# CS5551 ADVANCED SOFTWARE ENGINEERING

# BLOOD DONATION MANAGEMENT

## USER MANUAL


**Instructor :**

**Dr. Yugyung Lee**

**TEAM MATES :**

1. **PRASANNA MUPPIDI (33)**
2. **SANTHOSH MOHAN (35)**
3. **ANUDEEP PANDIRI (40)**
4. **Fathima James S (58)**

**Motivation & decision:**

The main idea of this project is to find the specific blood type donor efficiently. "Donate Blood, Save Life" as per the quote, we are trying to save life by easily search the blood donors in near by geolocation. Even though, there is lot of options to find the donors. We are trying to find a donor in a fast and time efficient manner. The user can get the donor information along with their address, phone no and Google map directions. We are providing lot of choices to find the blood donor or blood banks information. By using our app, the user can search the available blood group type via hospitals, blood drive, blood bank and Facebook share. For that purpose, we have the user friendly functionalities such as,

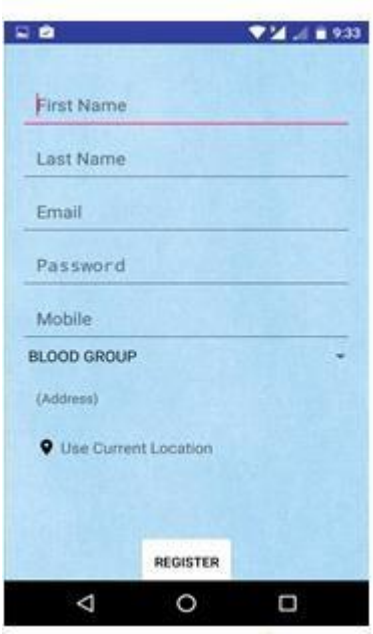
- ❖ Hospitals
- ❖ Blood drive
- ❖ Blood bank
- ❖ Share on Facebook

By using any of these above functionalities, the user can easily get the donor's information very quickly. The volunteer donors also have an account with us in order to help and support other people as they do. So the donors also search other doors information along with Google direction. Thus, this app is all about the saving a life. Simply, we are making everything easy and friendly here. Just because "Life is beautiful" So Donate blood and save Life. To implement our idea, we used Android studio, Firebase, Java & XML.

**The style of user interaction:**

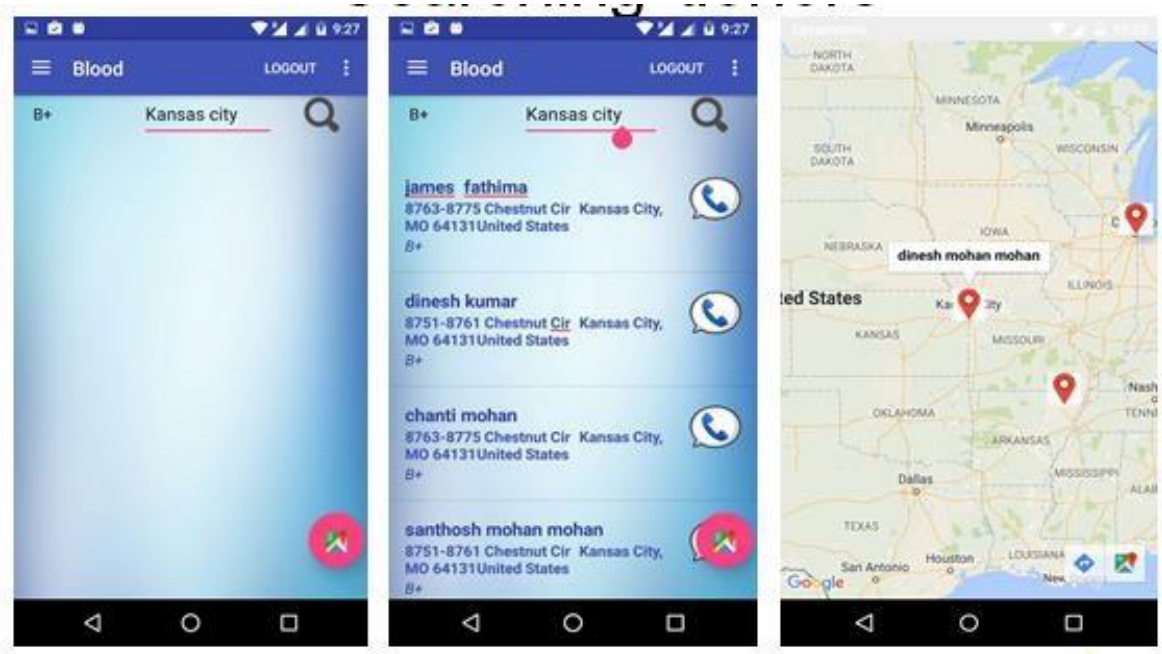
**-->** The user can interact with our app by login their information. The user should register first, if they don't have an existing account and then they can login through Facebook as well. This below screenshot of our app shows the login page where the user can login through the social media like Facebook. But that option is only for the existing user. The new user should have to register first and then login via social media. It emphasis that no need of going to our app every time for login.


