not reveal the data to any person. Whenever there is a request raised the requester’s phone number and hospital details will be shared with the donors available near the hospital location. So this makes it more secured compared to the apps mentioned above. In an extension we can also think about adding a feature of artificial intelligence which will help us get donors of nearby location also.

Here the hospital and patient details are to be entered to send mails to the donors which make it a secured process of requesting. Because, if there is any suspicious activity involved, we can contact the hospital and report the user if it is not a fair request.