



# **Go-Social - Implement Community App Using Go Social Framework**

# Project Introduction

## Problem Definition:-

What is an Open-Source Organisation? Open-Source Organisation is the one, whose project's codebase is open for all to contribute.

In GSOC, there are many organizations, having their different community apps/forums where aspirants/mentees ask questions, discuss their projects, and other queries. But most of the organizations don't have their independent Community App, making them dependent on other platforms. Better Communication leads to an increase in productivity. Better the Communication, more the Understanding. Students/Mentee/Aspirants may not be able to find a particular and single platform where they can:-

- Communicate as well as make a connection
- Post their queries
- Collaborate with others
- Answer to others' problems
- Checkout Forums

So if all the above points included in one platform, can help the whole organization.

## Current State

Community App plays an important role for every organization, as it provides fluidity in easy conversations/communication and communication is what makes team Strong. Community supports and helps all the folks in need, helps in collaborating and syncing when working on projects.

What I believe is that only a few organizations have their own independent platform, but none of them includes all the stated points which I mentioned above.

Basically, all the organizations use different platforms for different purposes i.e.,

- Slack:- For communication and collaboration,
- Gitter:- Communication,
- StackOverflow:- Queries and Questions and others.

But one needs to surf on different platforms for different purposes. Creating a time-consuming Problem.

## **The issue that I'm going to solve**

I am basically aiming to resolve the above problem by proposing a platform which is a Community app named **"Ask SCORE"** using the Go-Social framework and its components,

This will resolve all the mentioned problems, i.e.,

- Communication - Group Chat (threads)
- Queries - Question and Answer window
- Collaboration - Sharing problems and communication
- Forums and others - Channels and thread.

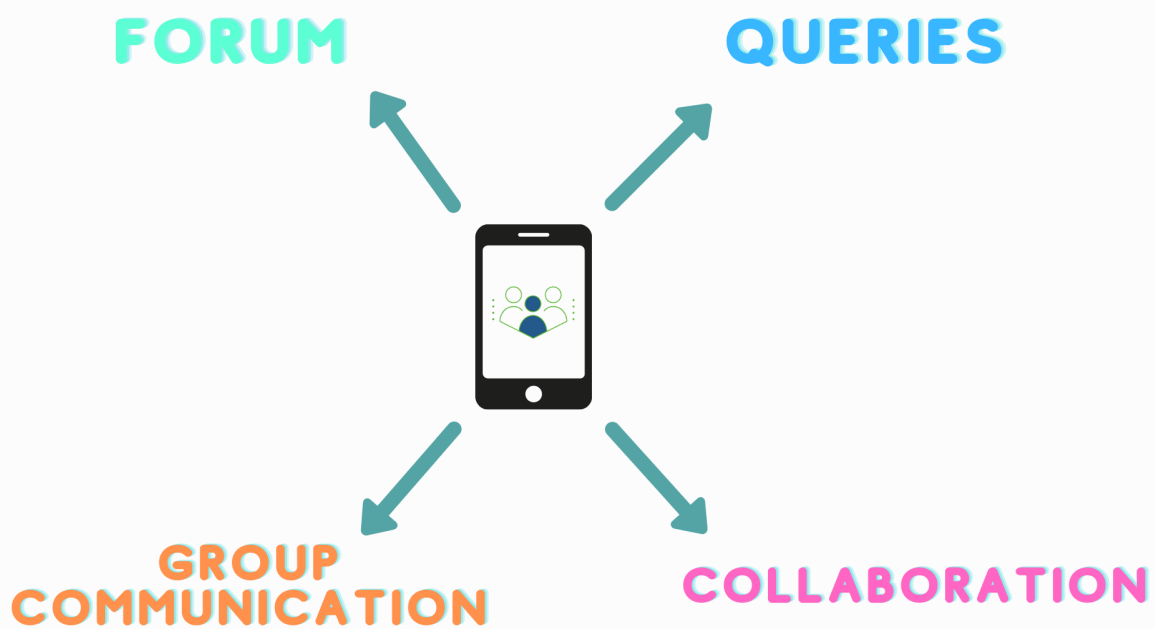
**Ask SCORE** App helps Mentors, Students, Mentee and all, in Collaboration, teamwork, promoting, cooperation, etc.

And if Communication is better between all, then it will surely be a Good Community, as

- One's issue can be easily resolved - Implementing query asking and answering in the application, which will help students and others to ask and get their queries resolved earliest and at the same platform.
- One can actively participate - There will be channels in the app, which will have specified topics, and one can enter the room and can start a conversation. This makes the community active.
- Helping each other in order to achieve success - Asking query and resolving the queries of others creates a helping environment in the app. Open-Source is all about helping each other.
- Making a safe and healthy environment for everyone - All above points include in creating a healthy environment.

