CP-III Project Report On

TRACK UP

at

U.V Patel College of Engineering

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B.Tech Semester VII

(Computer Engineering)

Nov-Dec, 2022

Submitted To,

Department of Computer Engineering

U.V. Patel College of Engineering

Ganpat University, Kherva - 384012

U.V. PATEL COLLEGE

OF

ENGINEERING

28/11/2022

CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Mr.**Vedant Oza** student of **B.Tech. Semester VII (Computer Engineering)** has completed **Capstone Project 3** with project titled "**Trackup**" satisfactorily in partial fulfillment of the requirement of Bachelor of Technology degree of Computer Engineering of Ganpat University, Kherva, Mehsana in the year 2022-2023.

Prof. Hiten Sadani
College Project Guide

Dr. Paresh M. Solanki
Head, Computer Engineering

U.V. PATEL COLLEGE

OF

ENGINEERING

25/11/2022

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College Project Guide	**Head, Computer Engineering**

ACKNOWLEDGEMENT

This satisfaction that successful completion of any task would be incomplete without the mention of people whose ceaseless cooperation it made it possible, whose constant guidance and encouragement crown all efforts with success. We are grateful to our guide **Prof. Hiten Sadani** for the guidance, inspiration and constructive suggestions that helpful us in the preparation of this project. We also thank our colleagues who have helped in successful completion of the project.

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ABSTRACT

The manufacturing industries are evolving at a higher pace though software available in the current market with plethora of applications available in the market, which has the potential to grow the business, yet when it comes to getting updates or sending the update to our current clients it gets a little bit hard for the for the businesses. Trackup will help the business to lookprofessional. For example, the client will get updates about the order in the Application. In future the clients could set tasks in To-do Task Module in future. Which will help the clients to be speedier in achieving the goals or tasks easily. The Application will help the companies to send order updates to their clients in this application. The current application is amazing but our “Trackup” will help the companies look professional. The companies could technologically upgrade themselves and make their clients feel professional. Also, the companies will have to do minimal calling once they start using this application.

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Chapter 1 – INTRODUCTION

The world is changing rapidly and so people are trying to use the technological advancements in their companies, so as to increase the profitabity and also to match the time constraint.

The current scenario says that 53% of businesses in India have not come close to realize their digital transformation goals.

And with the increasing demand of the Make in India, the manufacturing hub is yet to enlighten the need of technology. There 9 is a software which helps keep the track ofthe financial statements. This has really helped the manufacturing business to upscale. Yet when it comes to CRM software's, undoubtedly there are hundreds of CRM''s available in the market, but either it is costly or it is not easy to use.

This is the pothole we have identified. And giving updates to our clients is getting a tiresome process when the client base hits more than 100. So, to coverup this gap we are developing this tool specifically for our company. This is where our software will help my business and clients to taste the technological advancements.

Chapter 2 - PROJECT SCOPE

According to the research done, there are 5000 large manufacturing companies in India and over 25,000 small and medium manufacturing companies in India. So, taking a rough estimation, only 5000 companies might have been working on fully technological basis.

On top of it during the financial year 2020, the manufacturing sector in India grew by 5% CAGR based on Gross Added Value. So, targeting all the SME's our product will be a fruitful investment for those companies. Comparing these companies with the fully technologically grown companies, which are there in America and many other technologically developed companies, they have upscaled with the growing technologies, and that's why they are growing at a higher pace. Bringing our product in the market, it would help the companies, especially the Small Medium Enterprises, this would be a fruitful investment for the companies in India.

Chapter 3 - FEASIBILITY ANALYSIS

3.1 Study of current System

A feasibility study is an evaluation and analysis of the potential of the proposed project which is based on extensive investigation and research to give full comfort to the decisions makers. It helps in deciding whether it is viable to go through the project or not. Feasibility study studies the system and tells the system whether to develop the system or not.

An important outcome of the preliminary investigation is the determination that the system requested is feasible or not.

- Technical Feasibility
- Schedule Feasibility
- Operational Feasibility
- Implementation Feasibility
- Economic Feasibility

3.2 Technical Feasibility: -

The technical feasibility assessment is focused on gaining an understanding of the present technical resources of the organization and their applicability to the expected needs of the proposed system. It is an evaluation of the hardware and software and how it meets the need of the proposed.

The Technical Feasibility test involves questions like: -

- Is the current Computer's configuration adequate for Usage
- Is the selected technique sufficient for future enhancements
- Is there sufficient support for the project
- Is current method acceptable to the user
- Are level of security and any other access control constrains high or not
- Is the skill set available with proper manpower for development and maintenance

3.3 Schedule Feasibility: -

A project will fail if it takes too long to be completed before it is useful. Typically, this means estimating how long the system will take to develop, and if it can be completed in a given time period using some methods like payback period. Schedule feasibility is a measure of how reasonable the project timetable is.

3.4 Operational Feasibility

Operational feasibility is a measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development. The operational feasibility assessment focuses on the degree to which the proposed development projects fit in with the existing business environment and objectives with regard to development schedule, delivery date, corporate culture, and existing business processes. The system has been developed for any user who wants to use this system. We have given a demo of our project the users found the system friendly and easy to use. So, they may face certain problem in using the user inter face.

3.5 Implementation Feasibility

The organization provides us with all the facilities required for developing the Website. All software's required for the development of the system are provided by the organization, which makes the project feasible in implementation. Other software's were downloaded from the Internet.

3.6 Economic Feasibility

The purpose of the economic feasibility assessment is to determine the positive economic benefits to the organization that the proposed system will provide. It includes quantification and identification of all the benefits expected. This assessment typically involves a cost/ benefits analysis. The costs of different hardware/software configuration need to be examined. Hidden costs such as user time for requirements acquisition, testing and training should not be omitted; the most frequently missed cost is the cost of maintaining the system once it is installed. Set against the costs should be a quantifiable assessment of the expected benefits, for example reduced labor, costs, and improved customer service for predicted increase in orders.

