MOZART IN CO.

Final Report

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Project Name :CommuinityHub
Program: Information Technology Solutions- 3rd Sem

Submitted to:
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Executive Summary

Project Idea/Scope:

We are going to design and develop an android application which provides a general digital platform to users to advertise their local businesses, sell their products and asked any queries. We have seen that due to cover situation there are a lot of new small businesses are opening which operates from home. Due to lack of budget it is very difficult for them to advertise their services for reaching out to customers. This platform facilitates them for promoting their business and end user also get to know about the new services providing by the people nearer to them. In addition to this, it also provides facility to end user for posting an advertisement which they want to sell.

Detailed Features:

1). User able to sign up and login to application.
2). Every user has a unique user name.
3). After successfully login, user can check their profile.
4). User can see all the advertisements on the public wall.
5).User can post an advertisement.
6). User can delete their posted advertisement.
7). User can update the posted advertisement.
8). Customers able to contact the business owner through email and contact number.

Requirements:

a). Hardware requirements

Your development workstation should meet or exceed these hardware requirements:

- A 64-bit environment is required for Android 2.3.x (Gingerbread) and higher versions, including the master branch.
- You can compile older versions on 32-bit systems.
- At least 250GB of free disk space to check out the code and an extra 150 GB to build it. If you conduct multiple builds, you need additional space.

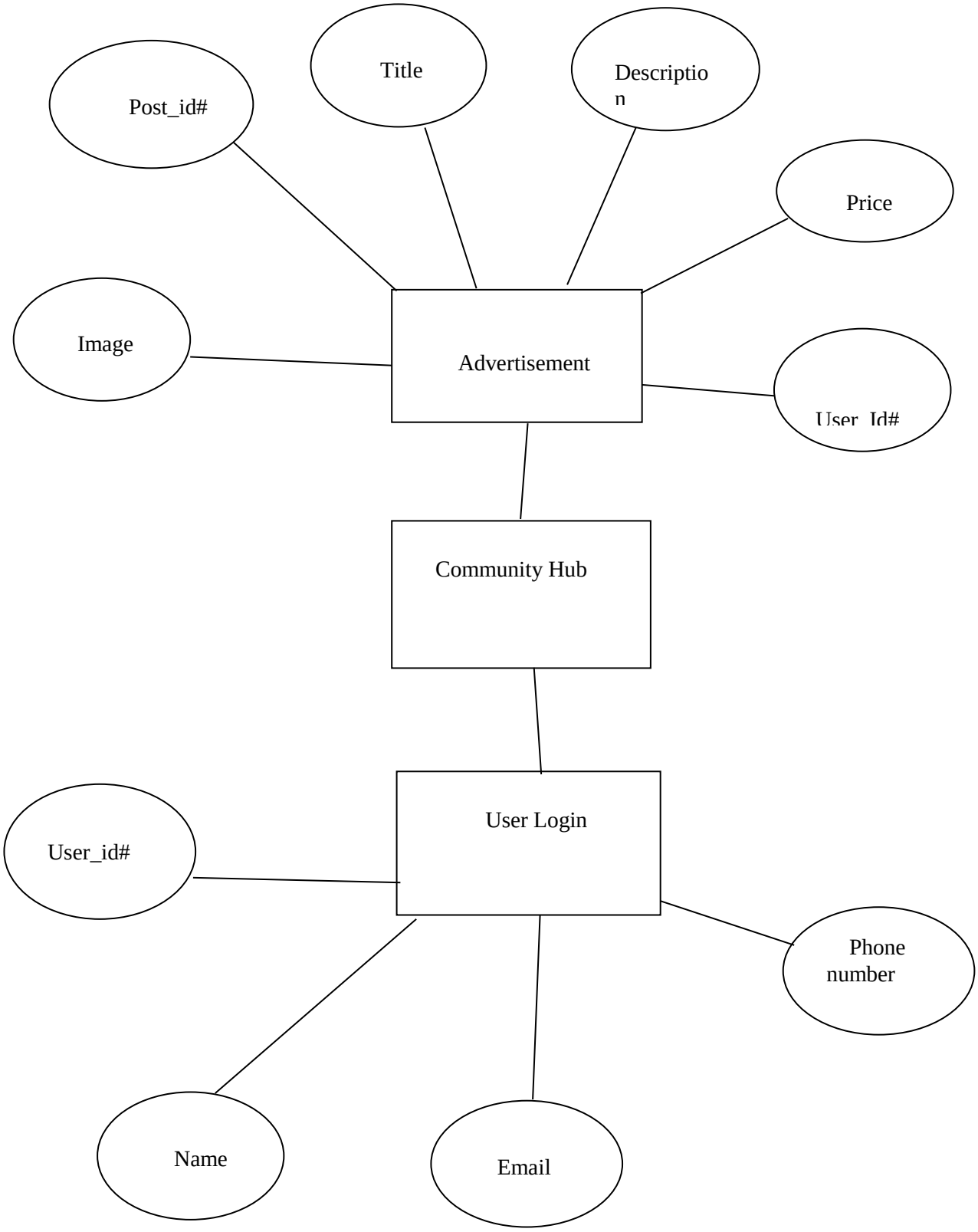
b). Software requirements

- **Android Studio** is exclusively designed for developing Android applications. It consists of all Android SDK tools to design, develop, maintain, test, debug and publishour app. Other main tools include Android SDK, ADB, and Gradle Build. It also supports Git as a version control system to maintain the app changes and push them into github. All java files, layout files (for design) are integrated into a single project easily. After the completion of project, the whole application could be put as an APK (Android Package) file, in which we can run that APK file in any device and use the application.
- **Android Software Development Kit (SDK):** One of the main tools used in developing android applications, as it packages many core features into one SDK and it can be used in the application easily. This helps us to avoid writing lot of code, and building applications faster.
- **Android Debug Bridge (ADB):** Android SDK uses ADB tool as a connection device which allows us to connect the Android Devices or Emulator with the machine via USB. After developing or while developing applications, we can connect with the device to check how the application runs. Later, we can debug and run the applications.
- **Gradle Build:** It is used to build an application.

Time Frame:

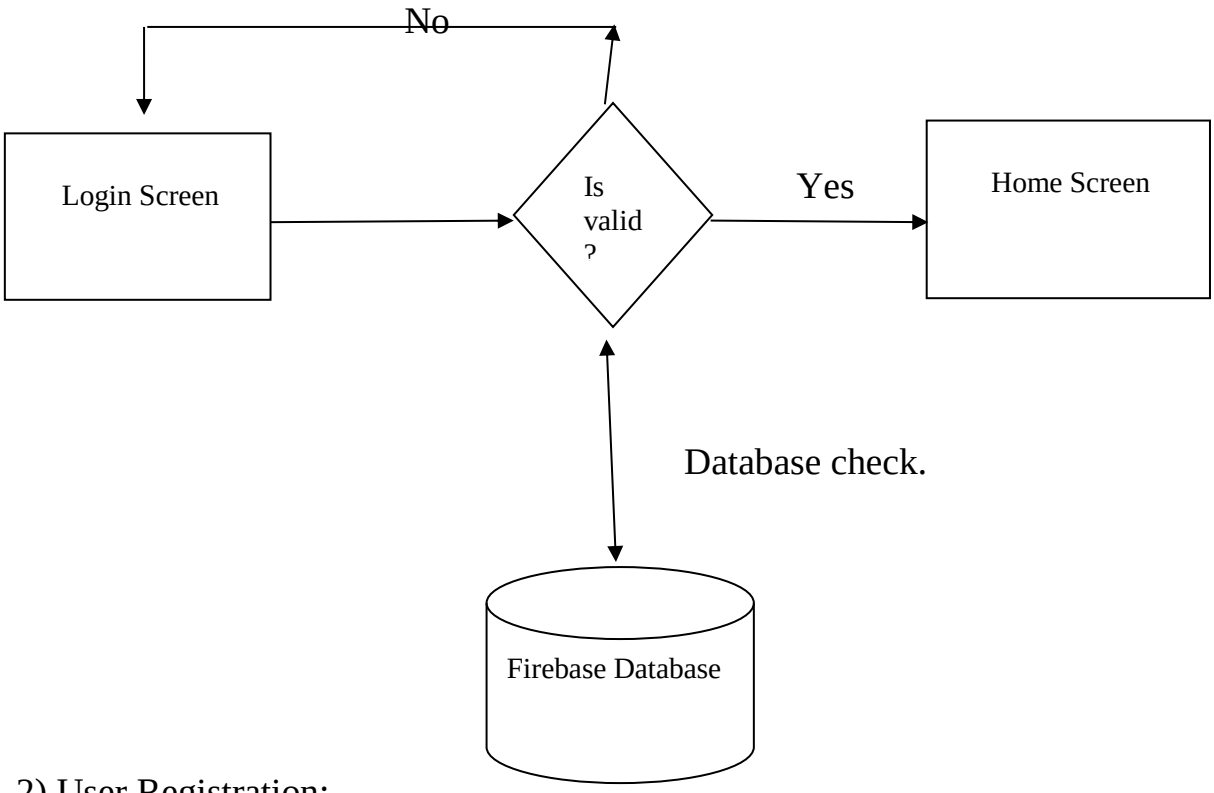
Sr No.	Phases	Start Date	End Date	Total Days
1	Team Member chooses	1-Feb-2021	5-Feb-2021	5 Days
2	Ideation and scope discussion	8-Feb-2021	10-Feb-2021	3 Days
3	Requirement gathering	11-Feb-2021	12-Feb-2021	2 Days
4	UI template design	12-Feb-2021	13-Feb-2021	2 Days
5	Final proposal Submission	14-Feb-2021	14-Feb-2021	1 Days
6	App frontend development	16-Feb-2021	26-Feb-2021	11 Days
7	App backend development	01-Mar-2021	19-Mar-2021	15 Days
8	Testing and maintenance	22-Mar-2021	02-April-2021	10 Days
9	SIT and UAT	05-April-2021	0-April-2021	10 Days
11	Final Project Submission	14-April-2021	23-April-2021	2 days