**-->** The registration page contains the user's normal basic information. As shown in the below diagram, user can enter their information along with their credentials. If there is any invalid data is entered, then the validation error will be thrown.



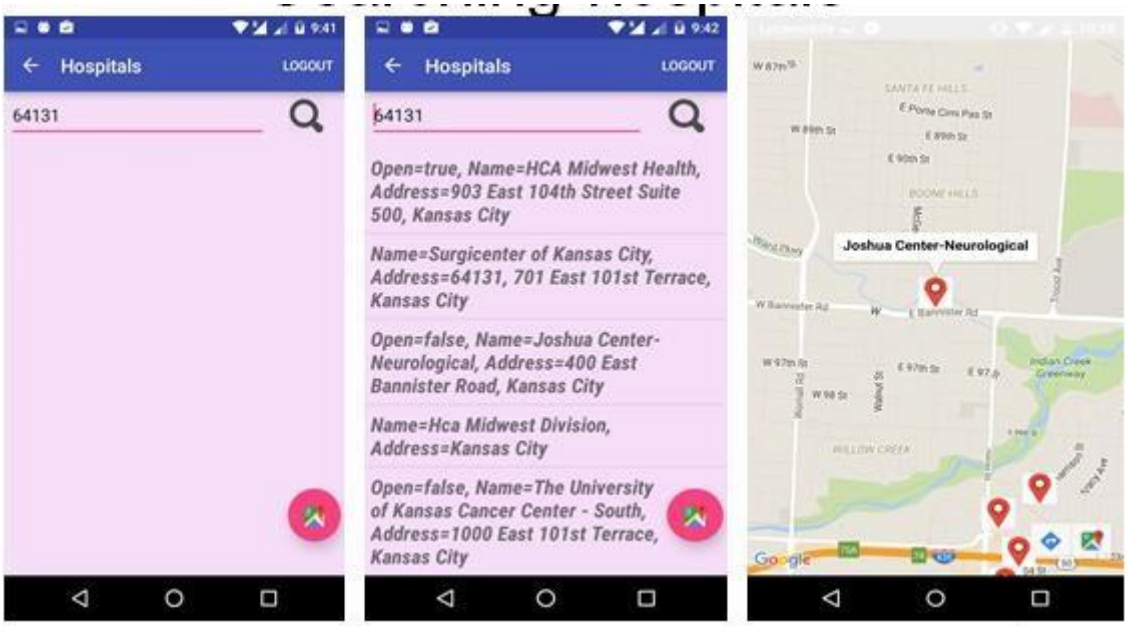

**-->** After creating an account, the user can easily login through our app as shown in the below screenshot. There is no need of login via username. Instead, the user can login with their phone no as well.


**-->** After login, the user can search their blood group type in home page. The search result will contain the list of available donors information along with their address, phone no and Google map directions as shown in the below screenshot.