3.7 Functional Requirement

This application is made for all those users who have android mobiles. According to the market research, the current users of Android are more than 75%. Which directly says that Android Is the best target for us. Also, as it is built on flutter, the application will be light to use.

3.8 Literature Survey

- Trello

  Currently it helps the businesses with chat and todo app but it is not easier for the new users.

- ClickUp

  It is an all-in-one productivity tool built for teams of all types across any industry. You can plan, track, and collaborate on any project.

- Zoho

  Zoho CRM enables B2B companies stay on top of their sales operations.
- Monday.com

  Monday.com is a customizable web and mobile work management platform, designed to help teams and organizations with operational efficiency by tracking projects and workflows, visualizing data, and team collaboration. But having one for manufacturers, especially for the small scale manufacturers is yet to found.

Chapter 4 - SOFTWARE AND HARDWARE REQUIREMENT

4.1 Hardware Requirement Software Requirement

	Developer Side Requirements	**Client Side Requirements**
Software	Operating system is Windows 8 Front End: Android Studio rogramming Languages: Flutter, Dart Database: Firebase	Andriod Operating System Internet Service Email account, Phone Number
Recommended Hardware	Intel core i5 8GB RAM or more 256 GB SSD storage	Any Andriod Mobile Device 4 GB RAM More than 8GB internal storage
Minimum Hardware	Intel core i 2GB RAM 256 GB SSD storage	Andriod Mobile Device 2GB RAM More than 8GB internal storage

Chapter 5 - SYSTEM REQUIREMENT STUDY

5.1 Functional Requirement

- Trackup should allow the administrator to delete a particular product if needed and also update product.
- Trackup should allow guest users to create account.
- Trackup should allow client to give feedback.
- Trackup should allow client to see the bills/payment.
- Trackup should allow client to chat with admin.

5.2 Non-Functional Requirement

5.2.1 Efficiency

Since track up is connected to Data base server so all the data is in cloud storage, hence we need not to take care of it. The Application is made so as to minimize the paradigm of calling each and every time. Undoubtedly the messaging applications like WhatsApp, have profoundly helped many businesses after its launch of WhatsApp Business, it has helped the business owners in saving the business address, business websites, business images, also the opening and closing hours of the business.

5.2.2 Reliability

Trackup is reliable in terms of privacy (no other member can access others' profile) services and accessibility.

Trackup is being made only and only for our own clients. So, there is no worry of leaking the data to someone else. On top of it, It also has some amazing and simple yet efficient functionalities, which in turn will help the business in growing rapidly.

5.2.3 Portability

Trackup can run on any system. So, you can use it wherever you want. Portability is the possibility to use the same software in different environments. It applies to the software that is available for two or more different platforms or can be recompiled for them. Common Portability kinds are application, source code and data portability.

5.2.4 Usability

The degree to which a software can be used by specified consumers to achieve quantified objectives with effectiveness, efficiency, and satisfaction in a quantified context of use.

Our clients had to call each and every time to take the updates. But using this application, the clients will get notified about all the things, starting from messages. And also, the clients will get the bills in this app. It could be proved as a one app solution for our clients.

5.2.5 Economic

While considering economic feasibility, it is checked in points like performance, information, and outputs from the system.

A mature research area that deals with the ever-challenging issue of valuing software and estimating the costs involved in its production.

Today everyone is wanting to update their businesses into a technological driven company. Whilst the cost of developing one, is not budget friendly. But we have chosen Flutter development because of its “One code for all”. It is also less expensive than other native mobile applications.

5.2.6 Sustainability

The sustainability is obtained by consulting the system users. Check that proposed solution satisfies the user needs or not. There is no resistance from member since new system is helpful. The prevailing system is manual system, whereas the new system is computerized and intensely user friendly.

Sustainable software engineering (or sustainable software development) is an approach to software design, implementation, and deployment that emphasizes energy efficiency and environmental sustainability. The goal of sustainable software is to minimize the impact that applications, and the infrastructure.

5.2.7 Availability

Availability describes how likely the system is accessible to a user at a given point in time. While it can be expressed as an expected percentage of successfulrequests, you may also define it as a percentage of time the system is accessible for operation during some time period. For instance, the system may be available98 percent of the time during a month. Availability is perhaps the most business- critical requirement, but to define it, you also must have estimations for reliabilityand maintainability.

This system will be functioning 365 Days, as our clientele might want to make use of this app at any time.

5.2.8 Security

Security is a non-functional requirement assuring all data inside the system or its part will be protected against malware attacks or unauthorized access. But there's a catch. The lion's share of security non-functional requirements can be translated into concrete functional counterparts. If you want to protect the admin panel from unauthorized access, you would define the login flow and different user roles as system behavior or user actions.

The Application will be used for clients only, that's why we won't even sharethe data of our clients to anyone else. Also, the registration could be done with anOTP only. That will ultimately help securing the clients data. Or any data breach problems.

5.2.9 Flexibility

Flexibility is the ease in which the software can be modified to adapt to different environments, configurations, or user expectations.

Flexibility requirements address the user concern for how easy it is to modify the system to work in different environments. When eliciting flexibility requirements, consider aspects such as organizational differences, industry differences, country differences, and whether the software system will be used at a single site or multiple sites.

The app will be a light weight application. Which will be utilizing only a few RAM or Storage space, for making the use of it.

Chapter 6 - SYSTEM DESIGN

6.1 USE CASE DIAGRAM

A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved.