- Member stays updated - FORUM section and Notification section in app will help members, by notifying the members with the latest information. If there are any mentions or any updates, the person will be notified.

Many projects don't have any containerization tech, which may reduce the life of the project and might have a hard environmental setup making them rigid. So to overcome this problem I will be implementing **DOCKER**, which is the software that creates containers and container-based apps. I have described the concept and relevance of **DOCKER** briefly in the next topic.



## Project Goals

In the given time period, I am looking forward to implementing the following things:-

- React-Native Application '**Ask SCORE**' using Go-Social Framework and its Components.
- Containerization using Docker
- Documentation for Users and Developers

Deliverables:-

- Source Code (iOS and Android)
- APK file

## What is Docker?



Docker is a software platform for developing applications based on containers.

**Then the question arises: what is a container? How does the container relate to this project?**

Taking this approach to a real-life scenario, what does a container do? Containers help store things, preserve them, and combinely **ISOLATES** the thing.

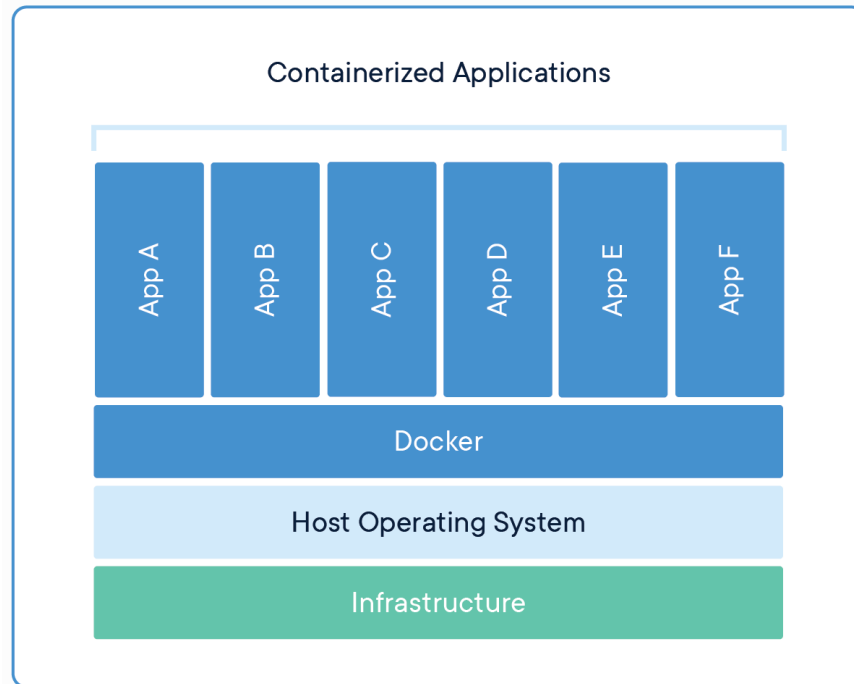
So this is what **DOCKER** is going to do, which is called Containerization. Docker is the software that isolates the Project from the outer environment of the project or isolates the project from one another, so they don't unduly interfere with each other's operation or maintenance. Containers, by contrast, isolate applications' execution environments from one another but share the underlying OS kernel.

**What is Docker going to do in this project?**

In react-native applications, there are many libraries that are needed to be installed to run the project, but versions of these libraries regularly update. So it isn't necessary that applications would run in other environments or after decades. And so Docker acts as a container, which locks the version of the libraries, So that it may run after decades. Then the question arises that we use a **package-lock.json** file in our project.

What's the difference between **DOCKER** and **package-lock.json**?

Package-lock.json file only saves the version of the library, which in result installs from the internet, but it isn't necessary that the version would be still available on the internet but on the other hand, **DOCKER** saves the version of the library and also the copy of the Library, which remains in the container, no need to install from the internet. This makes the project more scalable, flexible, and easy to maintain and assemble.



## Implementation

### Create React-Native Application

I will be developing an application '**Ask SCORE**' using React-Native with a backend with Firebase RTDB. All the functionality will be handled through the backend itself.

#### 1) Front-End Development:-

I have prepared some wireframes/prototypes of how the app will look, with workflow too. Here is the workflow of the App:-

UI Designs- [Link](#)

WireFrame - [Link](#)

**Logo:-** I have designed a logo for the Community app, which also matches the color schema of SCoRe Organisation. Here is the logo-

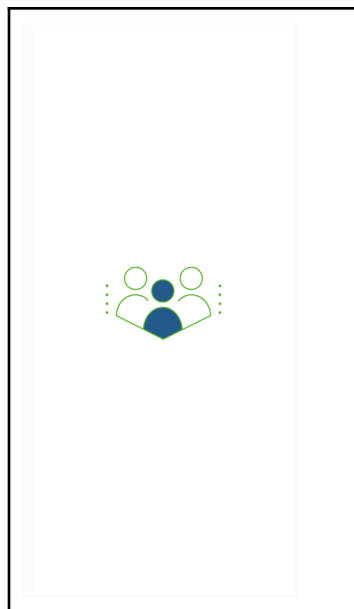


This logo solely signifies the People together, which basically tries to depict **COMMUNITY and Collaboration** fitting best with the motive of the **Ask SCORE** app which is a community app.