ER- Diagram

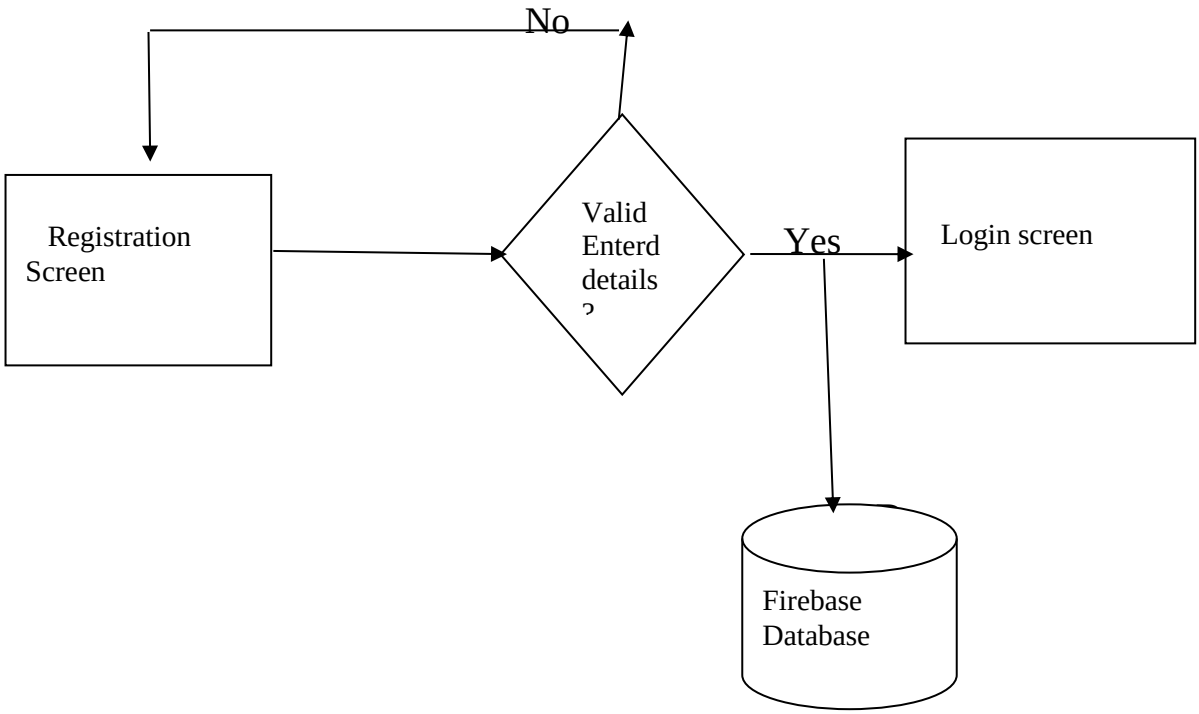

Post_id#
Title
Descriptio
n
Price
Image
Advertisement
User_Id#
Community Hub
User Login
User_id#
Phone
number
Name
Email

Data Flow Diagrams:

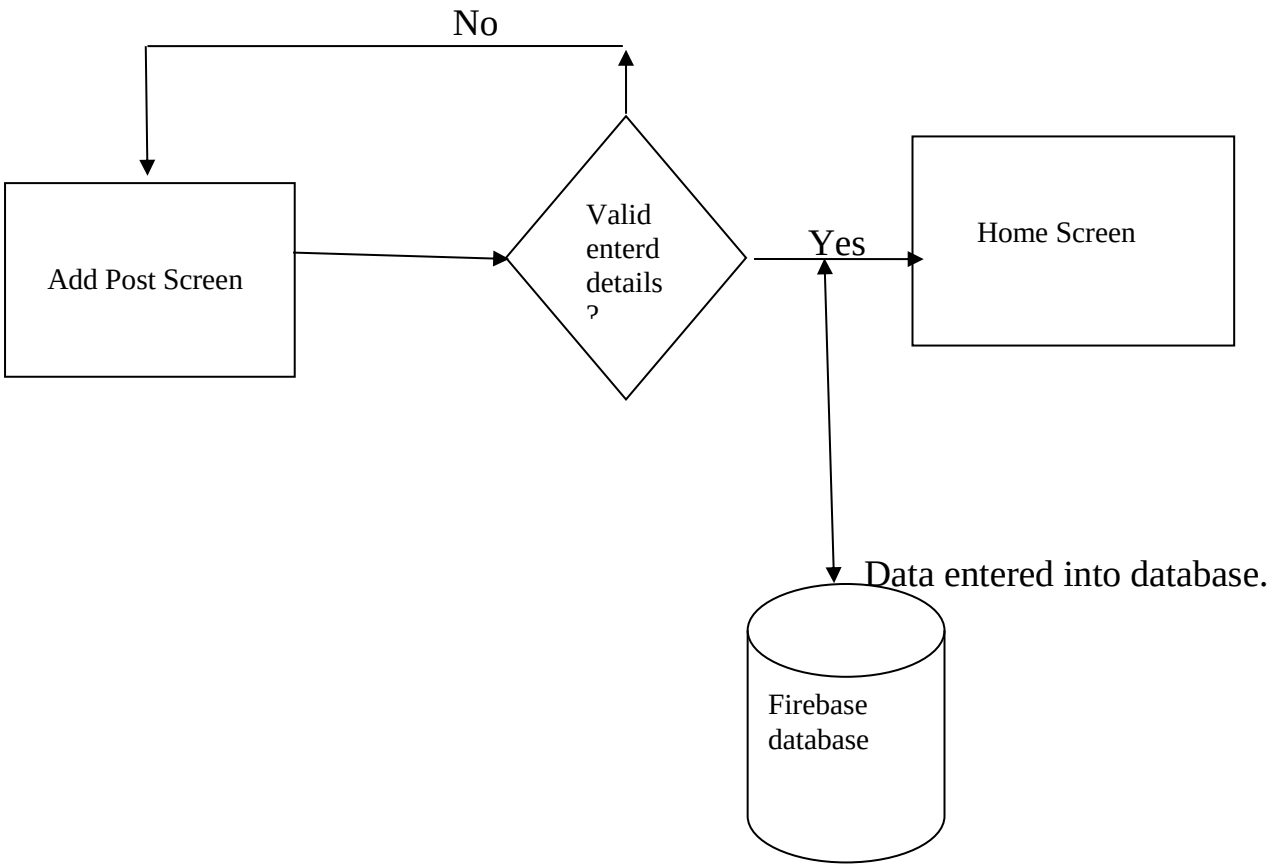
1) User Login



2).User Registration:

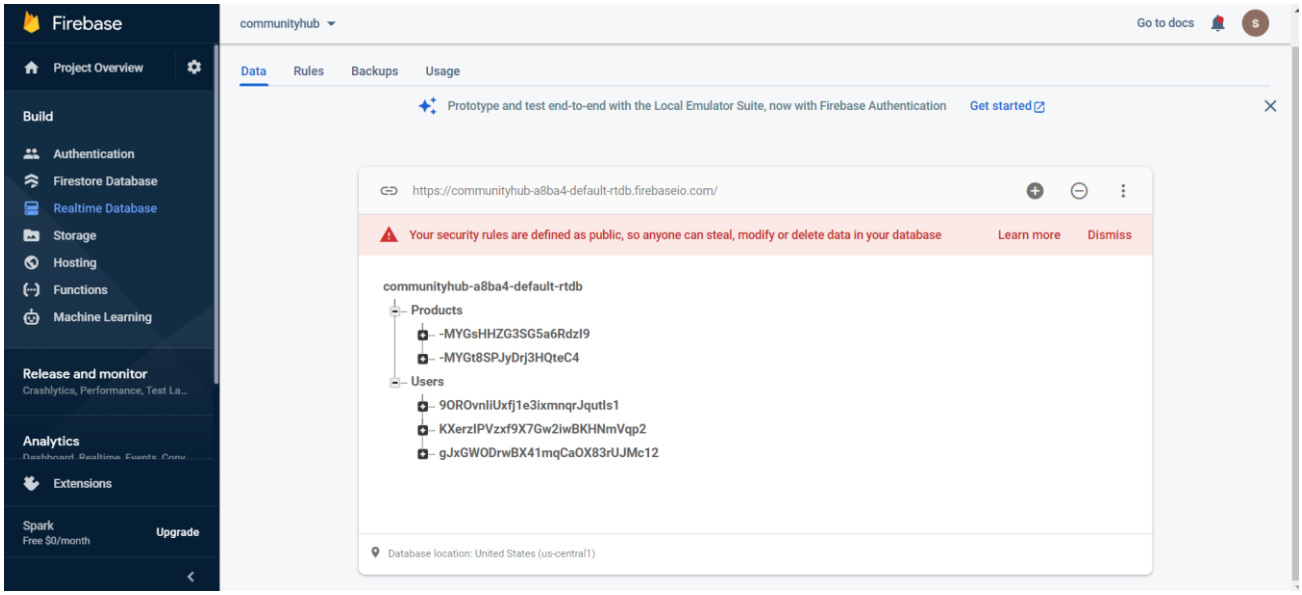


3). Add a Post

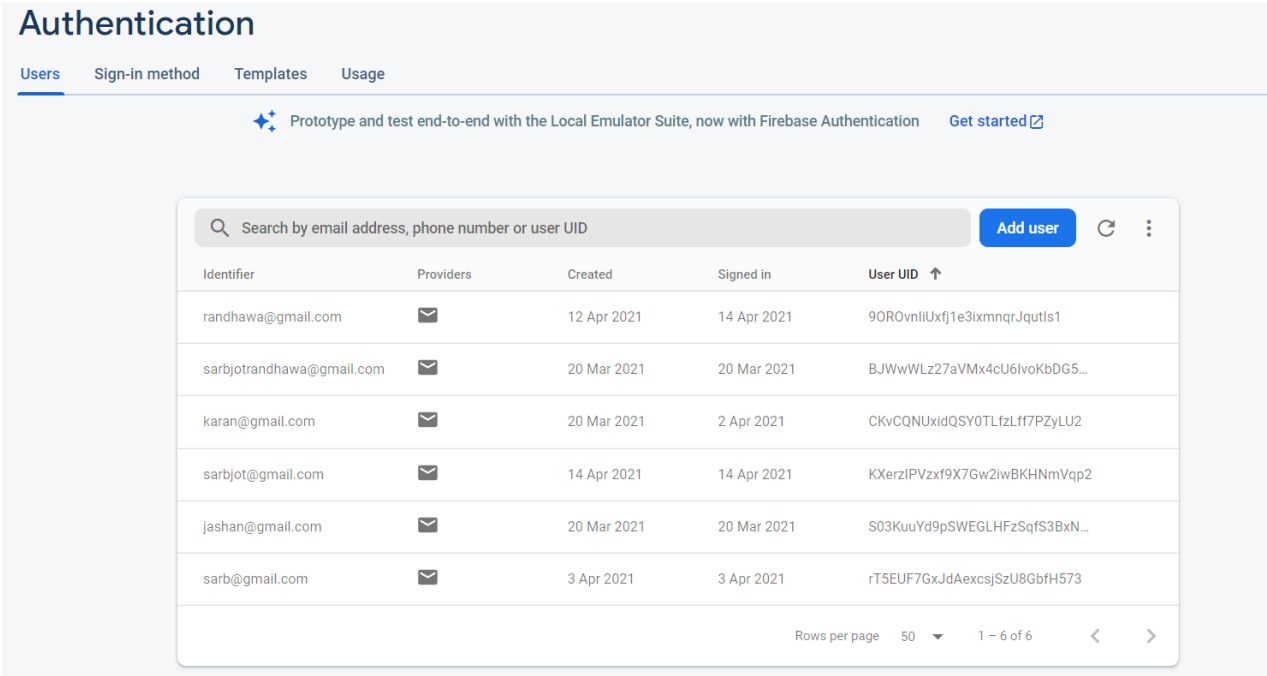

No
Add Post Screen
Valid enterd details ?
Yes
Home Screen
Data entered into database.
Firebase database

Database: In application we used Firebase as database server which available all the time on google server and stored data in JSON form. This is a No-SQL server.

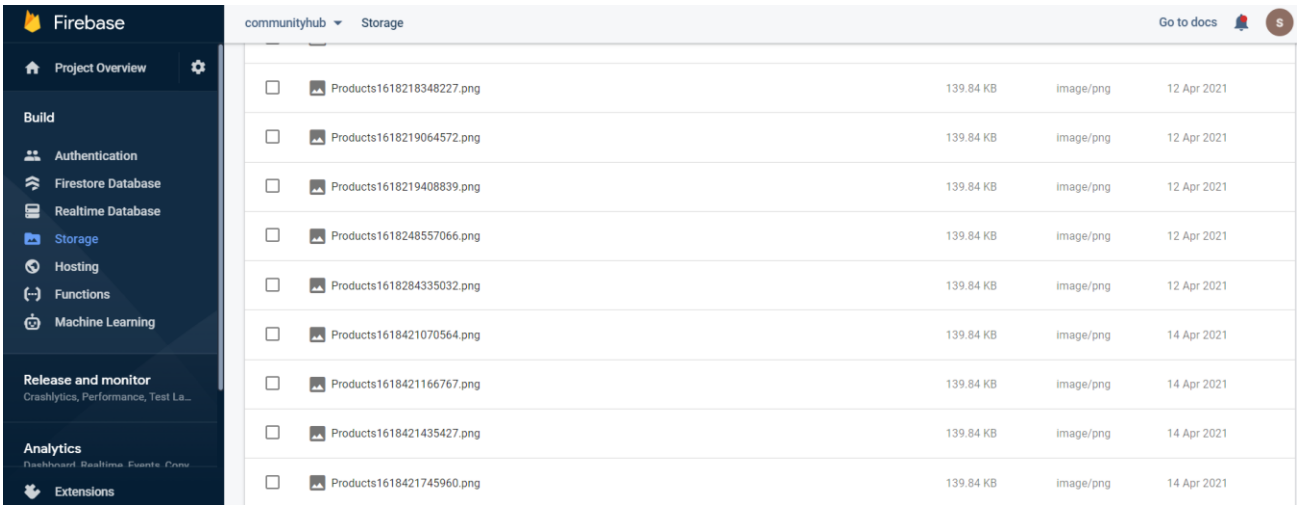
1). Products and User real time database