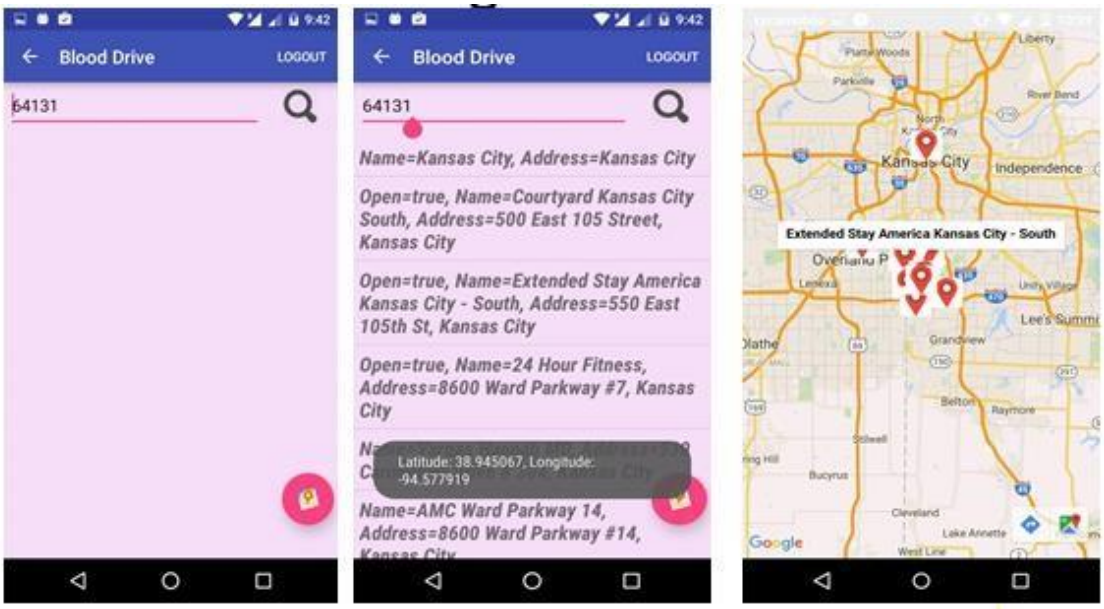



**-->** The left navigation bar contains the additional functionalities such as Hospitals, Blood drive, Blood bank and share on Facebook. By giving the area zip code, the user can get the near by hospital name, address and Google direction as well. Same like

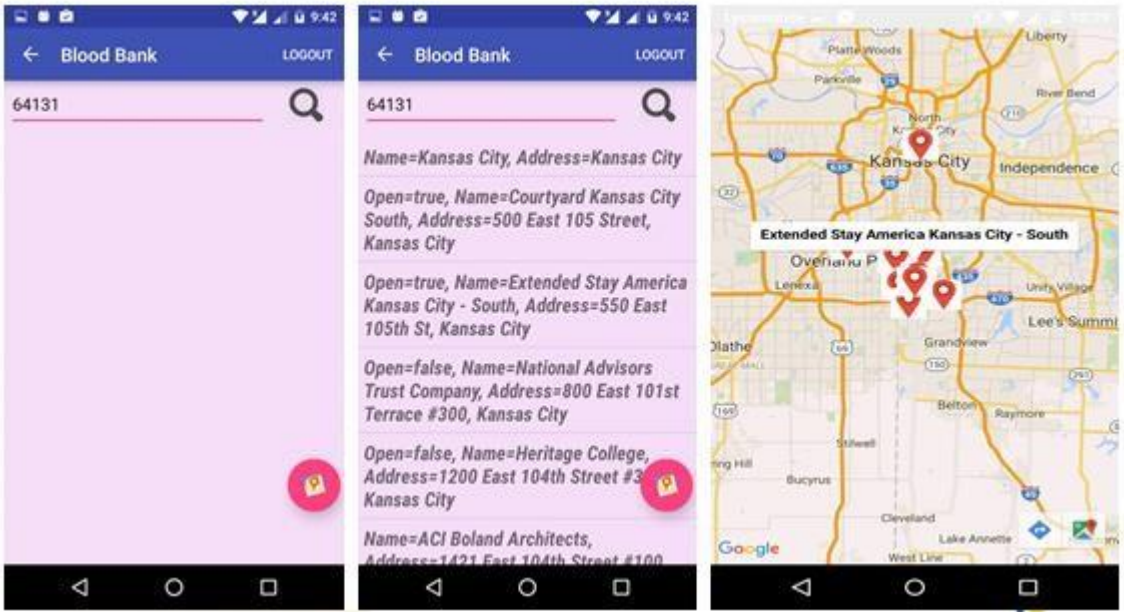
hospital, the user can get the near by Blood drive and Blood bank as well. Finally the user can share the needed blood group information in their Facebook wall as well.