Color Schema also matches with the SCoRe Organisation color schema i.e.

- 1) #51AD28 - Green
- 2) #23598B - Blue

i) **Splash Screen**:- Users will be greeted with a Splash Screen with a logo I have Made. Here is the look of Splash Screen -



### **SPLASH SCREEN**


ii) **SignUp/Login Screen**:- After the splash screen(automatically closing), the User will be asked to login/Signup into the app. This functionality will be implemented using Google Firebase. I will be using Firebase SDK Authentication. Firebase authentication also handles sending user authentication, password reset all by sending email verification. And at the next level, whatever the mentor says, I will also enable login/signup using Facebook and Google.

```

firebase.auth().sendSignInLinkToEmail(email, actionCodeSettings)
  .then(() => {
    // The link was successfully sent. Inform the user.
    // Save the email locally so you don't need to ask the user for it again
    // if they open the link on the same device.
    window.localStorage.setItem('emailForSignIn', email);
    // ...
  })
  .catch((error) => {
    var errorCode = error.code;
    var errorMessage = error.message;
    // ...
  });

```

For email verification, an email will be sent on the registered email id to verify the account, once the user verifies using the link provided on the email, the User may log in into their account. This enhanced the safety of the App.





LOGIN


SIGNUP

Forgot Password?

LOGIN

OR





LOGIN

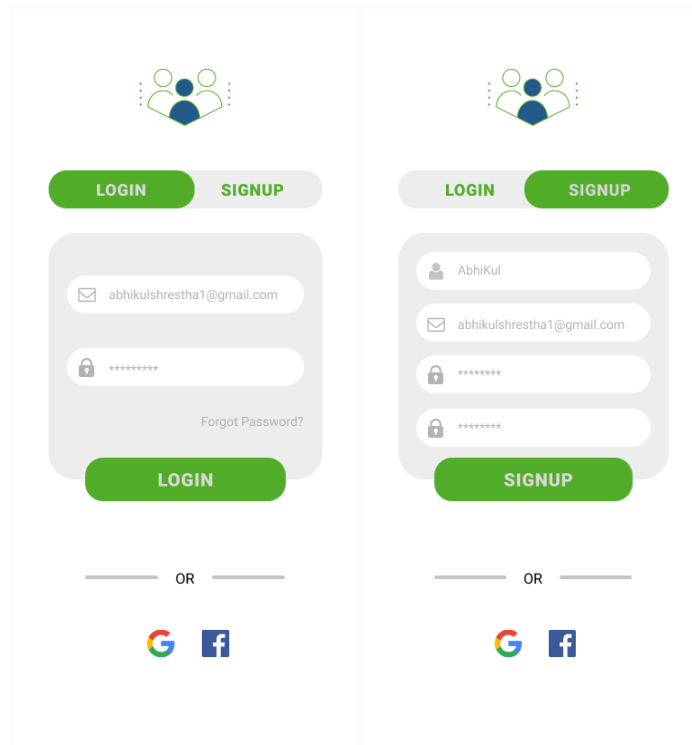
SIGNUP

SIGNUP

OR

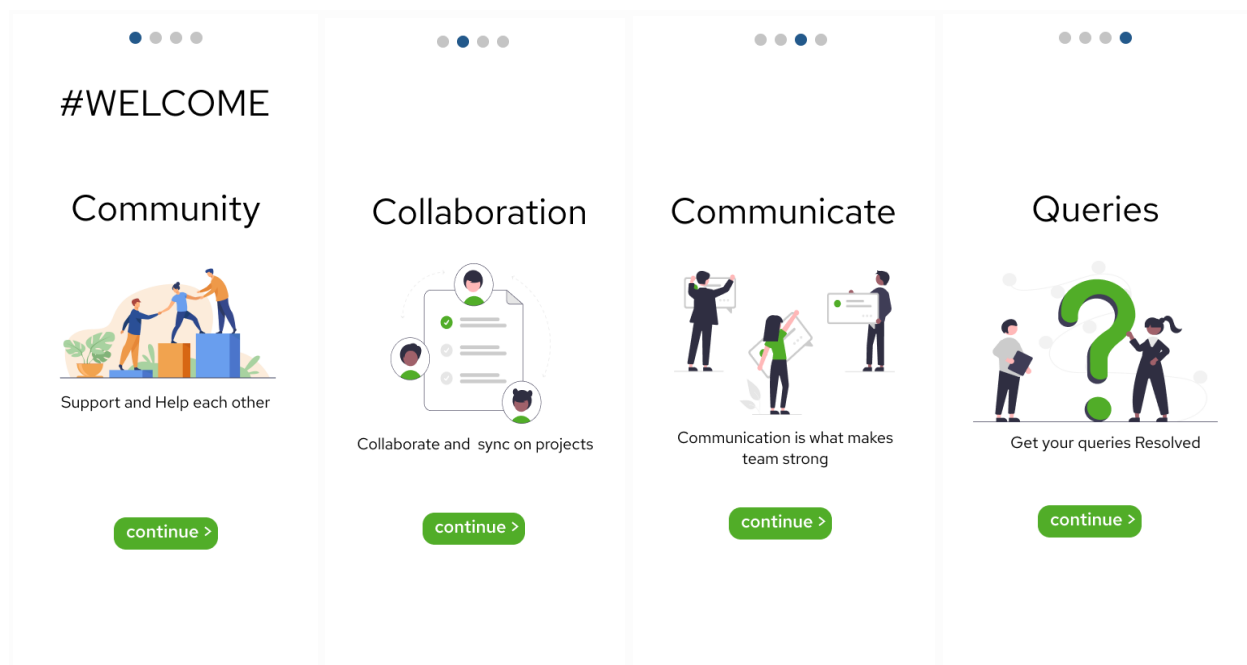







## ii) SignUp and Login View

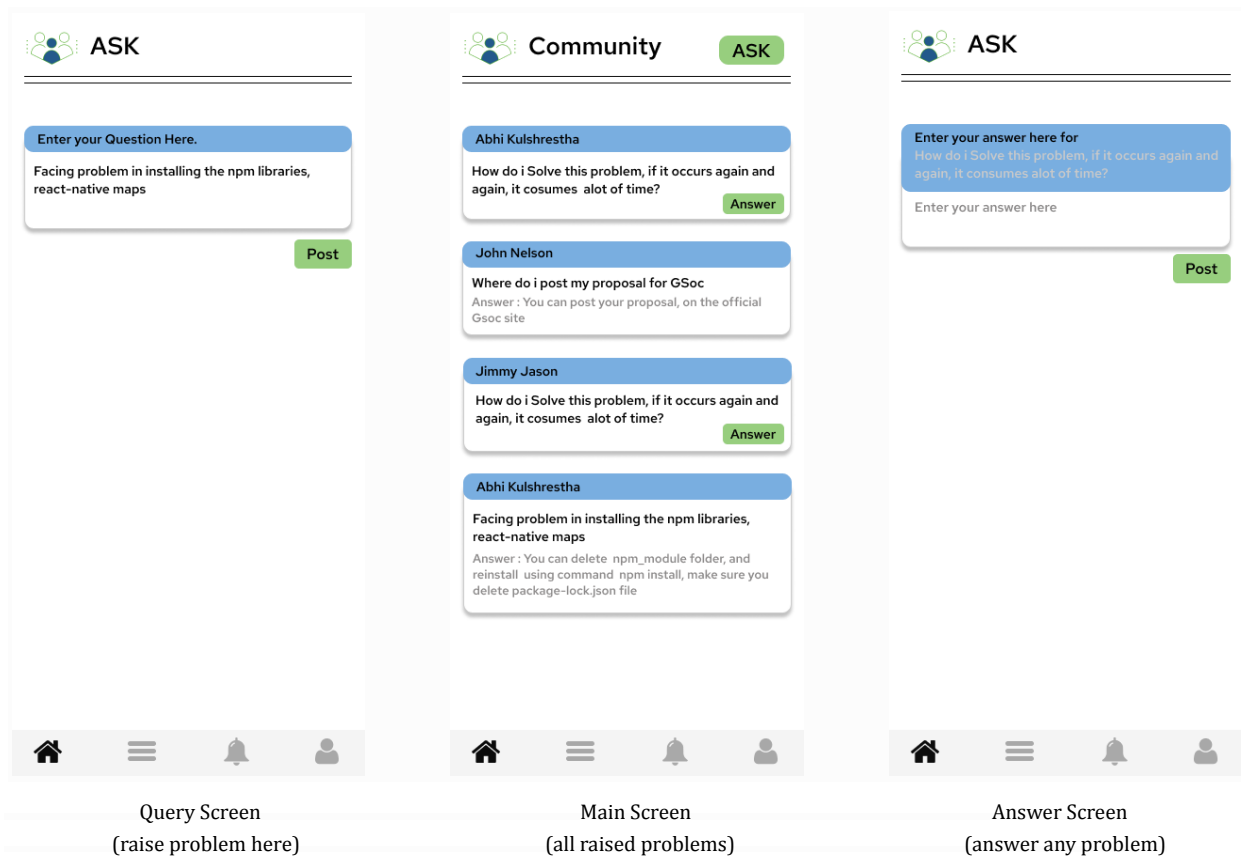
iii) **Onboarding Screen:-** After Logging in or signing in, the user will see Onboarding Screen, basically a walkthrough of the app and its motive -