2). Authentication database

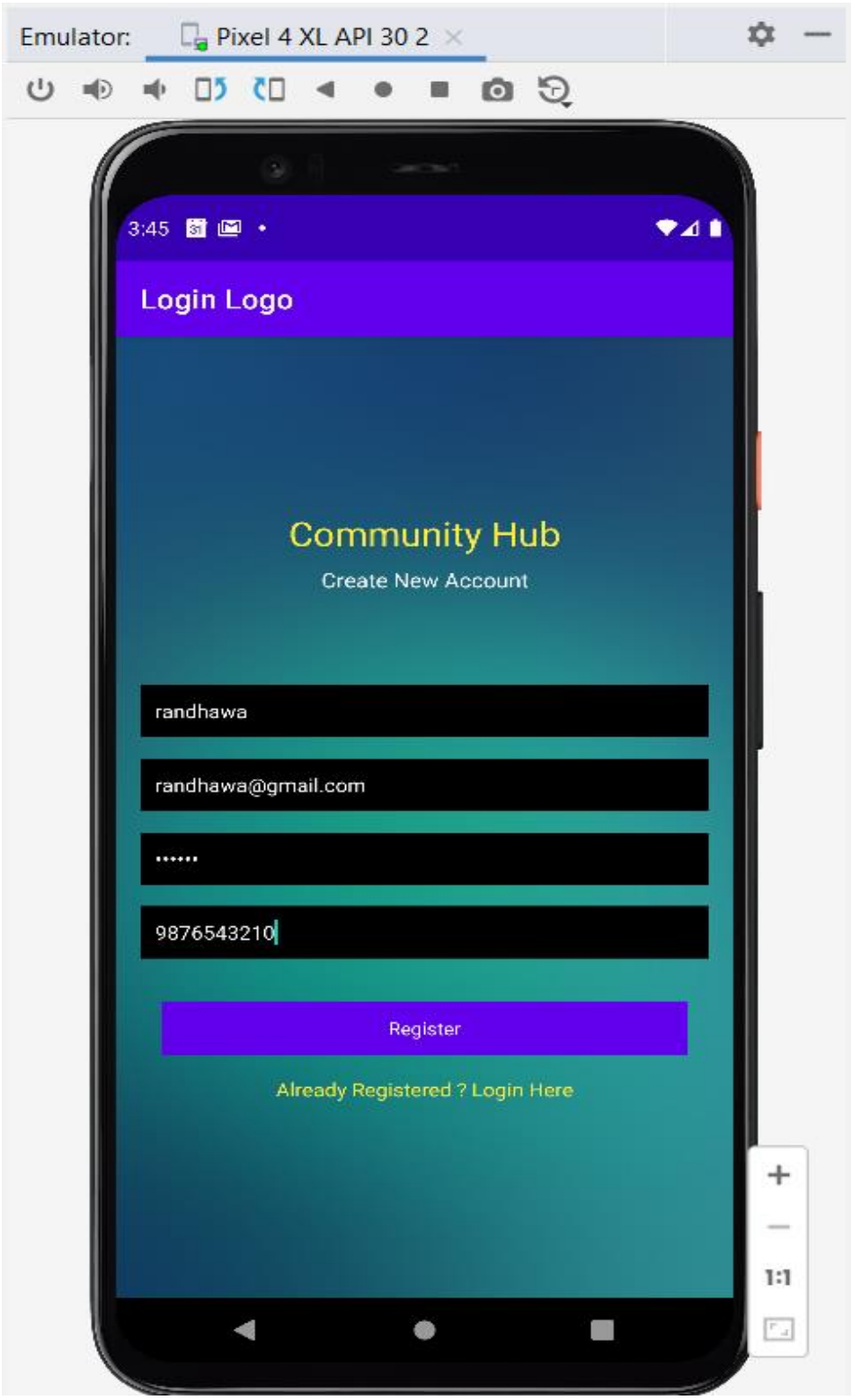


3). Storage for image in firebase

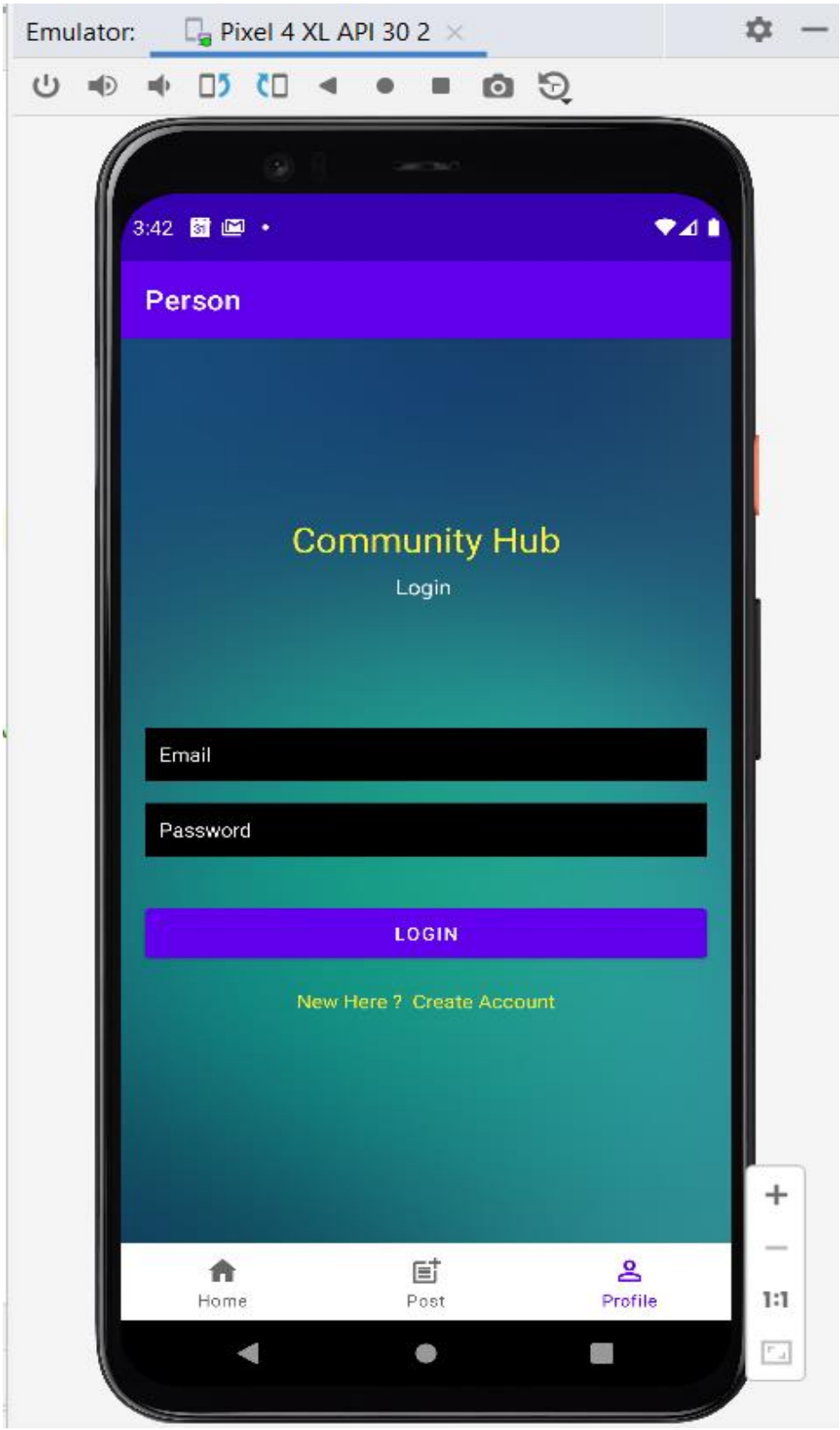


UI Screens:

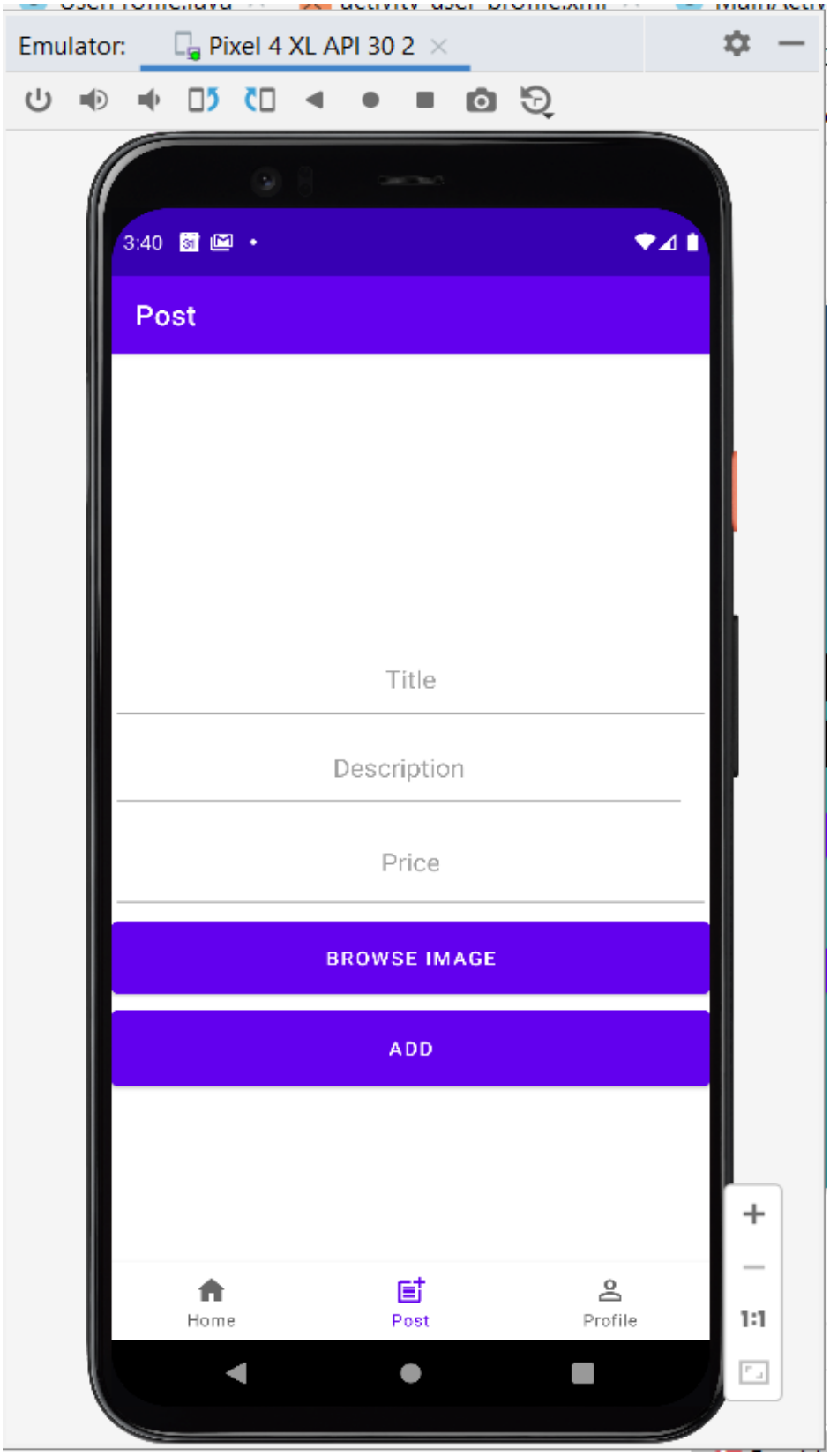
Registration: In this screen user has to add data and click on registration. After registration user will move to login screen.



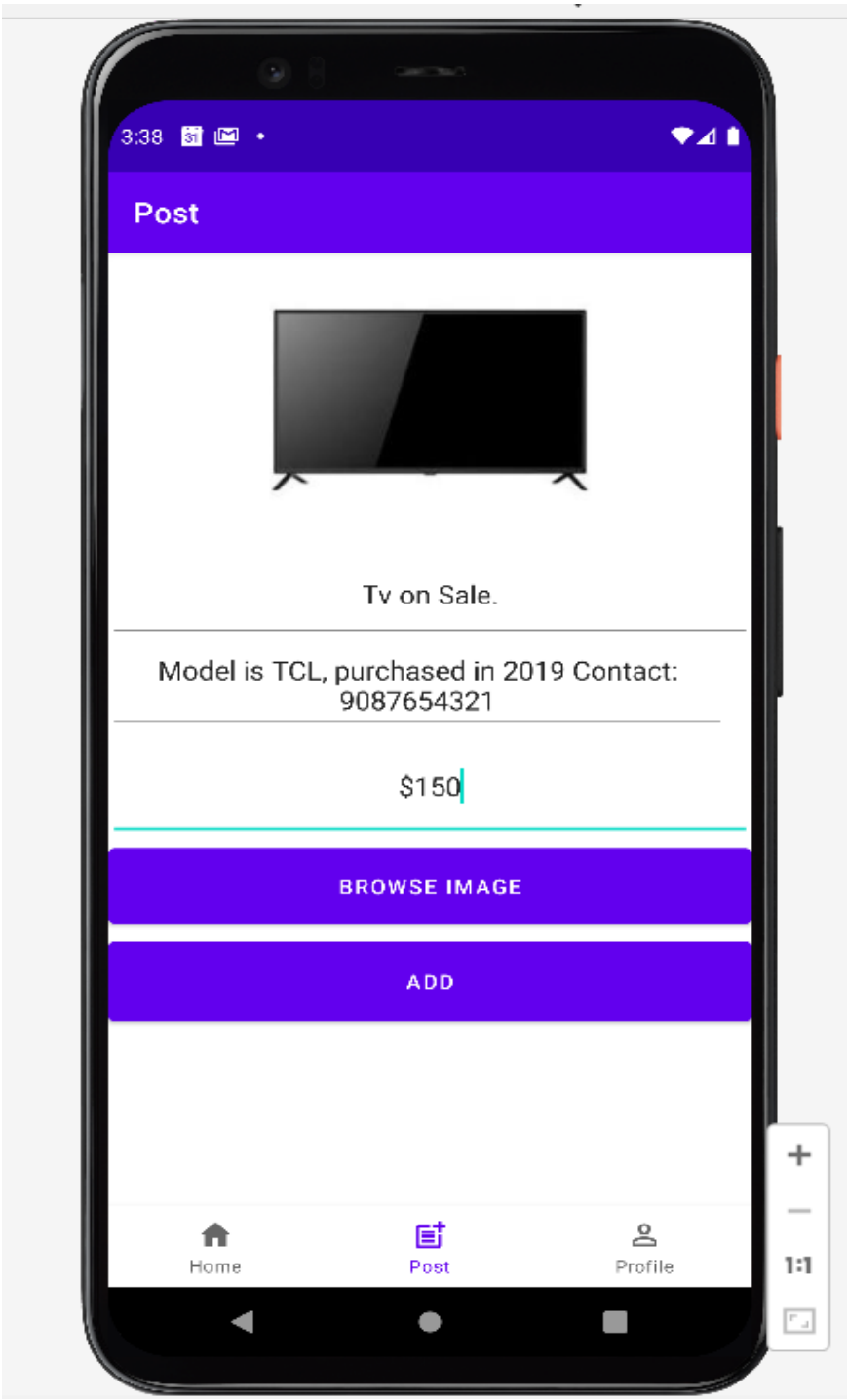
Login Screen: on this screen user has to enter email Id and password for logging into app. After successfully login it gives us a toast that user is successfully logged In.