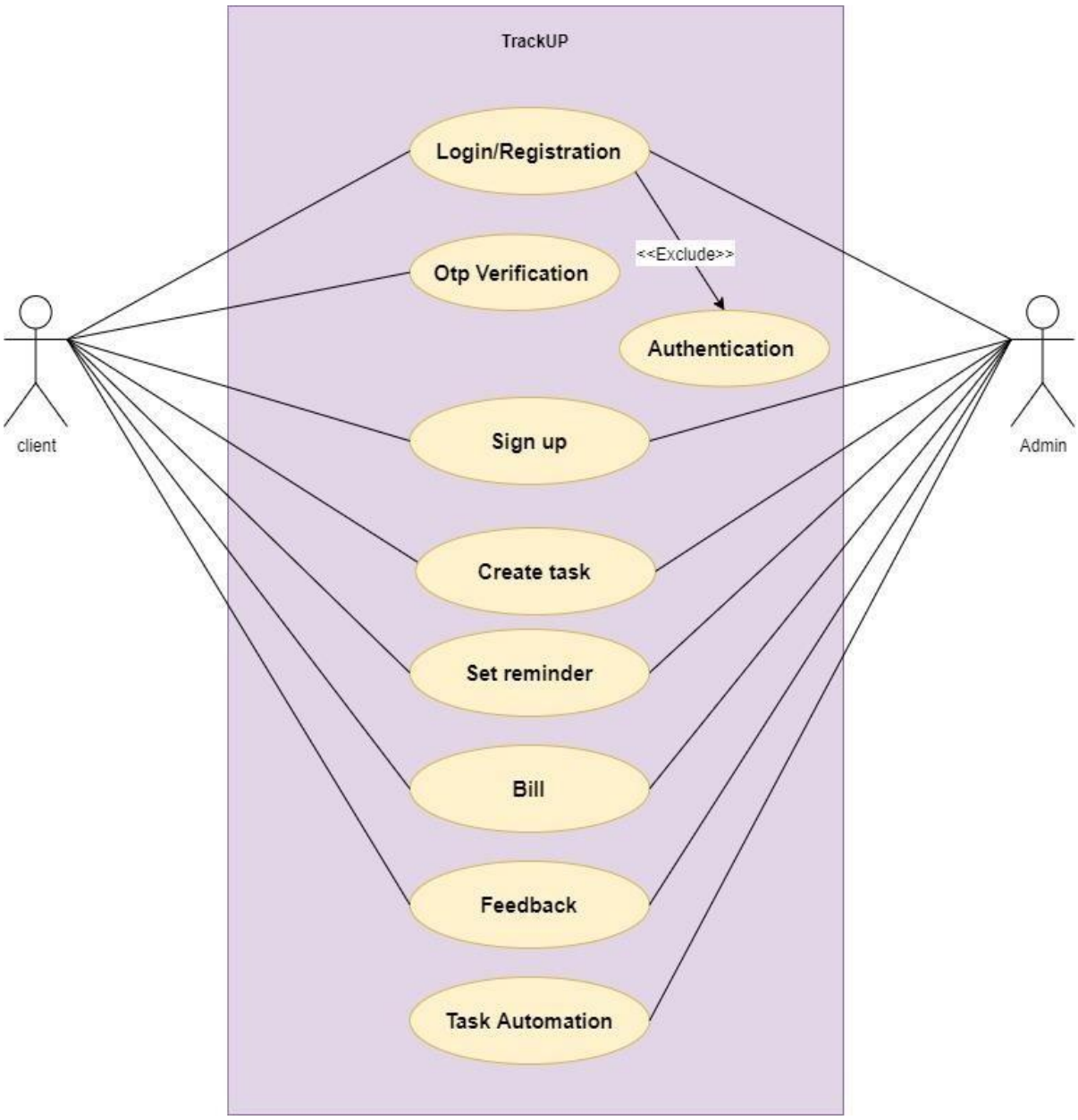


Figure 6.1: Use Case Diagram

6.2 Activity Diagram

In software engineering, a class diagram in the Unified Modeling Language is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations, and the relationships among objects.

