

Final Project
Assignment for full day competition
Blood Donation Collaboration System

Objective:

Everyday hundreds of thousands of people need blood and most difficult part is arranging blood donor, coordinating with them and give them direction to reach required location. Our objective is to create an application that will allow users to collaborate for blood donation, user can post blood requirement, volunteer for blood donation etc.

Requirements:

- 1) Signin/Signup
- 2) Post blood requirement
- 3) Users can comment on post about further detail or direction
- 4) Display blood requirement feed
- 5) Volunteer on particular blood requirement
- 6) As blood requirement fulfilled user can update his/her post for progress or completion
- 7) All users receive notification of blood requirement
- 8) Push notification to notify other users for blood requirement

Limitation:

For this application we will not have any web interface, therefore many details like location of hospitals and blood group will be directly added/updated in database
Static data provided at the end of this document.

Technology:

Create a mobile application Node.js MongoDB and React Native


1) Sign In / Signup

<div><input type="text" value="User name"/></div> <div><input type="password" value="Password"/></div> <div><div>Login</div><div>Signup</div></div>	<div><input type="text" value="First Name"/></div> <div><input type="text" value="Last Name"/></div> <div><input type="text" value="Email"/></div> <div><div>Blood Group</div><div>▼</div></div> <div><input type="password" value="Password"/></div> <div><div>Signup</div></div>
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2) Menu

Zeeshan Hanif Blood Group: A Positive	
Home	
My Requests	
Post requirement	
Notification	
Settings	

3a) Home screen/ Post feed list

<div><div></div><div>Feed</div></div> <div><div>Zeeshan Hanif 3 units of A Positive blood required. At Indus Hospital for my Friend Urgency: Urgent Contact at: 123456789 Additional instructions: Call me when you reach hospital Volunteers uptill now: 5 Current requirment: 2</div><div><div>Volunteer</div><div>Comment</div></div></div> <div><div>Zeeshan Hanif 3 units of A Positive blood required. At Indus Hospital for my Friend Urgency: Urgent Contact at: 123456789 Additional instructions: Call me when you reach hospital Volunteers uptill now: 5 Current requirment: 2</div><div><div>Volunteer</div><div>Comment</div></div></div>

3b) Post Details


Post Details	
Zeeshan Hanif ☆	
Units required: 3	
Donation Received: 2	
Still required: 1	
Blood Group: B Positive	
Location: Karachi, Sindh, Pakistan	
Hospital: Indus Hospital	
Urgency: Urgent	
Relation with patient: neighbour	
Contact no: 12345678	
Additional instructions: Call me when reach to hospital	
Volunteers	
Rehan uddin -- O Positive Exchange donation Not Donated	
Inam ul Haq -- O Positive Exchange donation Donated	
Comments	
Taha Shahid -- What is your exact location	
Rehan uddin -- I will reach in 2 hours	
Inam ul Haq -- Just donated	
Comment	Post

Post detail screen display post information in detail

- a) Empty star with username shows that blood requirement has not fulfilled yet
- b) Color filled start will show that blood requirement has fulfilled and no more donation required for this post
- c) List of Volunteers will display users who are willing to donate blood
- d) Volunteer list time display username, user's blood group, blood donated yet or not, and if users blood group does not match with the required blood group then it will display "Exchange donation"
- e) User can post a comment to get further details

It will be full big scrollable screen which will display all the details provided in image

4) Post Blood requirement



Blood Group:

A Positive

✓

No. of Units required:

3

Urgency:

Within 2 days

✓

Country

Pakistan

✓

State

Sindh

✓

City

Karachi

✓

Hospital

Indus Hospital

✓

Your relation with patient

Father

✓

Contact no.

Additional instructions

Post

User can post blood requirement

- a) List of Blood Group
- b) List of Urgency
- c) List of Countries
- d) List of State based on selected country
- e) List of Cities based on selected state
- f) List of Hospitals from selected City
- g) List of Relations to select relationship with patient


Important:

As user post blood request, all other users should receive push notification through GCM

Note: All of these data will be loaded from firebase. As we are limited with time so all of these information should be added in database directly.

Also for now use only Pakistan in country list and state/cities of Pakistan

5a) My Blood Request

<div>My Posts</div> <div><div>Required 3 units of B negative at Ziauddin Hospital Status: Not fullfilled</div><div>Required 1 units of A negative at Ziauddin Hospital Status: Completed</div><div>Required 3 units of B negative at Indus Hospital Status: Completed</div><div>Required 3 units of O Negative at Ziauddin Hospital Status: Completed</div></div>	<p>Display list of blood requirements posted by logged in user.</p> <p>It will display only small summary of requirement and status if requirement is fulfilled or not.</p> <p>Click on each item will display detailed post screen</p>
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5b) My post details

My Post Details	
Units required: 3 Donation Received: 2 Still required: 1 Blood Group: B Positive Location: Karachi, Sindh, Pakistan Hospital: Indus Hospital Urgency: Urgent Relation with patient: neighbour Contact no: 12345678 Additional instructions: Call me when reach to hospital	<input checked="" type="checkbox"/>
Volunteers	
Inam ul Haq -- O Positive Exchange donation	
Donated	Not Donated
Rehan uddin -- O Positive Exchange donation	
Donated	Not Donated
Taha Ahmed -- B Positive	
Donated	Not Donated
Comments	
Taha Shahid -- What is your exact location	
Rehan uddin -- I will reach in 2 hours	
Inam ul Haq -- Just donated	
Comment	Post

This post details screen is for user who have posted the blood requirement.

- Display all the details post by user
- Tick on the top right corner is clickable button, when user click on this it means that blood requirement has been fulfilled and no more blood is required
- Volunteer list display two buttons with each volunteer and current user can click any one of them to identify if that user have donated blood or not
- Comment section will display list of comments

6) Notification

<div>Notifications</div> <div><div>Zeeshan Hanif required 3 units of B Positive at Indus Hospital</div><div>Inam ul Haq required 3 units of A Positive at Indus Hospital</div><div>Rehan uddin required 1 units of B Positive at Ziauddin Hospital</div><div>Zeeshan Hanif required 3 units of O Positive at Jinnah Hospital</div></div>	<p>Notification list will display notification received for blood requirement</p>
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Static Data:**Blood Groups:**

- 1) A Positive
- 2) B Positive
- 3) O Positive
- 4) A Negative
- 5) B Negative
- 6) O Negative

Urgency:

- 1) Urgent
- 2) Within 5 hours
- 3) Within 12 hours
- 4) Within 24 hours
- 5) Within 2 days
- 6) Within Week

Hospitals:

- 1) Indus Hospital
- 2) Ziauddin Hospital
- 3) Agha Khan Hospital
- 4) Liaquat National Hospital
- 5) OMI
- 6) Jinnah Hospital
- 7) Holy Family Hospital

Relation with Patient:

- 1) Father
- 2) Mother
- 3) Son
- 4) Daughter
- 5) Aunt
- 6) Uncle
- 7) Nephew
- 8) Niece
- 9) Friend
- 10) Neighbour
- 11) None

Blood requirement Status

- 1) Not Fulfilled
- 2) Completed

Marks distribution:

Marks will be given on 1 to 10 scale for each criteria, 1 being the lowest and 10 highest

Criteria:

- 1) Application structure, code cleanness
- 2) Object oriented design, separation of code and proper business logic
- 3) Completion of all requirements
- 4) UI design
- 5) Database design
- 6) Push Notification