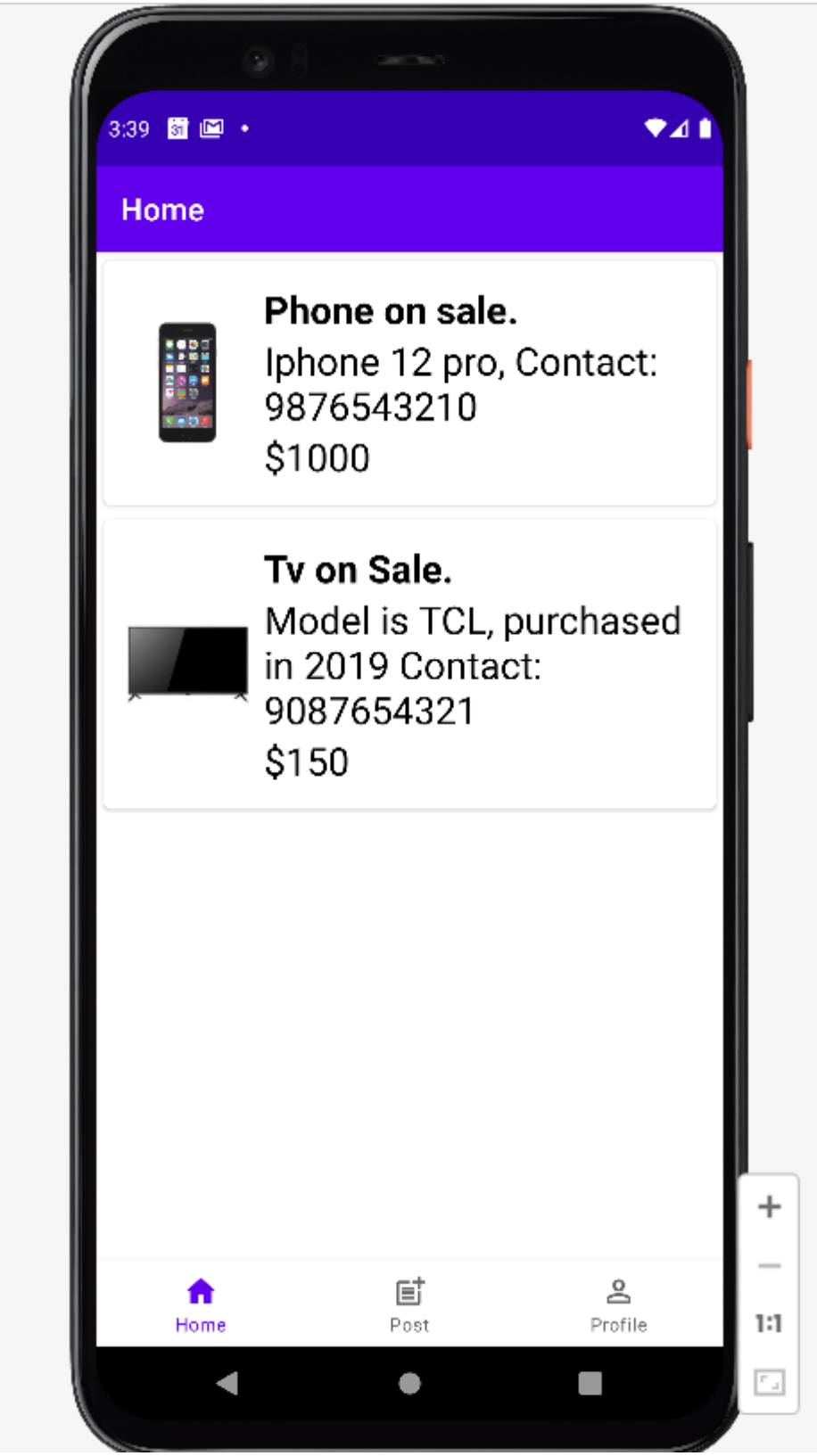
Post Screen: On this screen user adds any advertisement. It takes Title, description, Price, and Image for adding a post. For adding post user must need to login first.



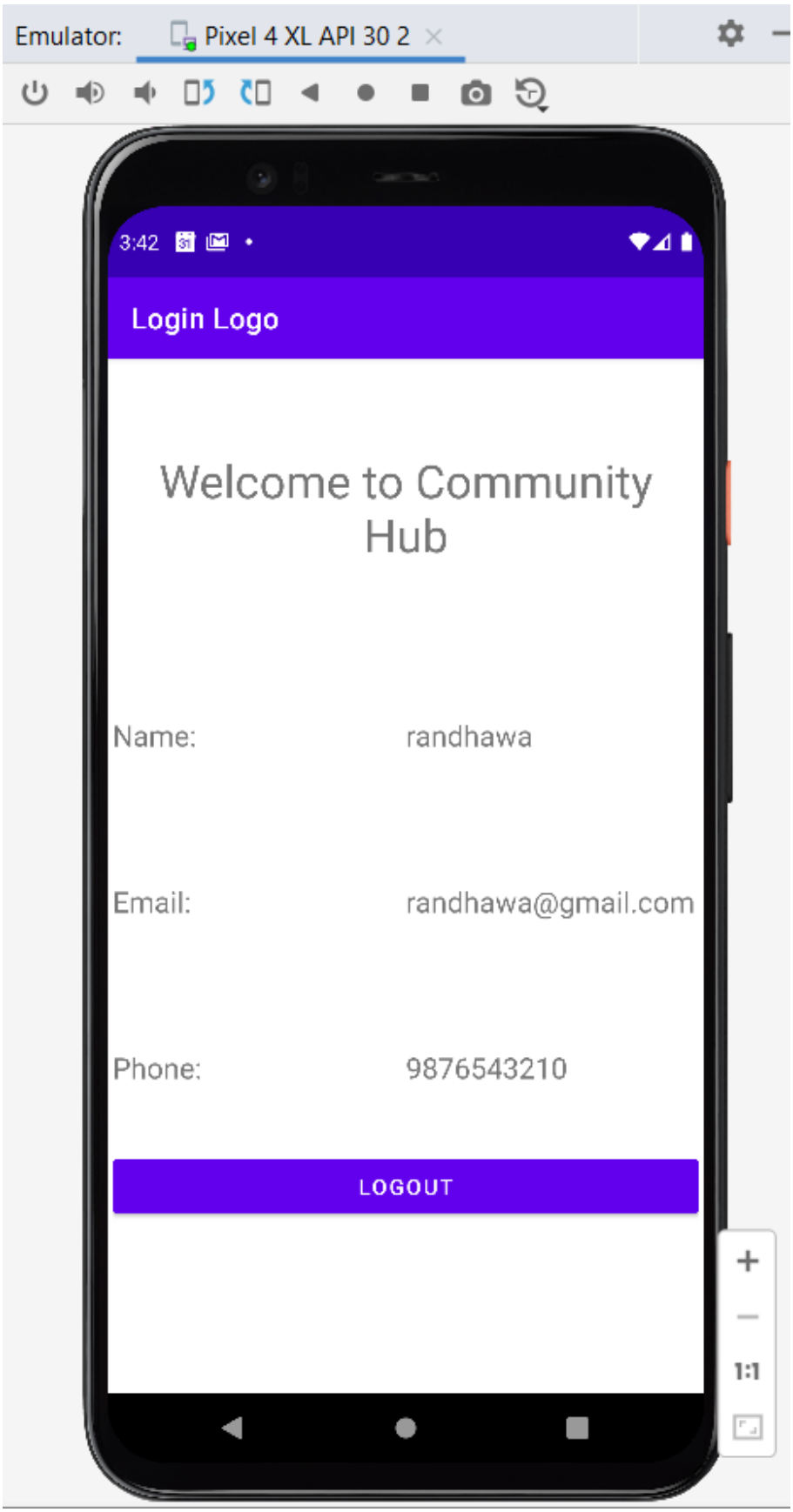
After adding detail on this page.



Home Screen: All the advertisements added by the user are displayed on this screen.