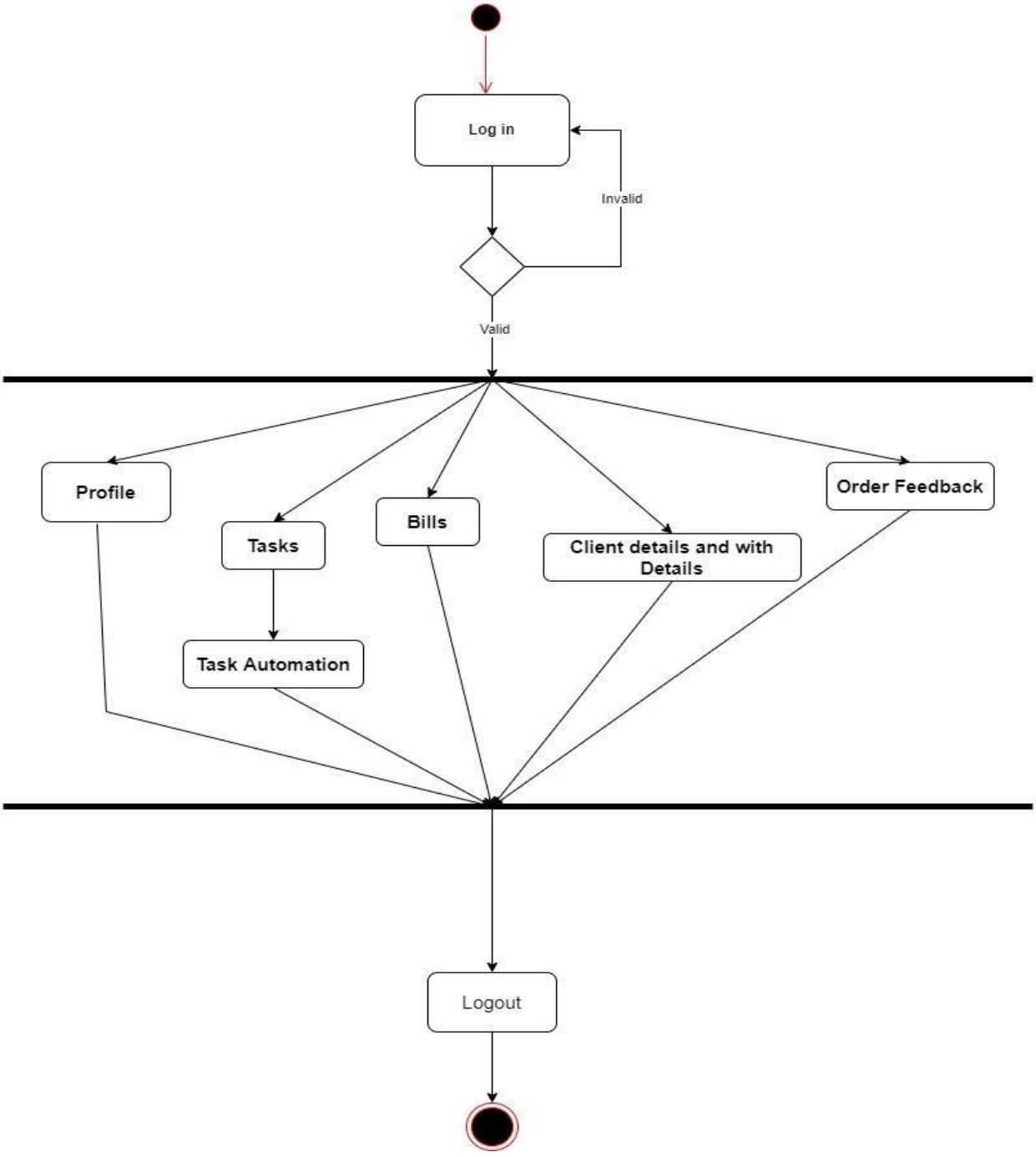


Figure 6.2.1 Activity Diagram (Admin)

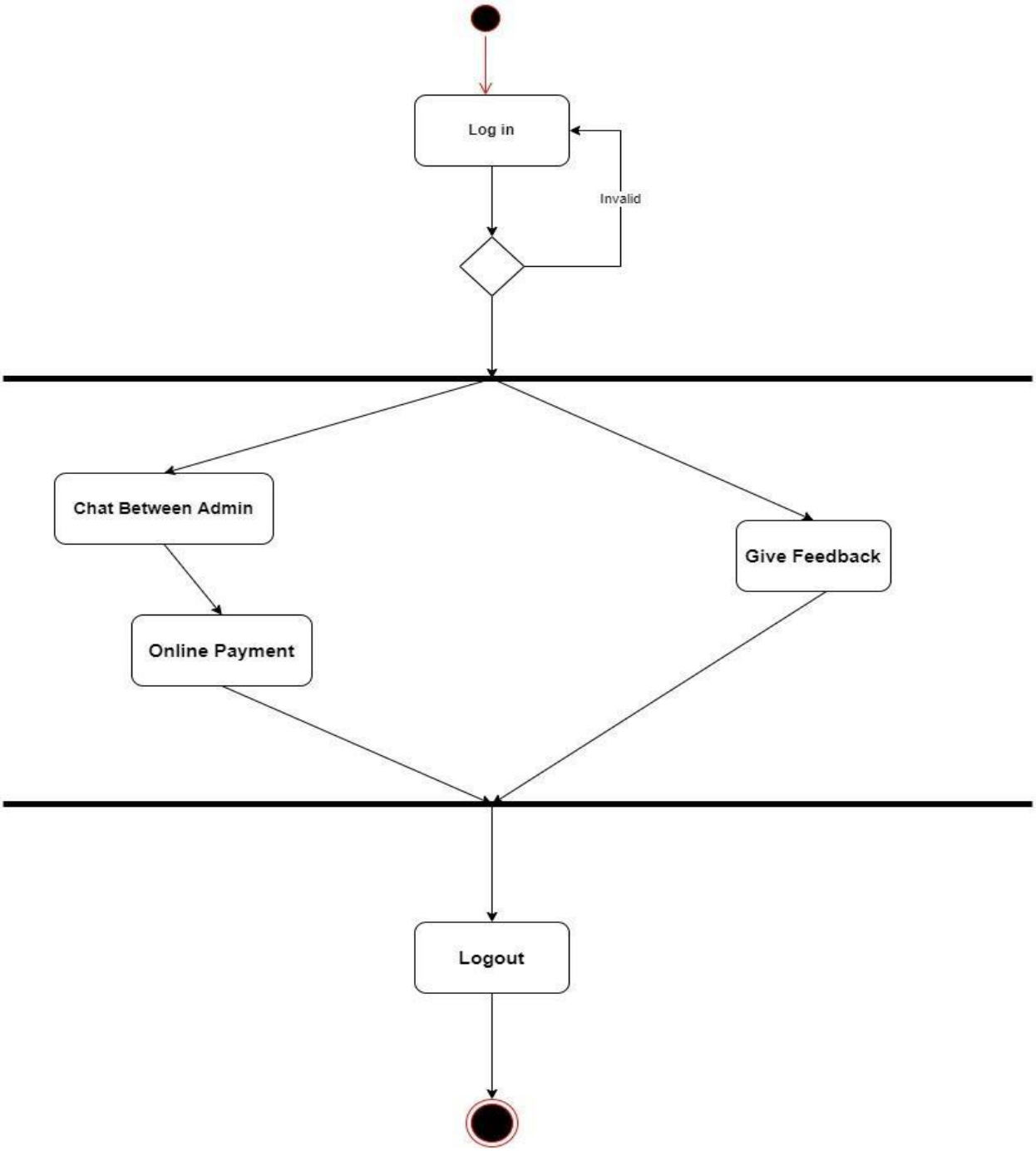


Figure 6.2.2 Activity Diagram (Client)

6.3 Sequence Diagram

A sequence diagram is a type of interaction diagram because it describes how—and in what order a group of objects works together. These diagrams are used by software developers and business professionals to understand requirements for a new system or to document an existing process.