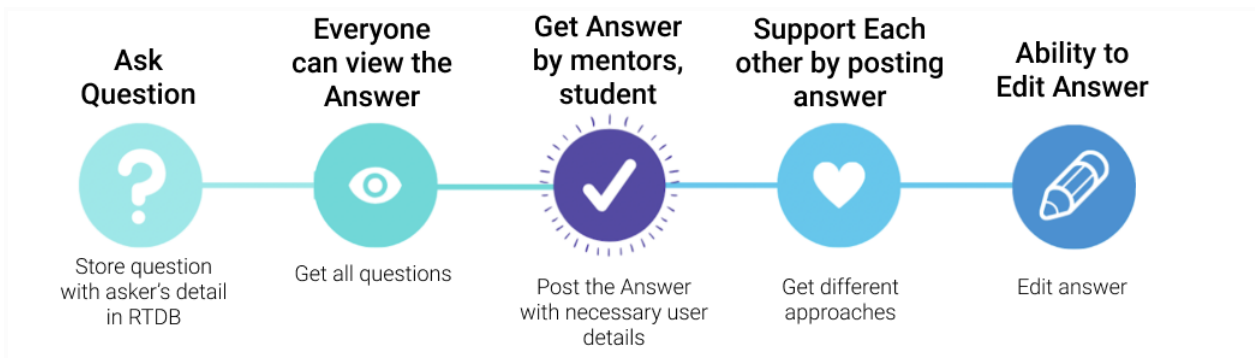
## iii) Onboarding Screens

**iv) Feed Screen:-** After the onboard screens, the user will reach the main screen which is FEED SCREEN. On the feed screen, there will be all the Questions/Queries/Requests and if you know the related information about the Question, you can Answer it. And if you are facing any problem, then you can ask the community too.