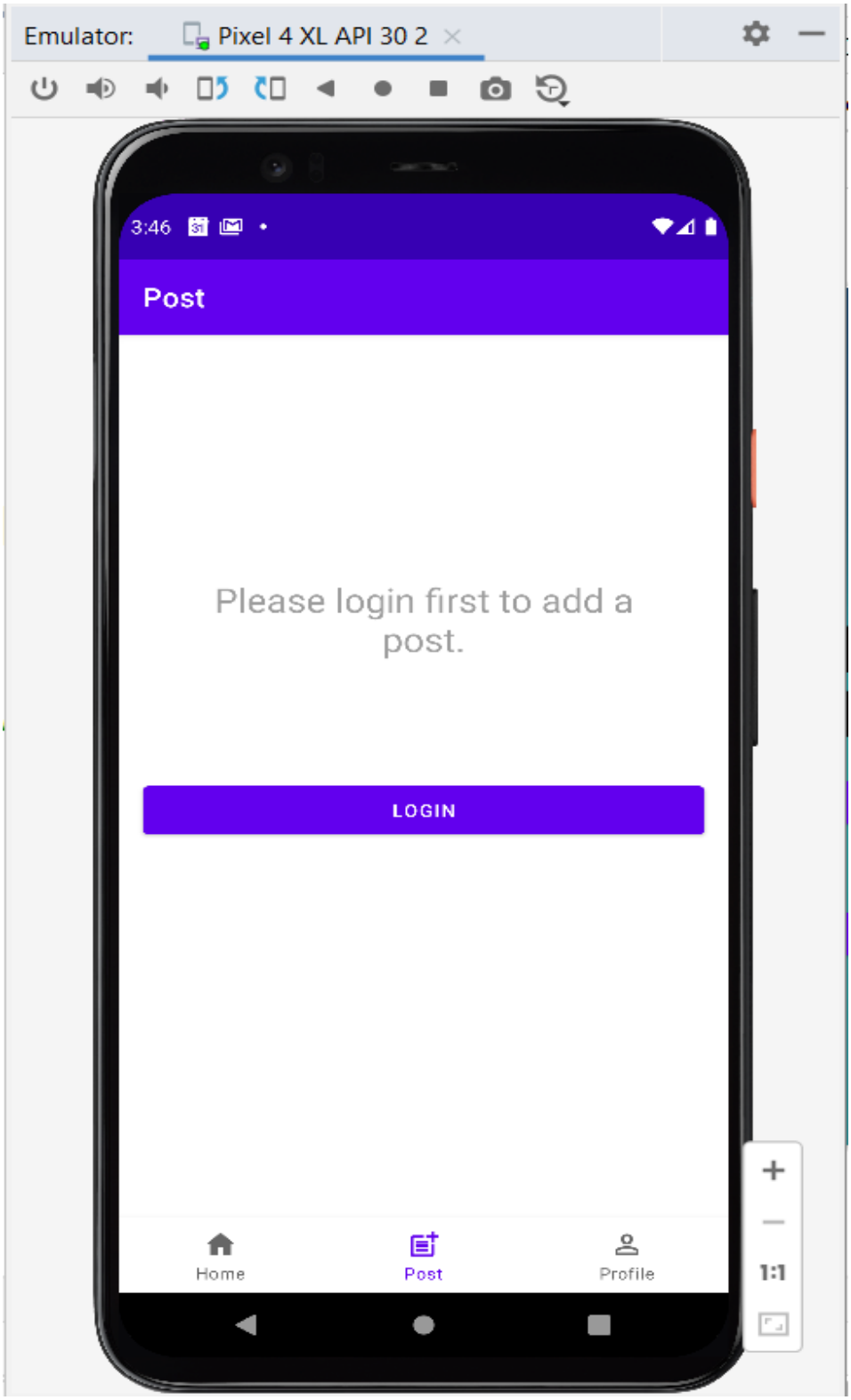


User Profile:

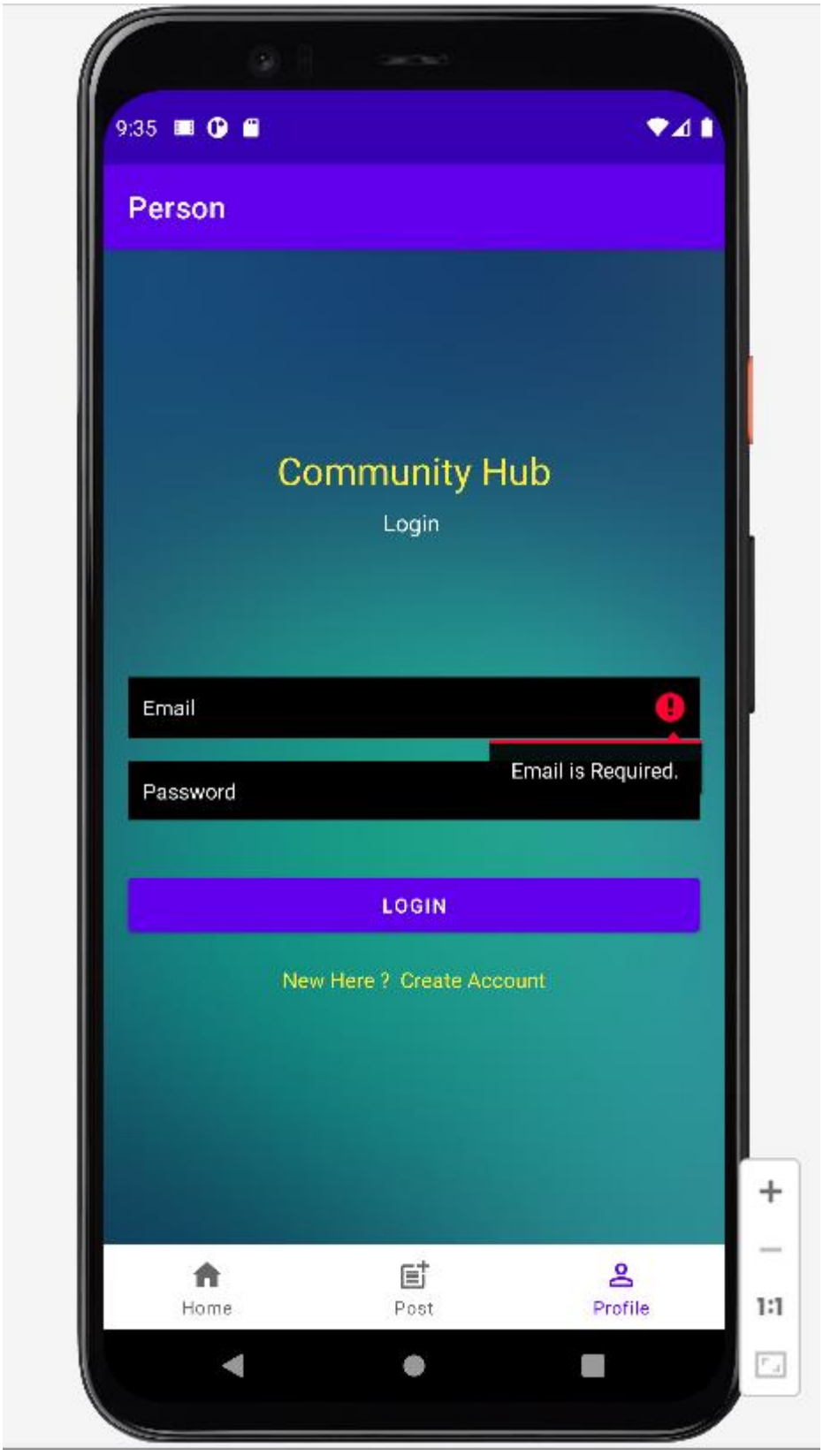


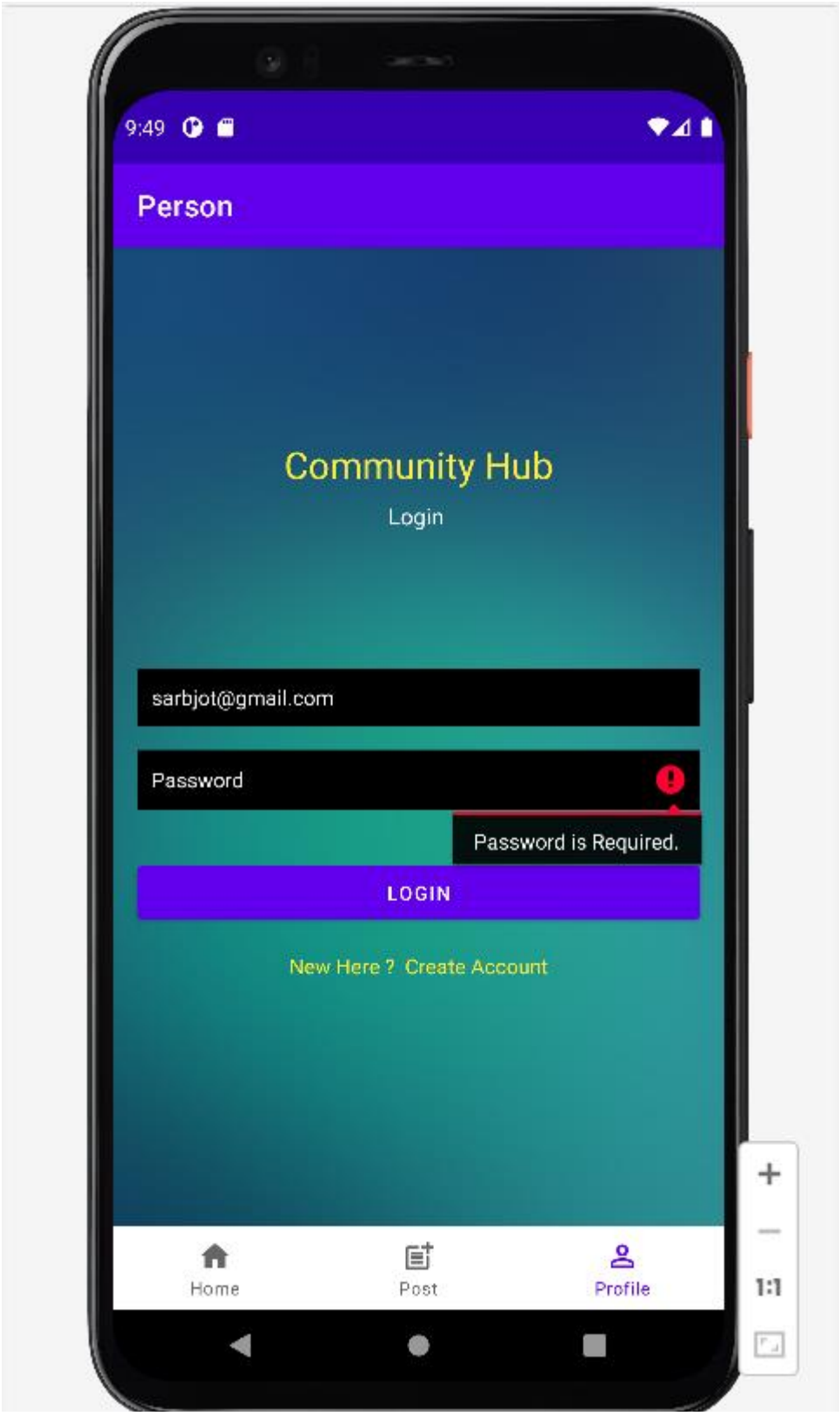
Validations:

1) If user does not entered login in into the system, adding post is unable for and it will display the following screen. After clicking on login button user will move to Profile where user has to login first.

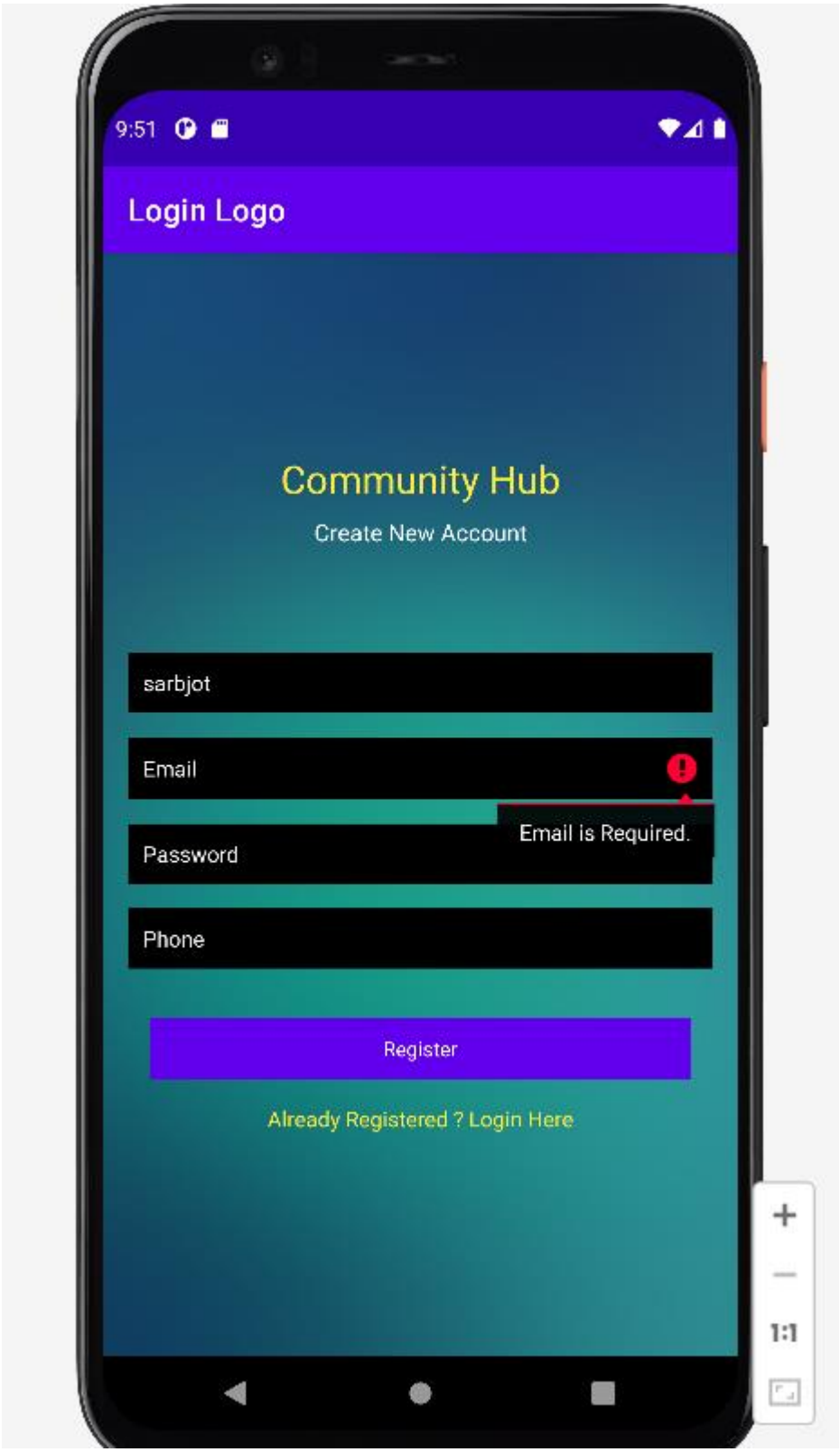


2). When User did not enter anything on login screen and pressed login button.

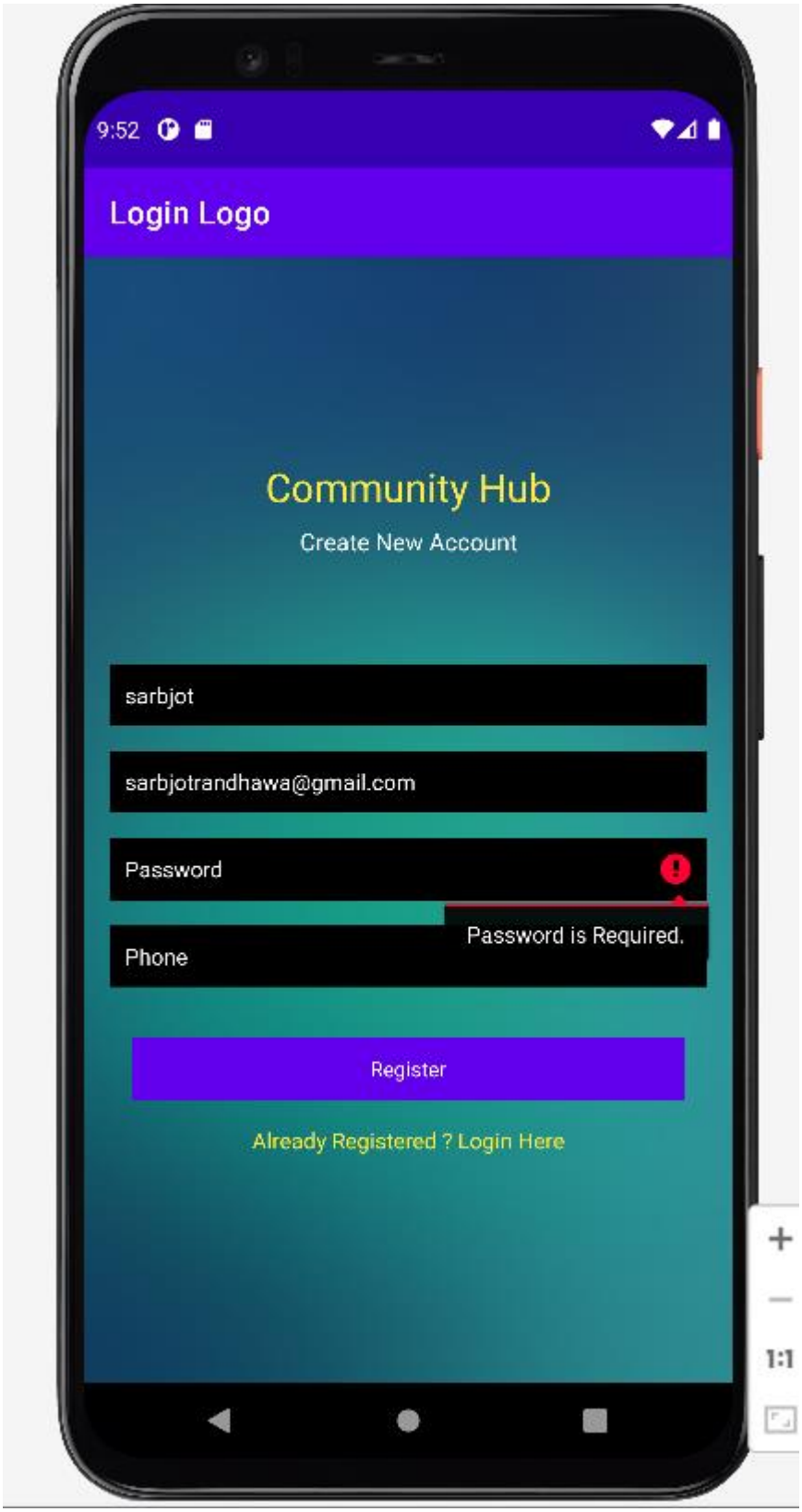



9:49
Person
Community Hub
Login
sarbjot@gmail.com
Password
Password is Required.
LOGIN
New Here ? Create Account
Home
Post
Profile
1:1