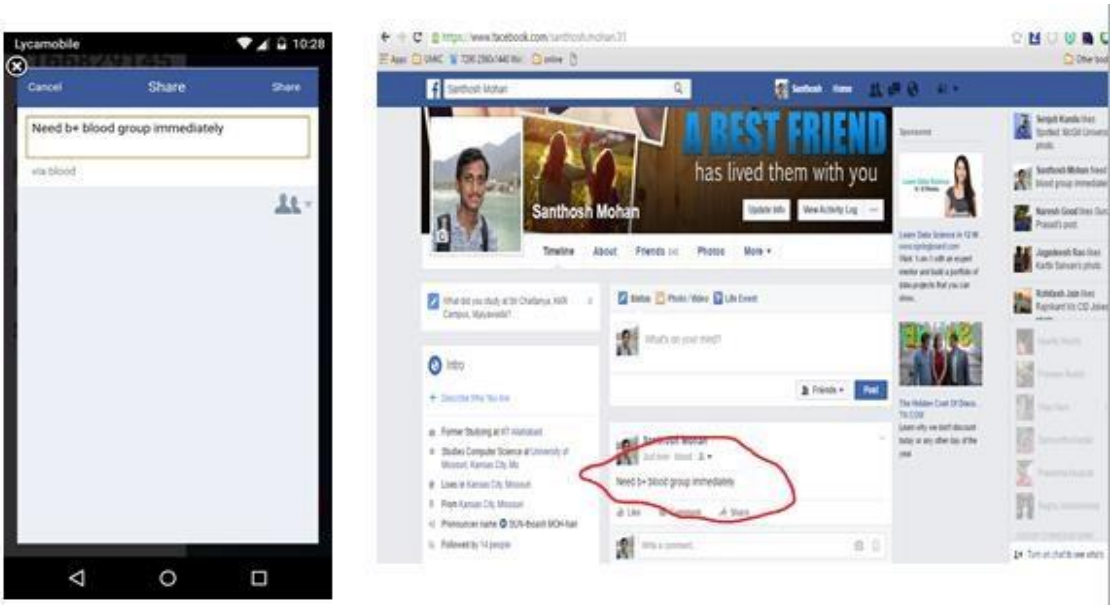

**-->** As shown in the below diagram, user can search the blood drive information along with address and direction. The one more thing about this functionality is, the user can get to know that the particular blood drive is open or closed.




**-->** This below screenshot shows the Blood bank information along with Google map direction. By giving the zip code in the search box, the user can get the near by blood banks addresses along with the blood bank closing information.




**-->** Here is another important functionality of this app. We are providing lot of choices to find the blood donor or blood banks information. The user can share the needed blood group along with their own message in Facebook as shown in the below screenshot.




**-->** Last but not least, here comes the profile and edit page. As shown in the below diagram, the user can view the profile and also the user can easily edit and update their information, by clicking the right side profile icon in home page.