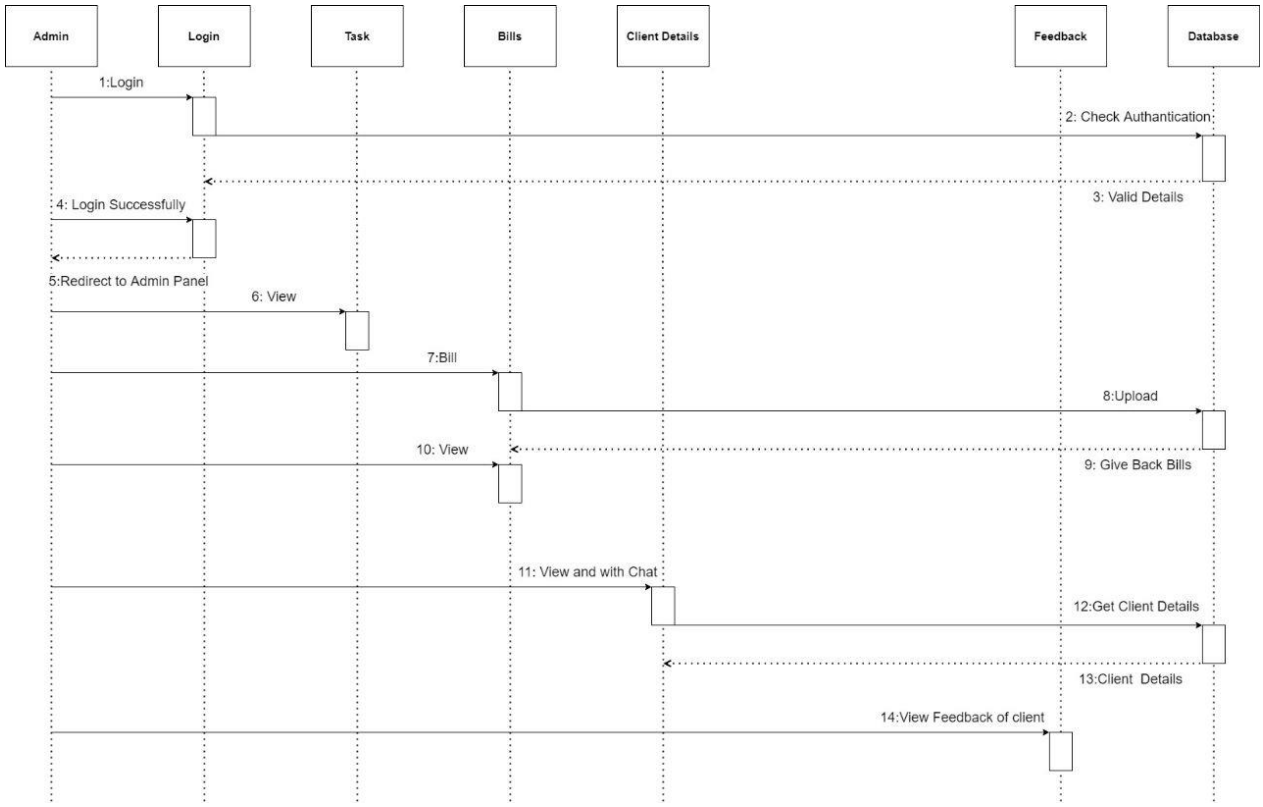


Figure 6.3.1: Sequence Diagram
(Admin)

