

### Executive Summary

A blood donation occurs everyday from the voluntary person and provided to the health services to donate it to a needy person which is not convenient all the time. Most of the times donors are limited and only donate whenever their family members need which happens due to lack of awareness about where to donate the blood. 'Donors' provide a platform for the people who actively donate their blood to the donation centers and hospitals as donors can check the nearby health services to donate the blood for their convenience. Also, it helps blood banks and hospitals to request for specific blood types to the donors more efficiently.

### Background

Donors is an android application where a hospital or any organizations needing blood for their patients or for any other applications request blood donations through it. On the other side, users get the notification/message on their phone. When the users acknowledge the message, they can either accept or deny it. They can accept it by scheduling for the donation on the locations where they find it easy, or they can deny it if they do not want to donate for the time being. Scheduling will be a lot easier because time and place where the donation is taking place will be explicitly shown to the users and they can just simply view and schedule. At any time they can cancel it too. Another feature is that the user can search the blood donation centers on their own and schedule instead of waiting for the requests.

### Conceptual Design Phase

As a result of the requirements determined for this project, The following software were necessary to build our product:

Software: Java, Google Firebase, Google Firestone Android Studio

Desired Features:

- Displaying nearby health centers with their addresses and navigating the current location of the user
- Fully functioning map facility
- Scheduling appointments between donors and health centers
- Handling user requests and button events.
- Providing details like distance to the health centers and others.
- Editing and updating both hospital profiles and donor profiles with respect to the database.

### Detailed Design Phase

The user interacts with the system through an android mobile application. The first interaction would be the login page where the user provides the login information. The overall android application is an interactive system, therefore at each instance the user is able to see different buttons and click on them and the system in turn would provide corresponding response.

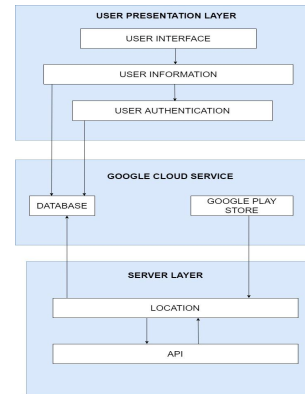
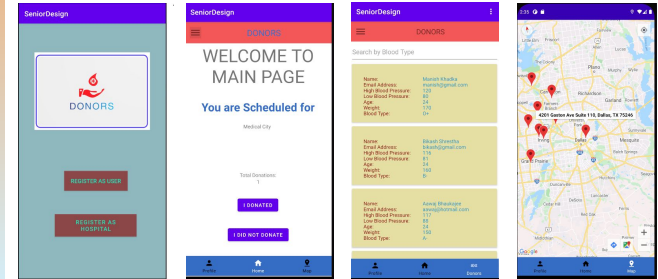


Figure : ADS Diagram

### Application Snapshots



### Conclusions

Donors aims to help hospitals to request the specific blood type easily in the app and gives the flexibility to its users to donate at a nearby location depending on their schedule and also, keep track of their donation history. The main goal is to simplify the donation process for both hospitals and the possible donors. Future plans for this project includes ability to create a blood donation event in the app by hospitals and let users see the event and decide on their participation status through the app. Also, more details such as hospital location and how long ago the donation was made could be displayed when clicked on the donation history of each user.

This Senior Design project was very helpful in providing a real world experience. Using agile methodology, we started the development process from gathering the requirements to building a mobile application..

### References

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