**-->** As shown in the figure, currently the user "Santhosh Mohan" is trying to edit his profile page.

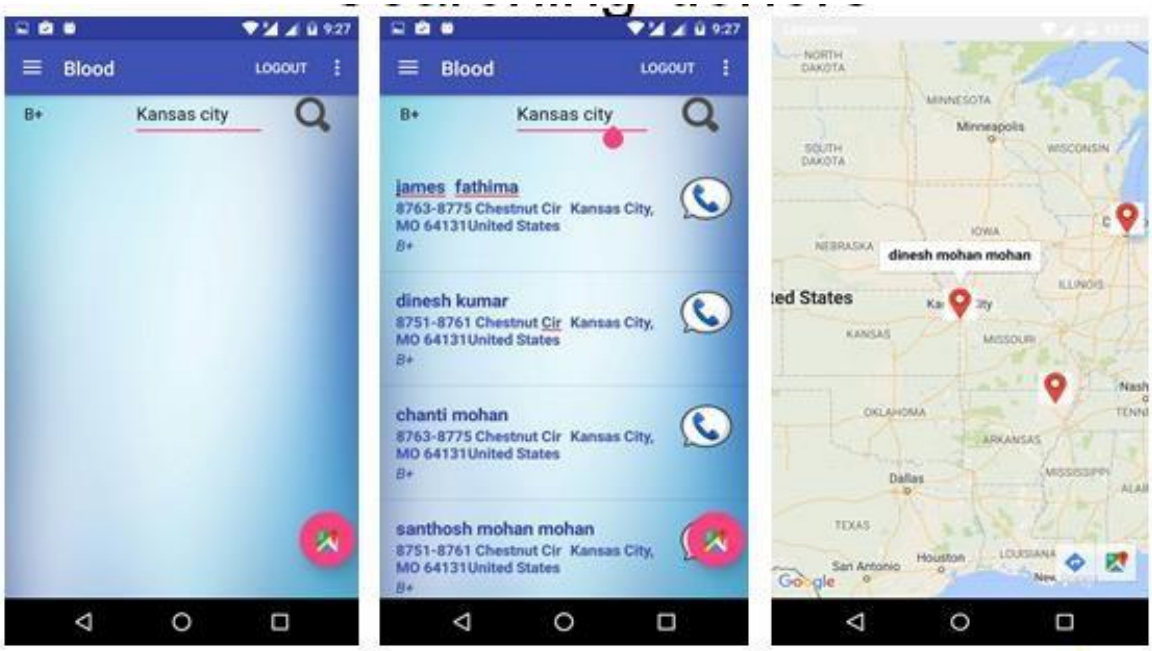

**Error recognition and handling:**

We have validation in login page and edit page as well. If the user login without giving password then the validation error will be thrown. In the edit page, the user give decimal number for email and character for zip code then the error will be thrown.

**Sample interaction:**

If the user first select the blood group and search it based on the city, then they will get the list of donors information. Here the user is directly interact with the backend service in order to get the search results.

The screenshot is the best example of the sample interaction. The user is searching with the city name "Kansas city" and then get the available donors information along with Google map directions. We are making everything easy here.



**A list of known bugs and deficiencies**

We do have some bugs in edit page but it won't affect the over all performance.

**Major bug:**

- ✓ Map view will be available after the list view. So if someone presses map button before list view, app will crash.

**Limitation:**

- ✓ There is no free API who provides blood donor list. So limited donors are available in database.

# Project Management Report

**Introduction:**

Our Blood Management application helps the users to find the donor for a particular blood group in a particular location in the easiest way possible. All the donors who wish to donate blood are supposed to enter their details in the application. The details include their Name, Age, Contact number, Email ID, Location (ZIP Code) and most importantly their blood group. The recipients who wish to receive blood should login to the application with their mobile number and are supposed to search the forum based on the required blood group and the location, they can contact the donor for further details.

We have divided the entire project into 4 increments.

**Increment 1:**

1. Research on importance of Blood Donation Management, requirements for the development.
2. Setup Android Studio, Zenhub and Github for every team member.
3. Design Class diagrams.
4. Design Sequence diagrams.
5. Design State diagrams.
6. Design Wireframes.
7. Design basic UI layouts (Login, Registration, Home)

- Prasanna has done Class diagram and Sequence diagram for the application.
- Santhosh has done State Diagram for the application.
- Anudeep has done the Wireframes of all the pages.
- Fathima has done the sample UI for Login, Registration and Home pages.

**Increment 2:**

1. Implement Login/logout /Registration/ Registration validation and functionality.
2. Implement home page.
3. Setup Firebase database.
4. Test Login/logout UI/Registration/Registration validation.
5. Test sample user data.

- Prasanna has done the Login, Registration, Home page validations.
- Santhosh has done the functionalities for Login, Registration and Home pages.
- Anudeep has done the UI for all the pages.
- Fathima has setup the Firebase database.

**Increment 3:**

1. Implement search functionality
2. Implement View and Edit Profile Functionality
3. Test search functionality
4. Test Edit Profile UI and functionality
5. Implementation of field validations.

- Prasanna has done the Profile view and validations.
- Santhosh has done the database queries for the Search functionality and the list view and the map view for the search.
- Anudeep has done the Edit Profile page and the database.
- Fathima has done the UI for all the pages and Social Login for the application.

**Increment 4:**

1. Implementation of Side Navigation Bar.
2. Implementation of Search for Blood Drives, Hospitals, Blood Banks.
3. Implementation of Share on FB option.
4. List View and Map View for all the searches.
5. Refined UI for all the pages.

- Prasanna has done the map view of Blood Bank search and UI for all the pages.
- Santhosh has done the Side Navigation Bar, Hospital search and Share on FB.
- Anudeep has done the list view and map view of Blood drive search.
- Fathima has done the list view of Blood bank search and UI for the search pages.

**Final Project Evaluation:**

We have implemented all the functionalities which we thought we should implement.

- We have implemented the search according to the Blood group and City.
- We have the implemented the Map view and the list view of the donors.
- We have implemented the Navigation Bar.
- We have implemented the list view and the Map view of Hospital search.
- We have implemented the list view and the Map view of Blood Drive search.
- We have implemented the list view and the Map view of Blood banks search.
- We have implemented the Share on FB option.