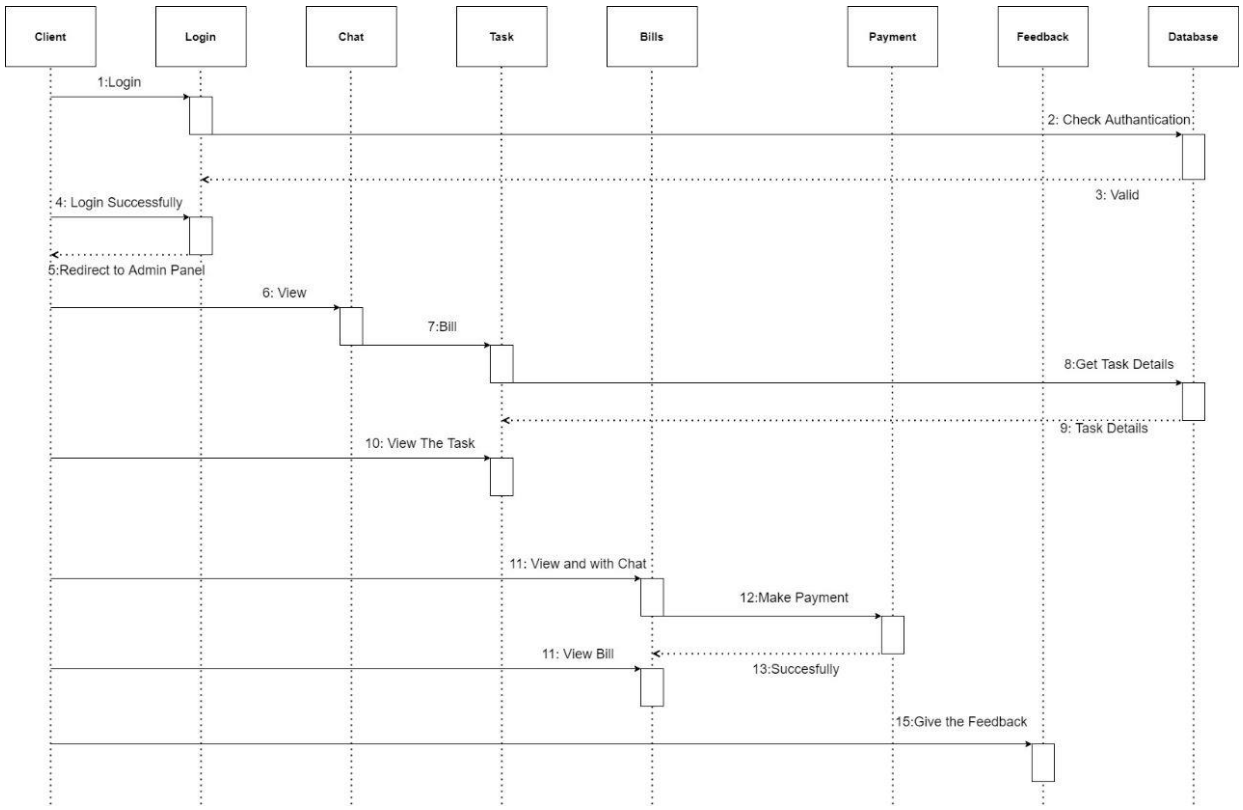


Figure 6.3.2: Sequence Diagram
(Client)

6.4 Data Flow Diagram

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It can be manual, automated, or a combination of both.