Here are the mockups design for the same -

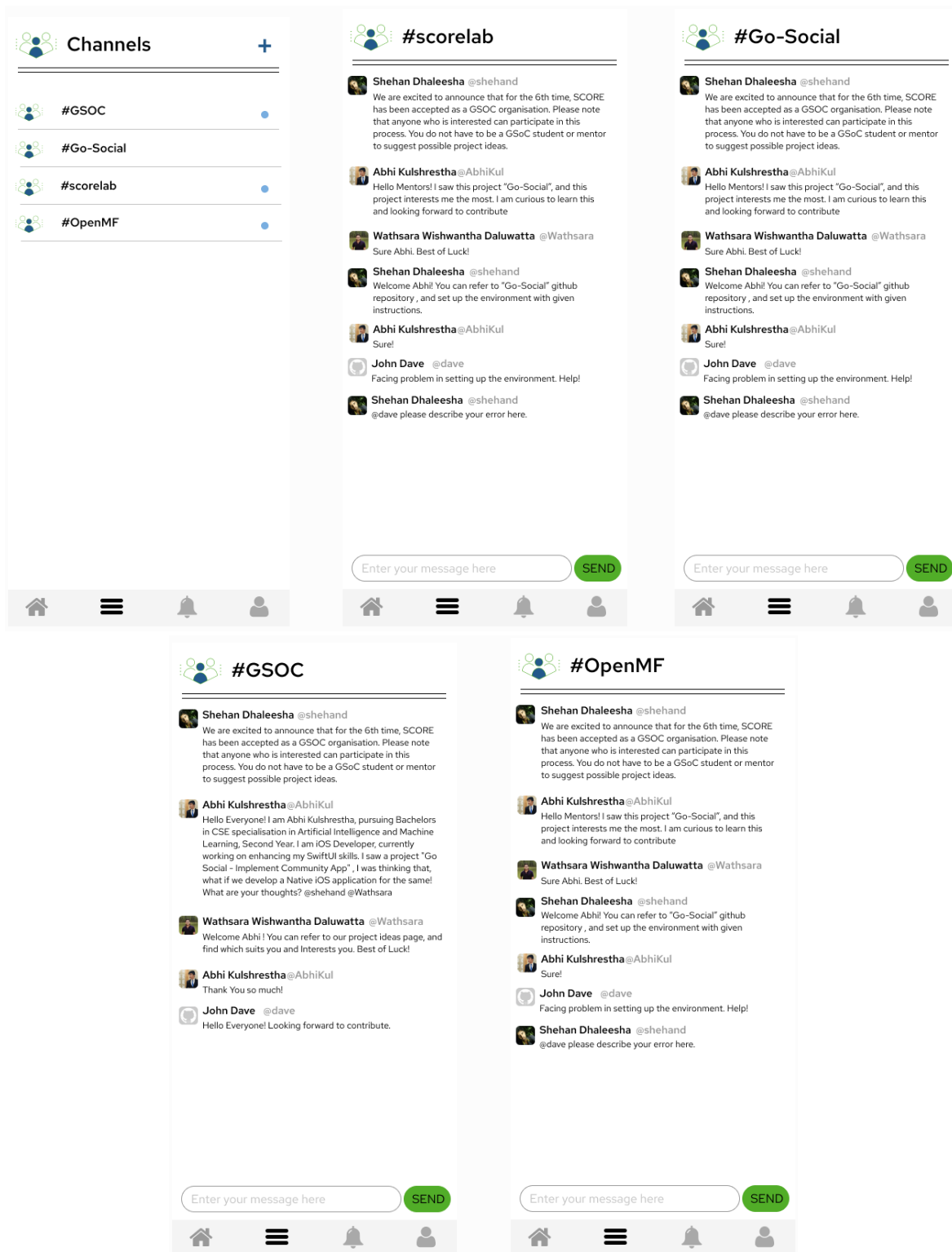


#### iv) Feed Screen



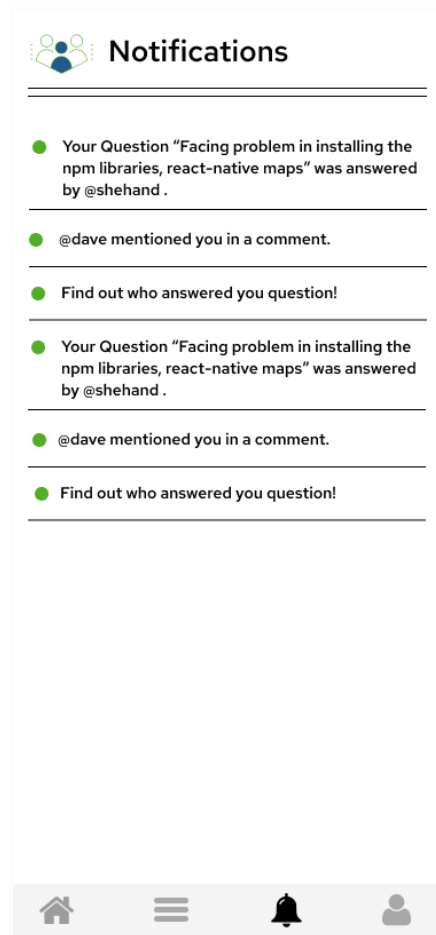
#### Procedure for Queries

**v) Channel Screen:-** This is the Screen, which will have all the Discussion channels, with different topics, One can Enter into the channel/Room and discuss anything related to the topic. Mentors will be there to help students and solve their queries.



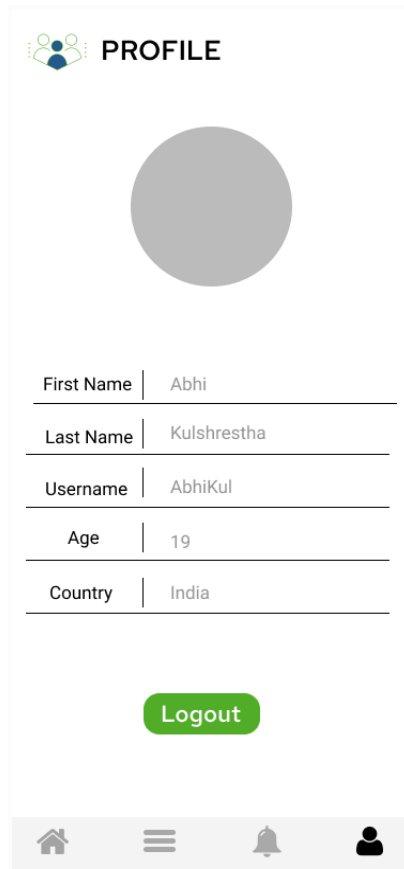
## v) Channel Screen (with different channel/threads and their screens)

**vi) Notifications** - This is the Screen in App, which will show all the notifications like, if you were mentioned, or your question was answered, or anything else. One can be easily notified by Notification Center and makes it easy to catch up. Mockups for the screen -



## vi) Notifications

**vii) Profile View** - This is the View in the App that contains information related to Users like Name, Username, Age, and country. This View also contains a Logout Button, if the user wishes so. This portion also has a User's Display Picture. One can upload a Display Picture from here itself.