Yes, we did stick to our project plan in all our increments.

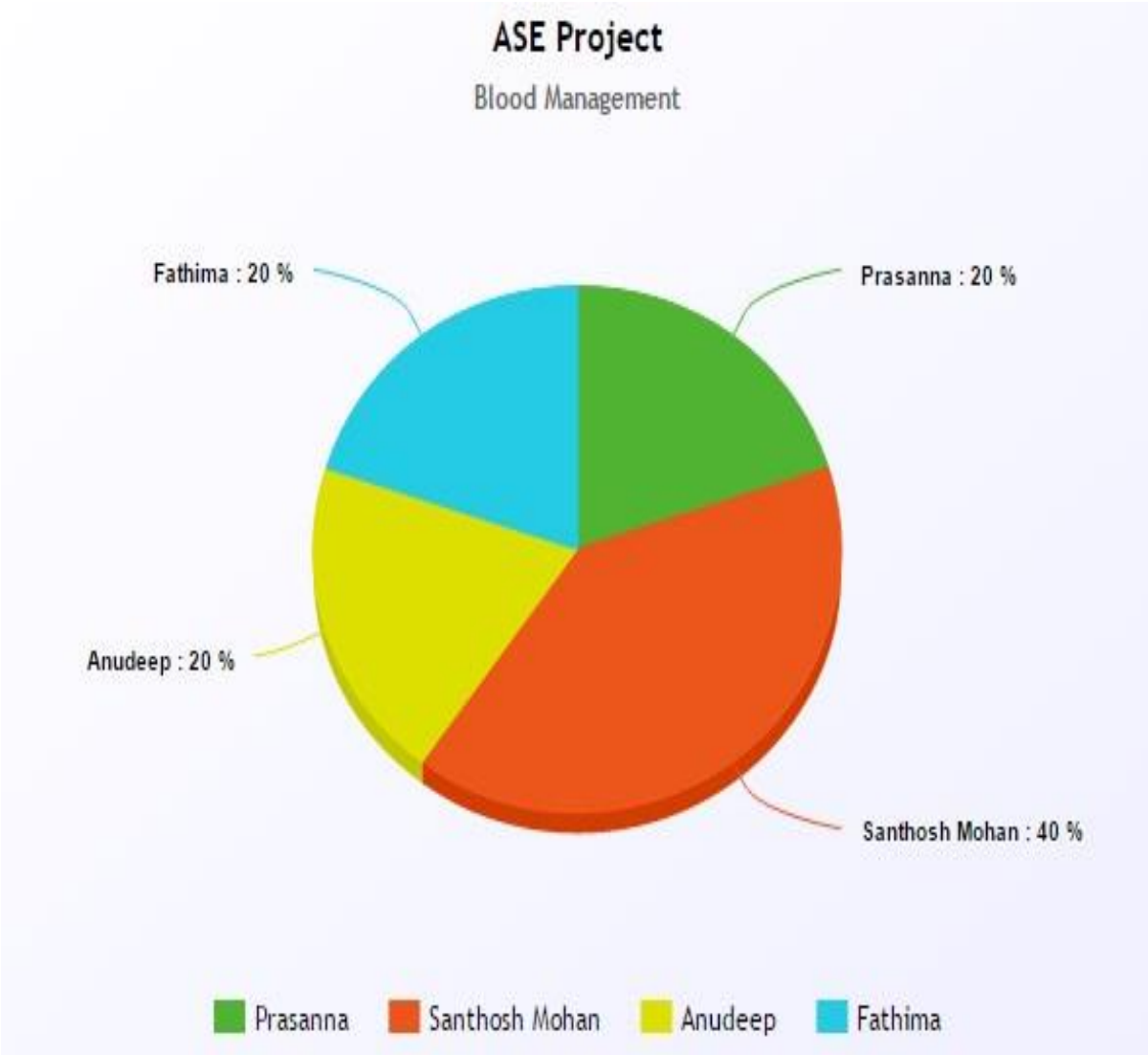
**Agile Process Uses in our project:**

- Implementation of project in phases.
- Design, Development and Testing is done simultaneously.
- Dynamic changes are implemented easily.

1. We would definitely use Agile process the next time we do a project since it is very easy as changes are done in the requirements generally.
2. All of our team members have worked really well and we didn't have any issues while working.