LEVEL 0

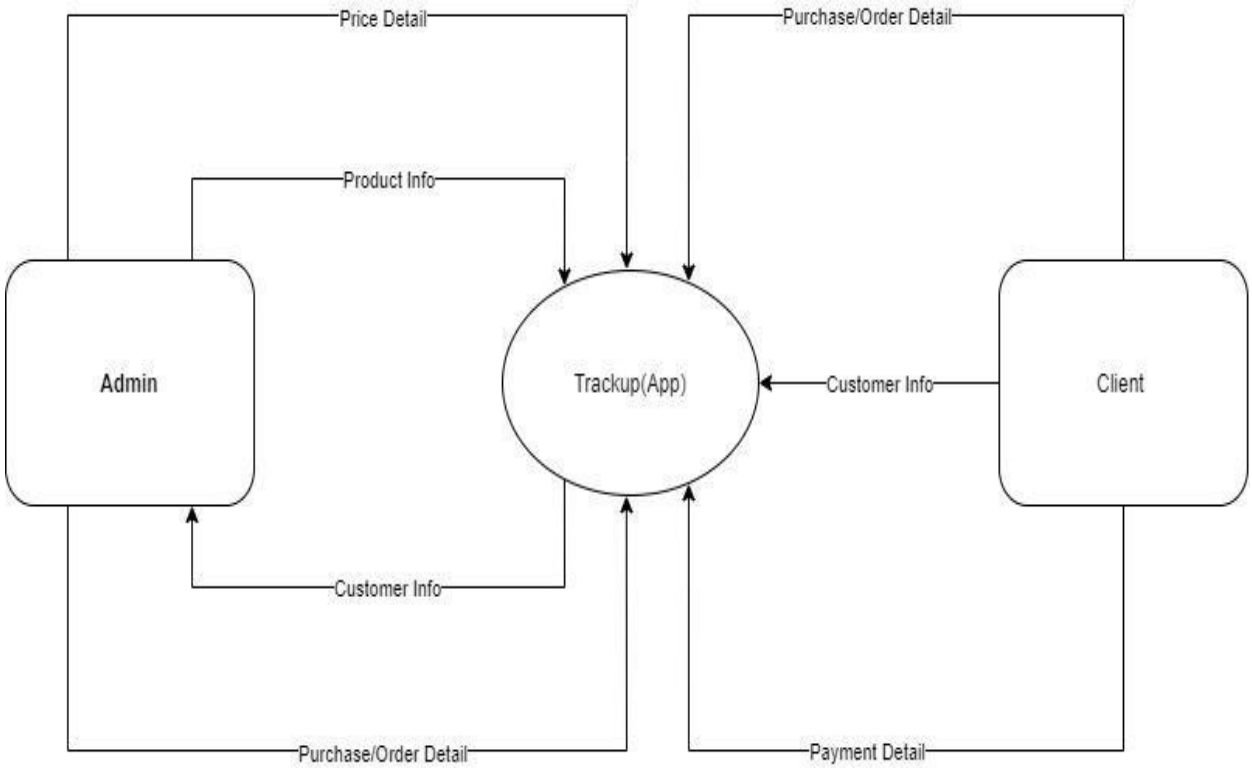


Figure 6.4.1: DFD Level 0

LEVEL 1

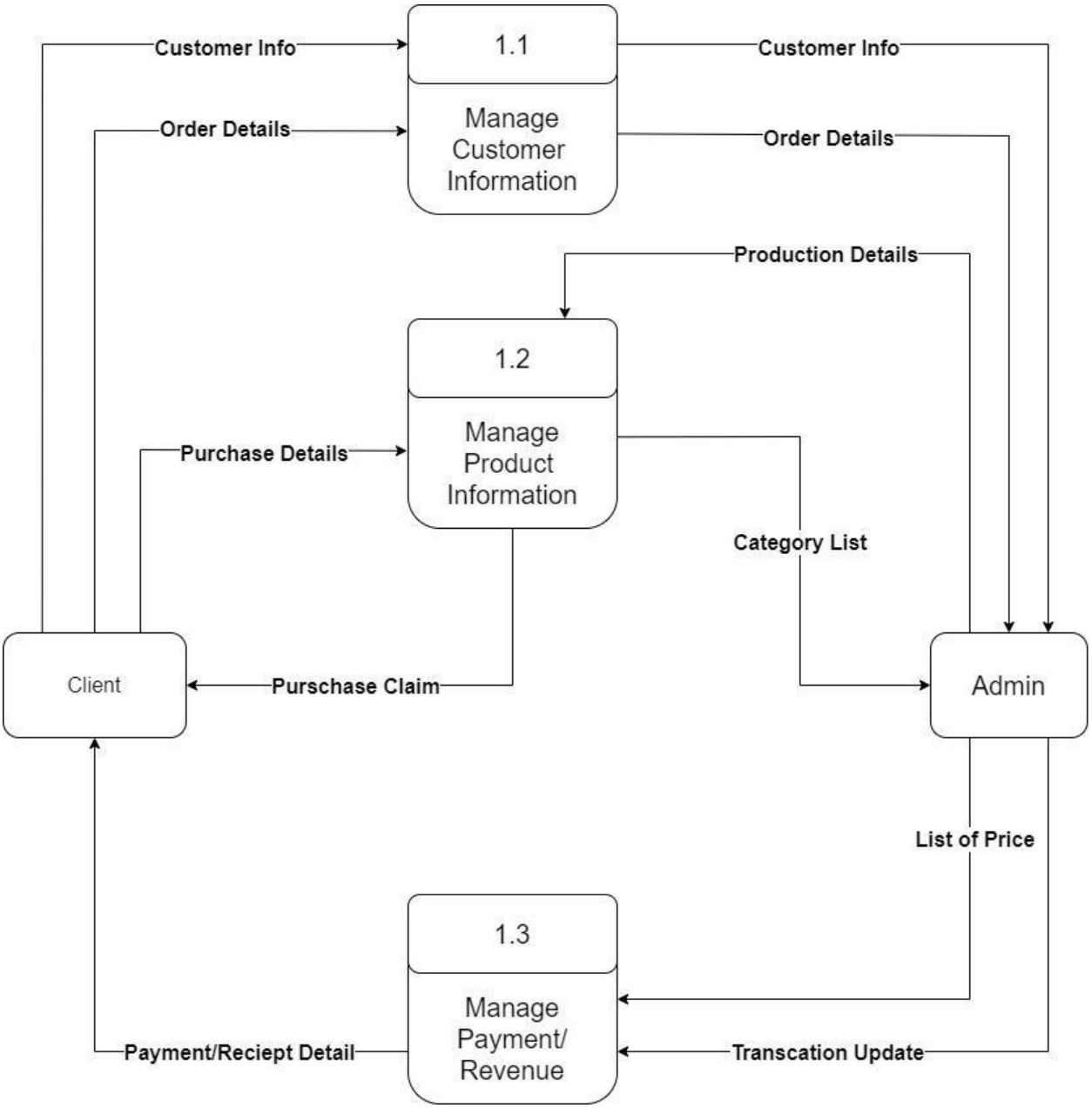
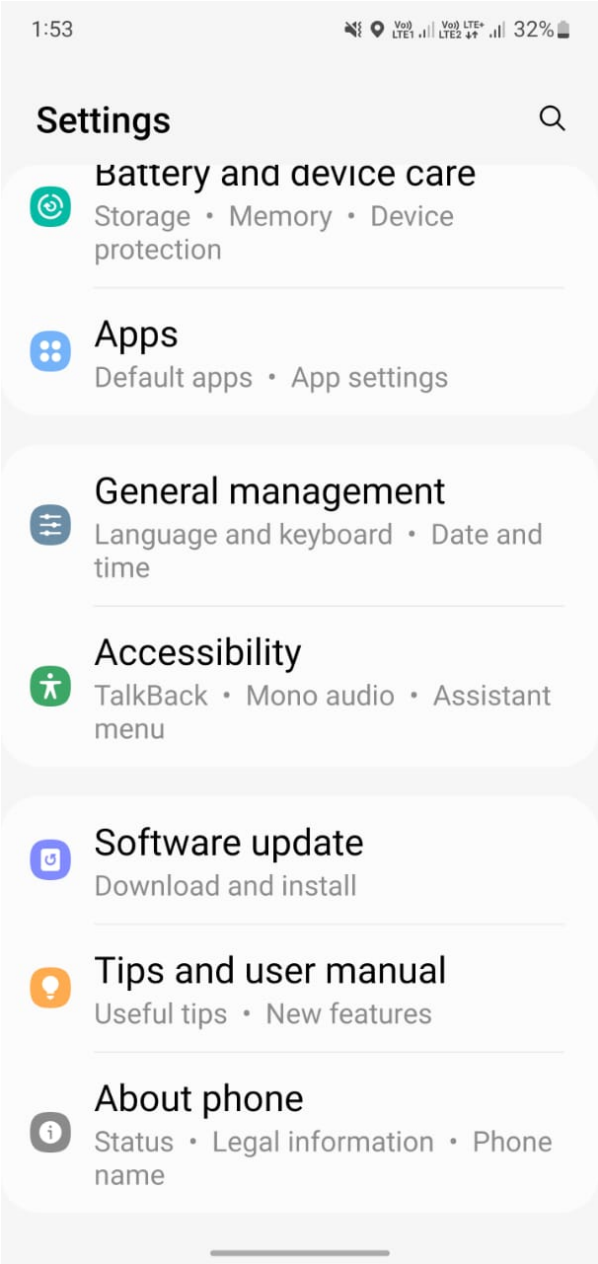