vii) Profile View

## Timeline

Period(Community Bonding, Coding Phase, etc.,)	Milestone	Duration/Date
<b>Community Bonding Period</b>	<ul style="list-style-type: none"> <li>● Get to know the Community</li> <li>● Discuss the project with the community, and potential features of the project.</li> <li>● Learn more concepts related to the project</li> <li>● Discuss Add-ons and take-off of the project.</li> </ul>	17 May 2021 - 7 June 2021

<b>Week-1</b>	<ul style="list-style-type: none"> <li>• Initialize the react-native application</li> <li>• Design UI of SignUp/Login View, (mockups provided above) with Go-Social Components</li> <li>• Enhancement in UI according to the community suggestion.</li> <li>• Implement Onboarding Screens.</li> </ul>	<b>7 June - 13 June</b>
<b>Week-2</b>	<ul style="list-style-type: none"> <li>• Design Profile View (given in the mockup above)</li> <li>• Integrate Firebase with the app.</li> <li>• Design Architecture of required Schema.</li> </ul>	<b>14 June - 20 June</b>
<b>Week-3</b>	<ul style="list-style-type: none"> <li>• Implement SignUp / Login functionality and Implement Password reset using email-verification-link.</li> <li>• Implement Google/Facebook Login/SignUp functionality. (* will be discussed with the community).</li> <li>• Implement Logout functionality in Profile View.</li> </ul>	<b>21 June - 27 June</b>
<b>Week-4</b>	<ul style="list-style-type: none"> <li>• Design UI for Ask Queries view</li> <li>• Design UI for Post Query View</li> <li>• Design Ui for Answer Query View</li> <li>• Implement Bottom Navigation Bar</li> </ul>	<b>28 June - 4 July</b>
<b>Week-5</b>	<ul style="list-style-type: none"> <li>• Implement Backend using Firebase Real-Time-Database.</li> <li>• Design Database Schema.</li> <li>• Implement Post Queries, answer query, and Main View functionality by integrating it</li> </ul>	<b>5 July -11 July</b>

	with Firebase.	
<b>Week-6 and Evaluation-1</b>	<ul style="list-style-type: none"> <li>• Prepare Deliverable for Evaluation.</li> <li>• Resolving UI issues.</li> </ul>	<b>12 July - 18 July</b>
<b>Week-7</b>	<ul style="list-style-type: none"> <li>• Design Channel section</li> <li>• Design threads/Channel Screen(Community Chat for discussion)</li> <li>• Basic Implementation of Channel.</li> </ul>	<b>19 July - 25 July</b>
<b>Week-8</b>	<ul style="list-style-type: none"> <li>• Integrating Channels with Firebase.</li> <li>• Implementing Chat Functionality</li> <li>• Implementing new Channel Creation.</li> </ul>	<b>26 July - 1 August</b>
<b>Week-9</b>	<ul style="list-style-type: none"> <li>• Design Notification View</li> <li>• Implementing Notification View</li> <li>• Basic of Continuous Integration</li> </ul>	<b>2 August - 8 August</b>
<b>Week-10</b>	<ul style="list-style-type: none"> <li>• Implementing Continuous Integration using Travis CI.</li> <li>• Dockerization of the project using Docker.</li> </ul>	<b>9 August - 15 August</b>
<b>Submit Code and Final Evaluation</b>	<ul style="list-style-type: none"> <li>• Prepare for Final Submission.</li> <li>• Documentation of the project.</li> <li>• Blog on Google Summer of Codes journey.</li> </ul>	<b>16 August - 22 August</b>

## SCoRe Contributions

4 issues opened.

- [Issue#126](#) - createBottomTabNavigator()' has been moved to 'react-navigation-tabs'
- [Issue#124](#) - Upgrades needed for SDKs, Gradle, plugins, abds
- [Issue#123](#) - React native run-android stops immediately after starting the app on Device
- [Issue#121](#) - minSdkVersion needs to be upgraded.

## Merge Requests

- [MR#122](#) - Upgraded minSdkVersion to 21
- [MR#125](#) - Upgraded Library versions
- [MR#127](#) - Createbottomtabnavigator() moved to 'react navigation tabs'

## Personal Information

**Name :** Abhi Kulshrestha

**Email :** abhikulshrestha1@gmail.com

**Mobile :** +91 7413968999

**Github :** [AbhiKul10](#)

**LinkedIn :** [Abhi Kulshrestha](#)

**Location:** 29A - Amari Greens, Kharar, Chandigarh-Ropar Highway, Mohali, Punjab - 140301

**University:** Chandigarh University

**Degree:** Bachelors in Computer Science with Specialization in Artificial Intelligence and Machine Learning

I am an App Developer, with good knowledge of iOS Development and Descent knowledge of Android Development. I am Developer for a while now and also have some knowledge about the project cycle. I love to learn and explore new technologies. I am determined toward my work. It feels great when I solve some problems using Technology. I love Exploring new techs and learning how to integrate them into a project or something to resolve some problem.