# Contribution:

1. Santhosh Mohan – **40%**
2. Prasanna Muppidi – **20%**
3. Anudeep Pandiri – **20%**
4. Fathima James – **20%**



# Github and Zenhub Images:


**Figure: Increment 1**

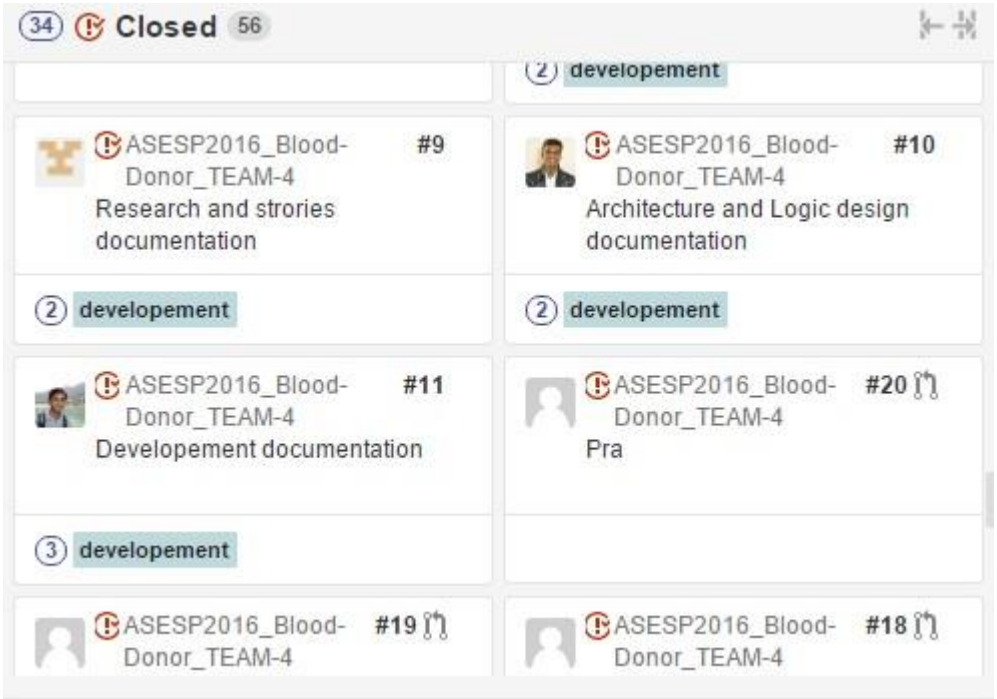