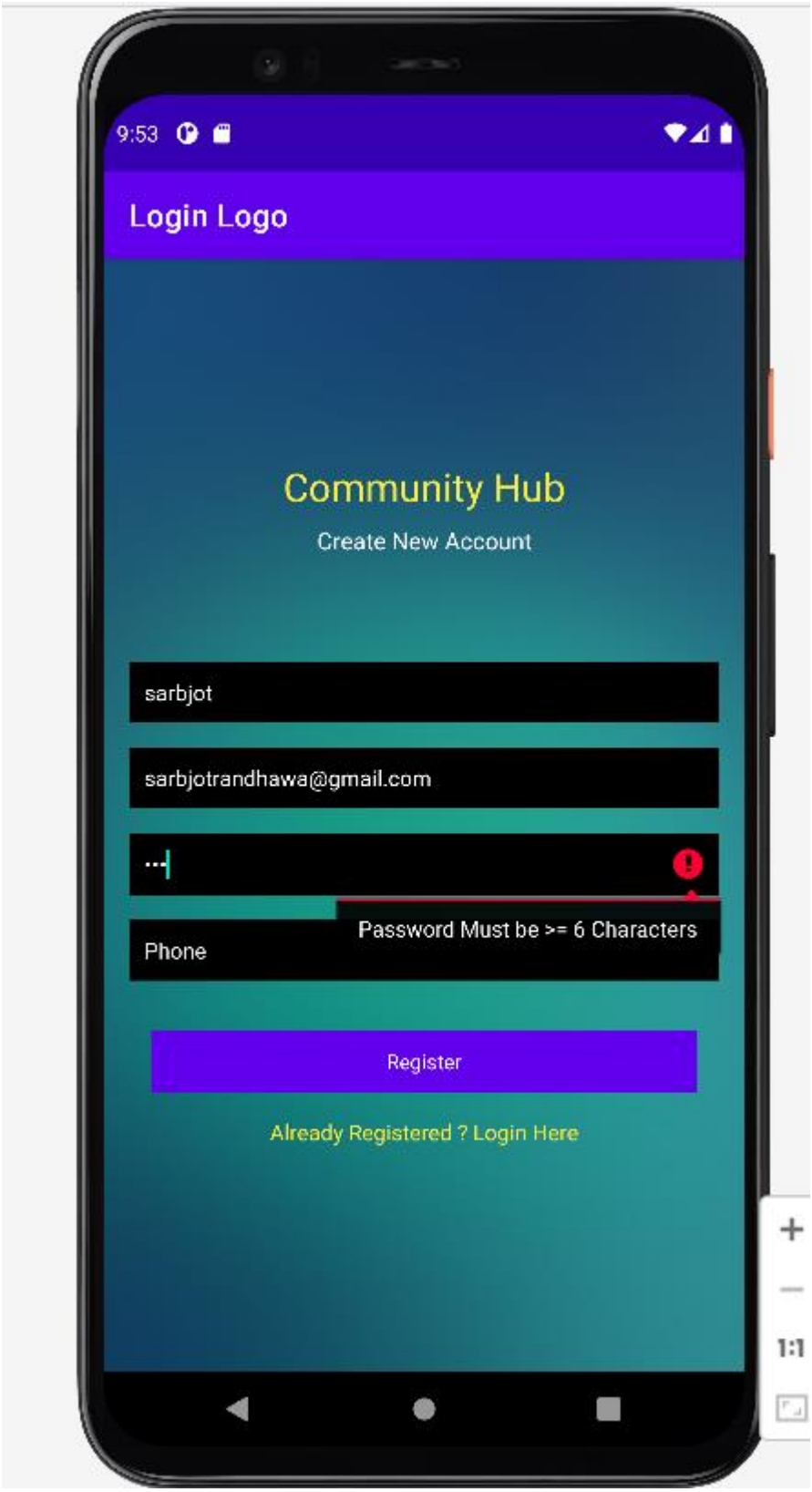
3). When user does not entered email for registration.



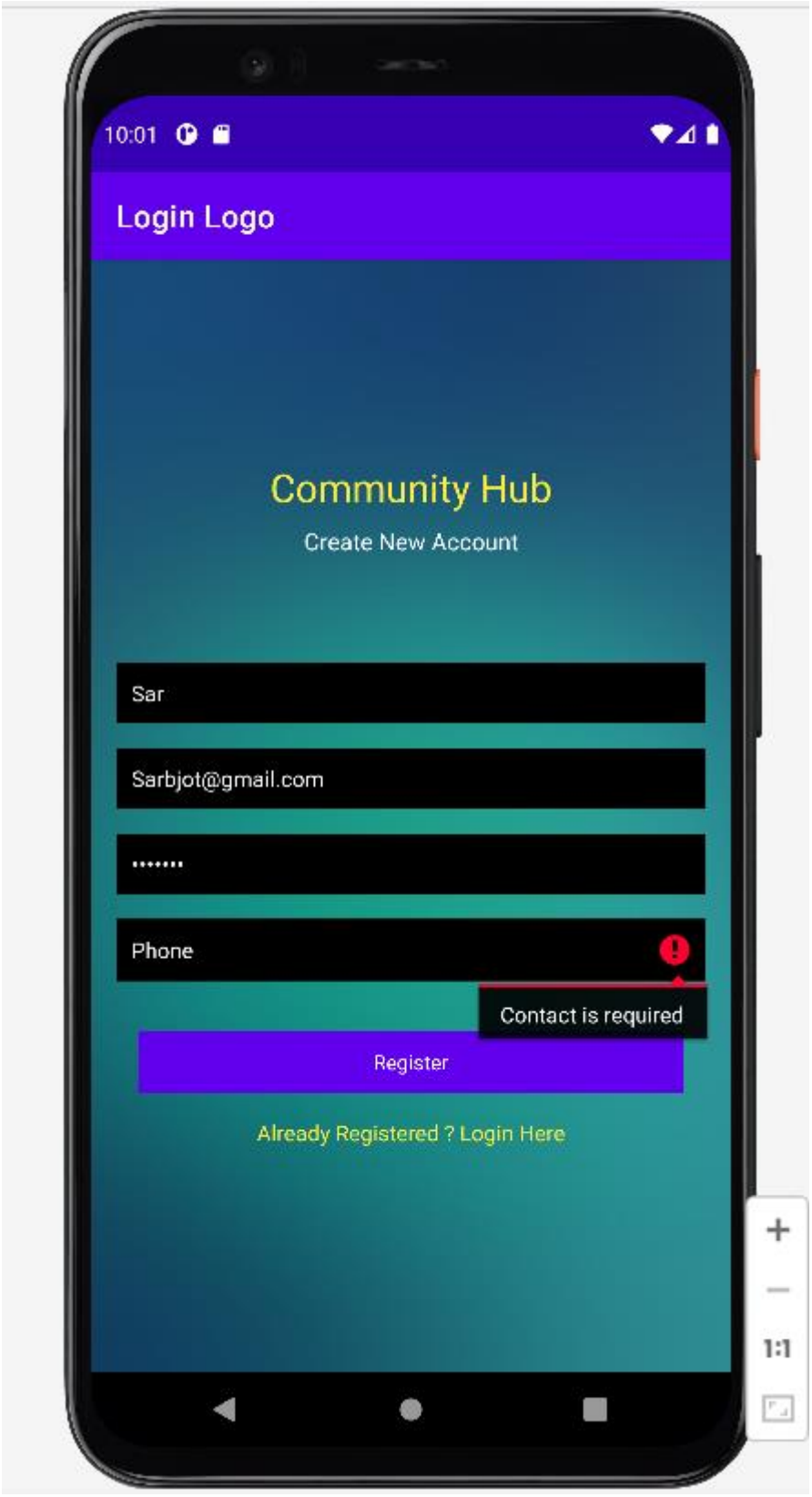
4). When user does not entered password.



5). When User entered password less than 6 digits.



6). When user did not entered contact number and try to register.



Testing:

This describes the process of running and executing software application or software product in order to find bugs in the software. Software testing can be defined as the process of validating and verifying that software program meets business needs and technical requirements that guided the design and development of the software product. The client side testing of this project was carried out on Emulator.

Various Phases in testing.

Unit Testing: In this we first test and analyses the each functionality independently. When every component works well then we move to the next phase of testing.

System Integrated Testing (SIT): In this phase we merged the activities and testing the overall functionality of the application. We noted the bugs in an excel sheet so that we can resolved all the issue without any delay. We created a proper plane to resolve all issues in a timely manner.

Regression Testing: In This phase of testing we randomly run scenarios and validate the functionality by giving dummy data. We tested every boundary so that chance of defect should be reduced at the production environment.

CONCLUSION

The development of this application was successful with achievement of all the compulsory and necessary technical requirements which enable easy tracking of course assignments on mobile phone by the users of this application. This project improved my technical and programming skills through working with Android studio and other mobile application development technologies such Java XML, Firebase and JSON.

Challenges

The challenges in the development of this project include creating a responsive user interface with tools such as list views and their adapter and spinner and their adapter. Also getting familiar with android studio development tool was challenging at the beginning such as software debugging, creating and running of application on virtual device. During the development phase of this project, requirement of skills and knowledge from other programming technologies which I was not familiar with also contributed to the challenges faced and these challenges are part of milestones in success of the project.

Improvements

There are possible improvements that can be included in this project in the future by increasing functionalities of the project in order to improve users' satisfaction. Such improvement includes providing functionality that enables the user to reset his/her password.

REFERENCES

1) https://developer.android.com/docs
2) https://firebase.google.com/?gclid=Cj0KCQjwpdqDBhCSARIsAEUJ0hN-pdayh5WWfRGCgc9kgBEV5Tg8GajCon0L4Ygeph4d90ZNAtRC3ucaAtdSEALw_wcB&gclsrc=aw.ds
3) https://firebase.google.com/docs/reference
4) https://firebase.google.com/docs/database/web/read-and-write
5) https://www.developer.com/languages/xml/working-with-fragments-in-android-applications/