I participated in Google Code-in, way back when I was only 16, So I have good knowledge of how Open-Source works and how projects are developed by collaborating with others.

I am a good learner, and I believe that I have good potential to work with SCORE, developing and collaborating with the help of the community to solve the problem with Go-Social Framework.

## Reference

### 1) Bridge - Adopt Your Village

This is the platform that connects donors with recipients which are students who don't have enough money to pay their education fees. I Contributed to this project by creating the iOS Application for the same.

Role:- iOS app developer

Link:- <https://github.com/adoptvillage/bridge-ios>

### 2) CU-Navigator-Android

This the University app which guides Students or people to different Block and Food Outlet

Role:- Android Developer

Link:- <https://github.com/AbhiKul10/CU-Navigator-Android>

### 3) Coronalytics---iOS

This is the app I Developed during the pandemic period. This app works on JSON data parsing from API on the internet about the data and Stats related to Corona Virus and pandemic.

Role:- iOS App Developer

Link:- <https://github.com/AbhiKul10/Coronalytics---iOS>

### 4) New-app

This is also based on JSON parsing, API. This app displays the latest News worldwide.

Role:- iOS App Developer

Link:- <https://github.com/AbhiKul10/news-app>

### 5) **PhysioMedic**

PhysioMed is an App that basically contains various types of Muscles. This App aims to help Physiotherapists in making. PhysioMed contains Muscles and the basic information (like Action, Origin, Insertion) about the Muscles.

Role:- iOS App Developer

Link:- <https://github.com/AbhiKul10/PhysioMedic>

### **Project Specific Questions**

4. Which SCoRe GSoC project are you applying for (please submit separate applications for each project):

**Answer:- Go Social - Implement Community App Using Go Social Framework**

5. What do you plan to accomplish over this summer for this project? (Please tell us

a. What project you want to work on,

b. How you will approach that project portion (with your milestones))

**Answer:-**

**a) Go Social - Implement Community App Using Go Social Framework**

b) Basically, what I have decided is that I'll be working step-wise. Each functionality will firstly be designed(UI) and then the implementation of functionality will be integrated with UI. I'll be implementing the whole project in this way.

6. If you have your own project to propose, please describe it here:

**Answer:-**

Presently, I have no project in my mind. But will surely be contributing to the same project to implement new features and to increase the scalability.

7. Projects-related details. (Have you tried that project you selected from SCoRe project list? What problems, if any, were presented? What prevented you from getting the entire system up and running?)

**Answer:-**

Yes, I tried running the project I selected from the SCoRe project list. I faced some dependency issues, which I resolved by debugging and updating the libraries to the latest version. I have opened some issues related to the project too.

8. List down any plans you have during this summer( over the time period of GSoC, such as classes, job, vacation plans, thesis, etc.)

**Answer:-**

I might be having my End-Sem exam during the Community Bonding Period. Dates aren't finalized yet, but I believe that the university exam will end before the Coding Phase. But I will make sure that I stay one step ahead of the timeline.

9. Education:

- a. What year are you in school?
- b. What programming courses have you taken?
- c. What is your major?
- d. Have you done group projects (programming or otherwise)?
- e. What was your primary contribution to/role in the group?

**Answer:-**

- a) I am currently in the second year.
- b) Bachelors in Computer Science with Specialization in Artificial Intelligence and Machine Learning.
- c) Computer Science Engineering
- d) Yes I have listed some Group projects above.
- e) iOS App Developer, Android App Developer.

10. Do you have work experience in programming? Tell us about it.

**Answer:-**

**Yes, ADOPT YOUR VILLAGE:-** Contributor in BRIDGE APP, with **8 Issues and 8 Merge Requests** (Closed).

11. Do you have previous open source experience? Briefly describe what you have done.

**Answer:-** I have been a Contributor to Open-Source Organisations. Developing different projects with the groups as an App Developer, Developing my own project as well. I also participated in Google Code-in 2019, where I was first introduced to Open-Source. I Contributed to a few organizations, one of which is DIAL which is an Umbrella Organisation. I Contributed to the Mifos Initiative, working on Fintech (Financial technology).

12. Tell one interesting fact about yourself.

**Answer:-**

I like Designing. Creativity is a must required while designing. Something which is a bit improper while designing makes me feel uncomfortable until it is resolved. **Fact-** In Google Code-in 2019, i targeted mostly designing tasks, and now involving Functionality in them makes me feel productive.