**Figure: Increment 2**


**Figure: Increment 3**

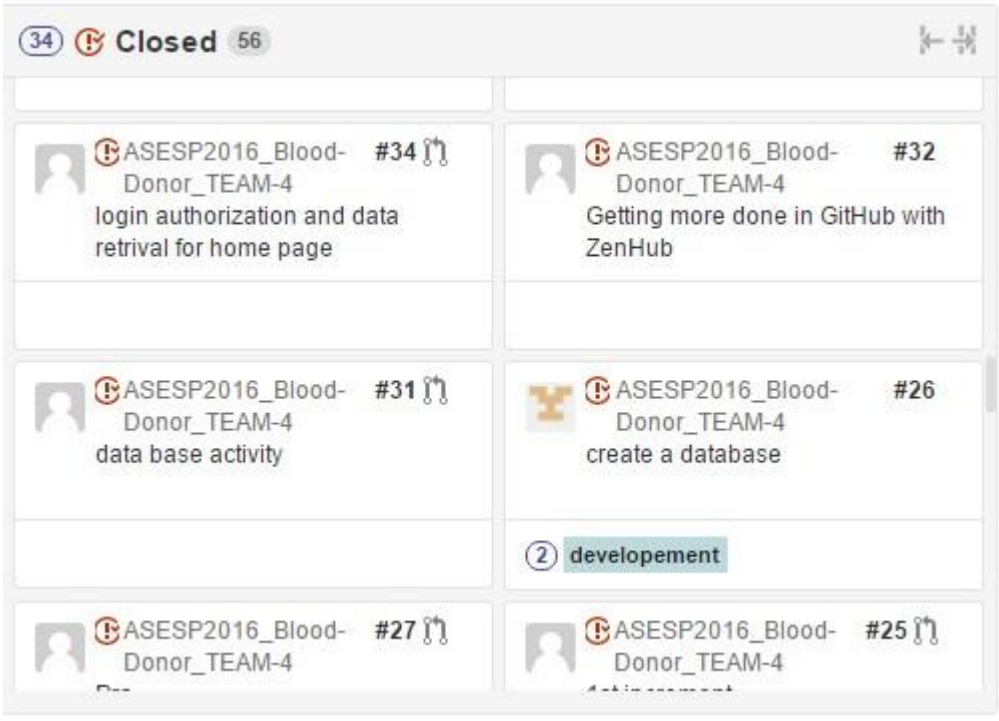



**Figure: Increment 4**

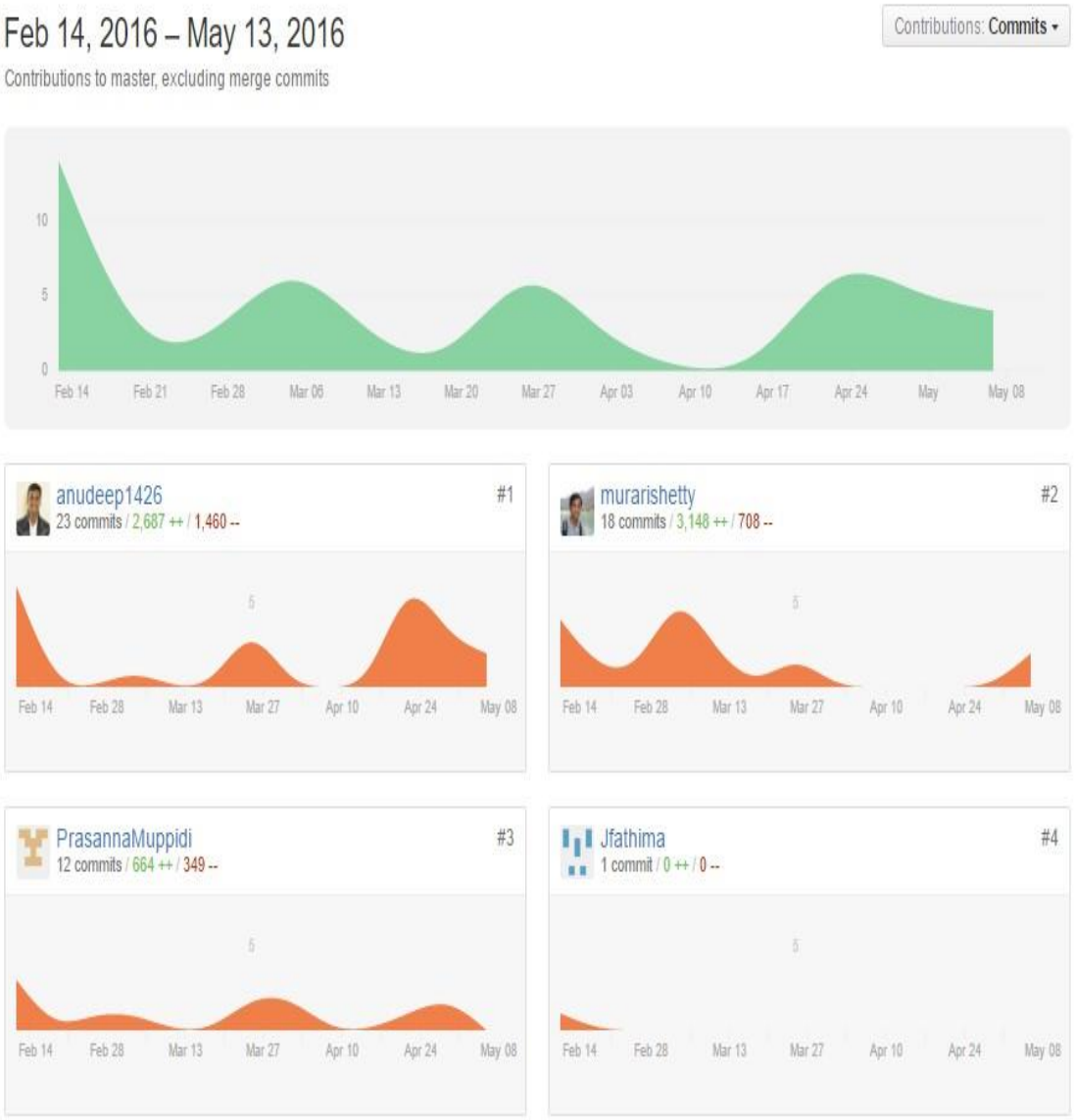



**Figure: Overall Contribution Graphs**