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Project Name: **Blood Transfer (Android Application)**

Chapter 1 : Project Profile

1.1 Project Definition:

Find local blood drives and donation centers quickly and easily right from the palm of your hand. The app makes scheduling and rescheduling appointments easy and convenient.

1.2 Motivation and Goals:

Blood is essential to help patients survive surgeries, cancer treatment, chronic illnesses, and traumatic injuries. This lifesaving care starts with one person making a generous donation. The need for blood is constant.

1.3. Practical Usages:

The Apps is really a good one. Through out the country it will manage the blood seekers and donors in very smart and effective way. Here no one can get donor phone number/ location without his/her permission.This app is just a bridge within donor & user.One can contact anyone over phone & verify his/her identity.

1.4. Features:

a. Finding Donor: If someone needs blood emergency or doesn't have a donor in contact they can find donor using this app

b. Contacting Donor :
   Contact the donor through email , phone number,messege .

c. Authentication:
   User must have valid information(email address and password).

d. Easy to use :
   People of every age can understand and use this app very easily.

e. Real time data update: Data is updated in real time.

f. Requires very low storage: It does not take lot of memory.

g. Admin Control: Admin user has special control over the app

Chapter 2 : Analysis

2.1 About Existing System:

User can Log in or sign up using his/her verified gmail address and password. User can search for donor using blood group and city name.He can add his profile picture or may be not as his/her wish from edit option.

2.2 Technical Feasibility & Economical Feasibility:

The app has been built using android studio. It is absolutely for free.
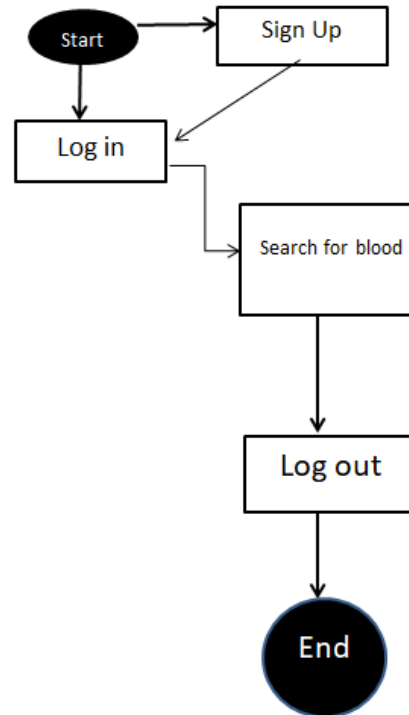
2.3 Limitation of Existing System:

There are some bugs. Which sometime create issues while running the app.
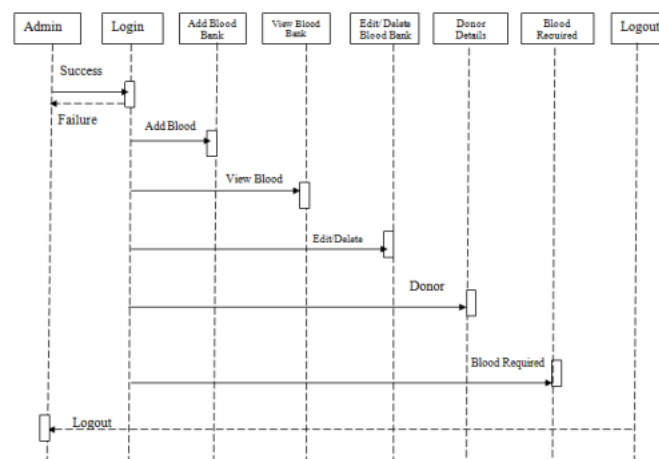
2.4 Scope of Proposed System:

We can elaborate the features and let the whole country for use the app.In the future the app will be more user friendly and expanded to remote users.
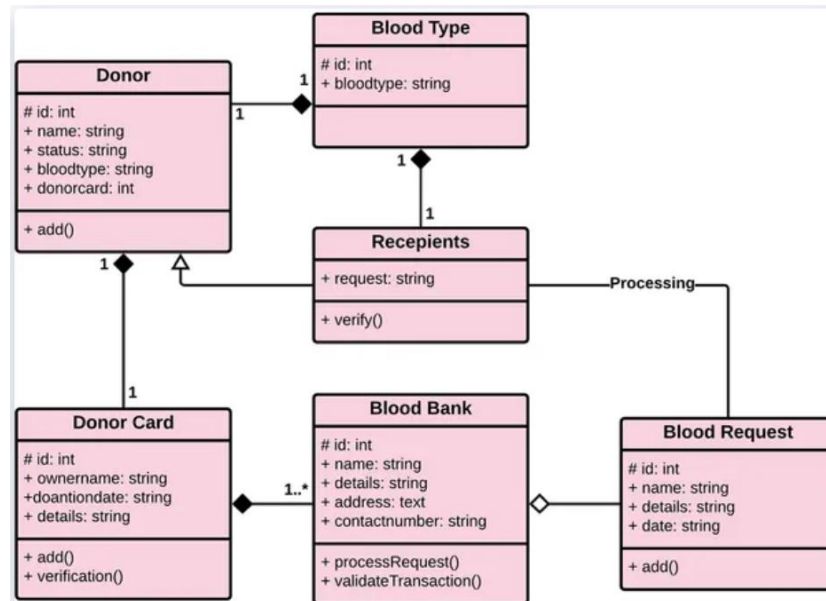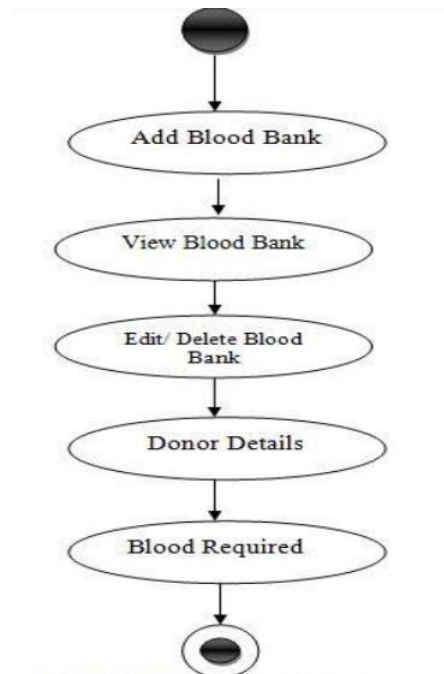
Chapter 3: Design
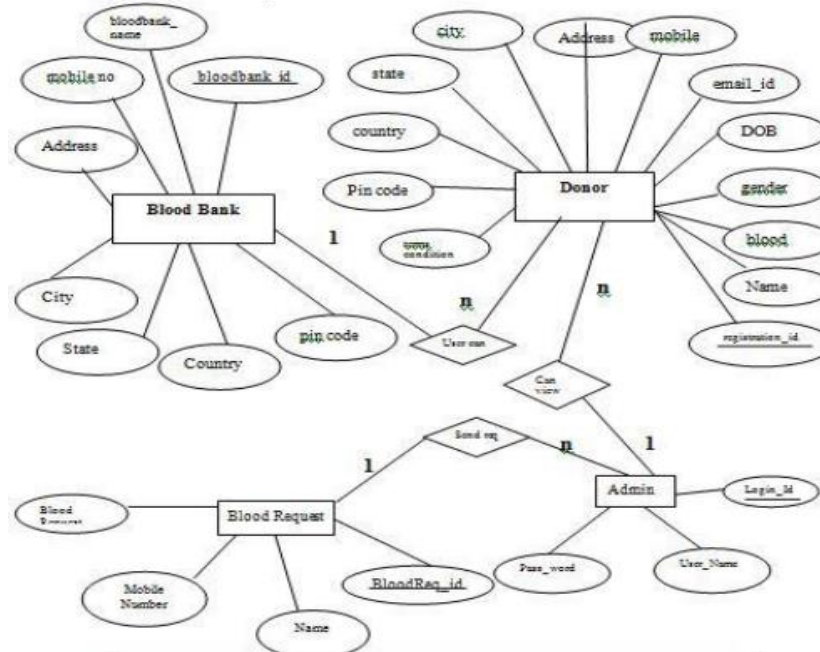## 3.1 Object Diagram:

3.2 Sequence Diagram:

3.3 Class Diagram:

3.4 Activity Diagram:

3.5 Data Flow Diagram:

Chapter 4 : Implementation

According to the survey conducted by World Health Organization (WHO) for the Year 2019, India wants eight crore units of Blood, however solely ten lakhs units are available on the market, that shows the intense shortage of blood. Blood and its parts are vital for human life as there's no substitute for human blood. No major operation will be performed while not the utilization of blood in any hospital or clinic. Since India has a huge population, the requirement of blood is rising on a daily basis. Statistics specifically show an alarming level. The quantitative relationship between the number of blood banks available and the number of blood banks required is not optimal. Every day, at least 2,000 donations are needed on average, but the remainder are not enough. Things such as traffic crashes, hospitalization, birth of children etc. still want external blood supplies in an emergency. The barrier between individuals in need of blood would be reduced by blood-base applications. A Blood Door(B-Door) Application is developed to handle the social group downside mentioned on top of. The platform accustomed to develop B-Door App using Android studio, Flutter UI Framework for front implementation and Firebase for Backend implementation.

Chapter 5 : Testing

We have installed the program in a real android device . It succesfull ran on the device.

5.1 Performance test:

Our app performed successfully as we intented when there was internet connection but we were unable to run it without internet or presence of weak internet connection,because for storage purpose we used cloud based storage.It won,t run in any other device than android.

Chapter 6: Future Enhancements

- ▪ **Security improvement**: We will make our security stronger by adding the One time password option , keep our software up to date , we will ensure that the new members should sign up with a valid email address and phone number.
- ▪ **Offline storage and secure private storage:** At this moment we are using a online database. We will update our system so that we can save info offline also.
- ▪ **Good and strong advertisement & increase awareness**:We are not advertising our app. But in near future we will advertise it with the help of social media in order to spread up its use.
- ▪ **Blood request option add**: For now users can only find the donor with the help of the app. But our next plan is to add a option so that request of user will be show up on the notification area from where other users can reply the user who need blood.

Chapter 7 : About the Tools and Technology

- • **Android Studio**   **:** For developing android application
- • **Java Development Kit :** For java as supporting language
- • **Firebase**   **:** For storage purpose and google authentication
- • **Github**   **:** To save our daily progress.
- • **Computer**   **:** For implementing and creating the project

Chapter 8: Learning outcomes during Project Completion

- • Android foundations. The most basic building block of Android development is a programming language
- • Android interactivity
- • Android UI.
- • Android testing.
- • Working with data.
- • Notifications.

- Firebase on Android.
- XML Basics.
- Java

Chapter 9 : Conclusion

Android Studio is an easy to use (and free) development environment to learn on. It's best if one has a working knowledge of the Java programming language for this tutorial because it is the language used by Android .Though at first we were stuck on different points but with the help of our instructor we passed those problems.

Chapter 10 : References

1. Android App Development in Android Studio: Java+Android Edition for Beginners (Book)
2. Academic Classes
3. Anisul Islam , Code with Harry etc.(YouTube Channels)