Figure 6.4.2: DFD Level 1

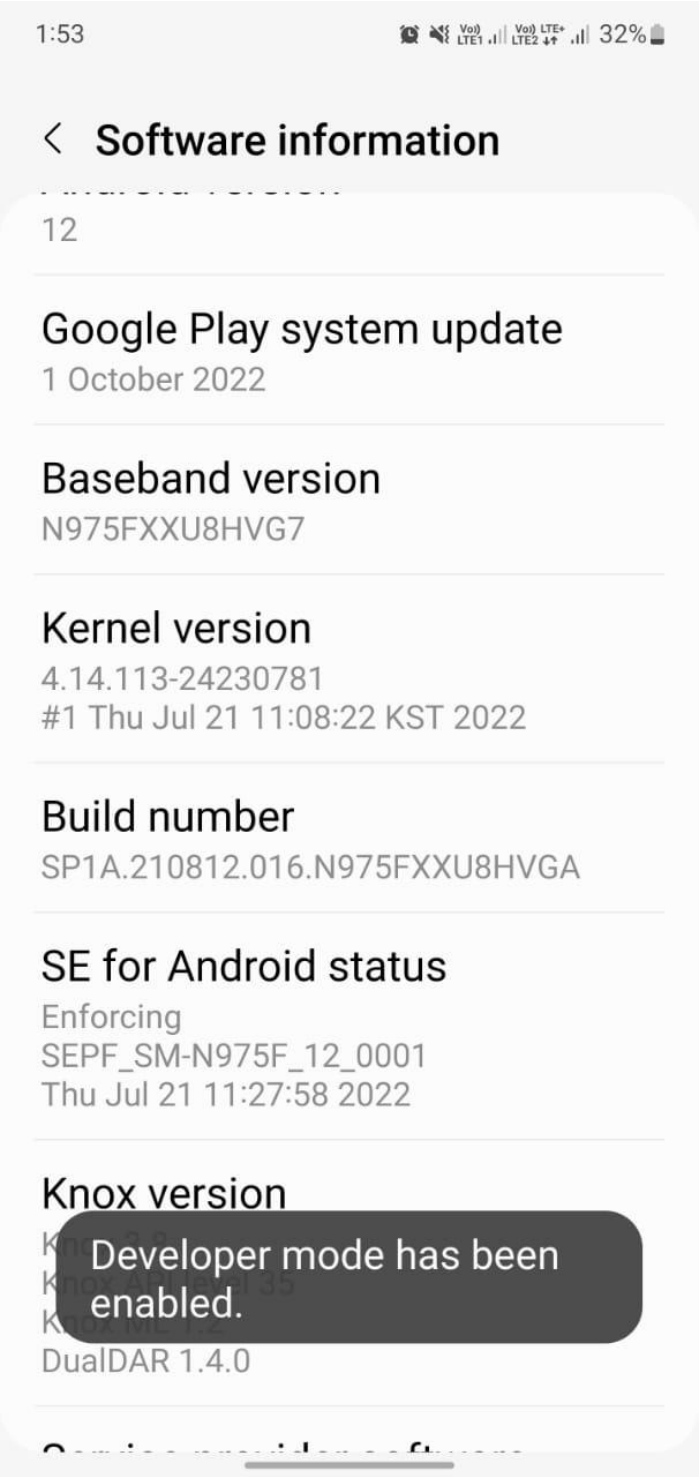
Chapter 7 – USER MANUAL

Application Installiation Steps:-

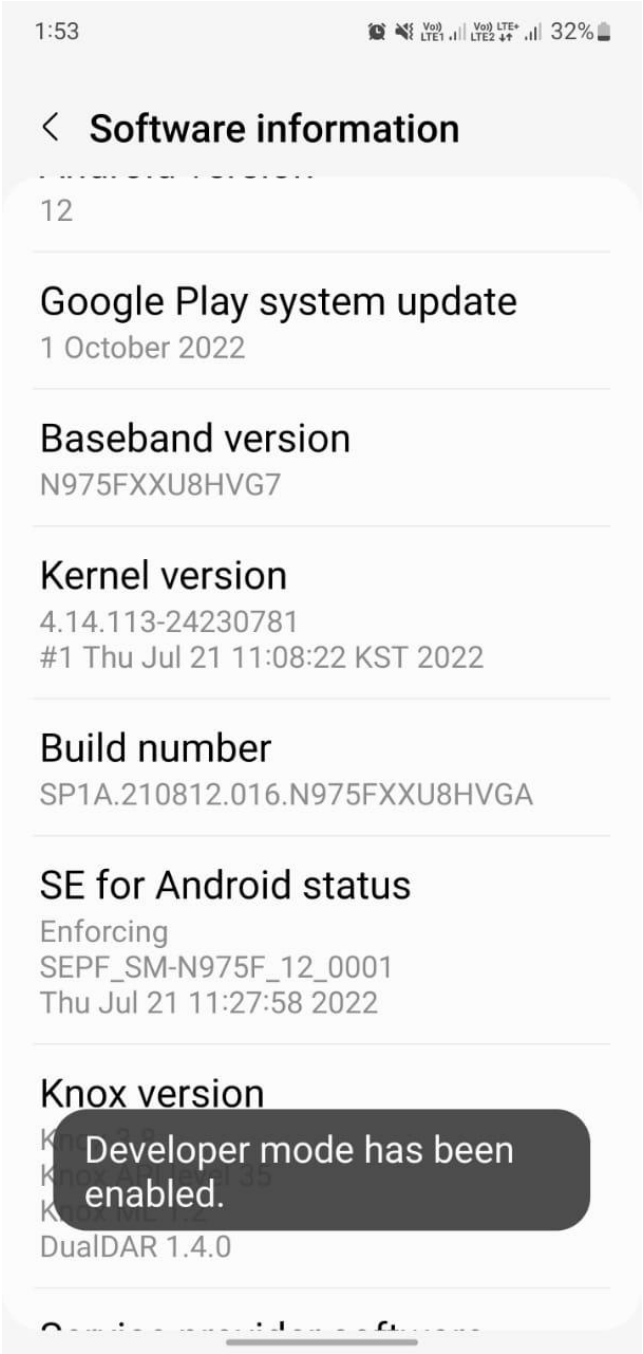
Step 1: First of all inside the settings of your phone, go to About Phone.



Step 2: Then Click on Software Information.

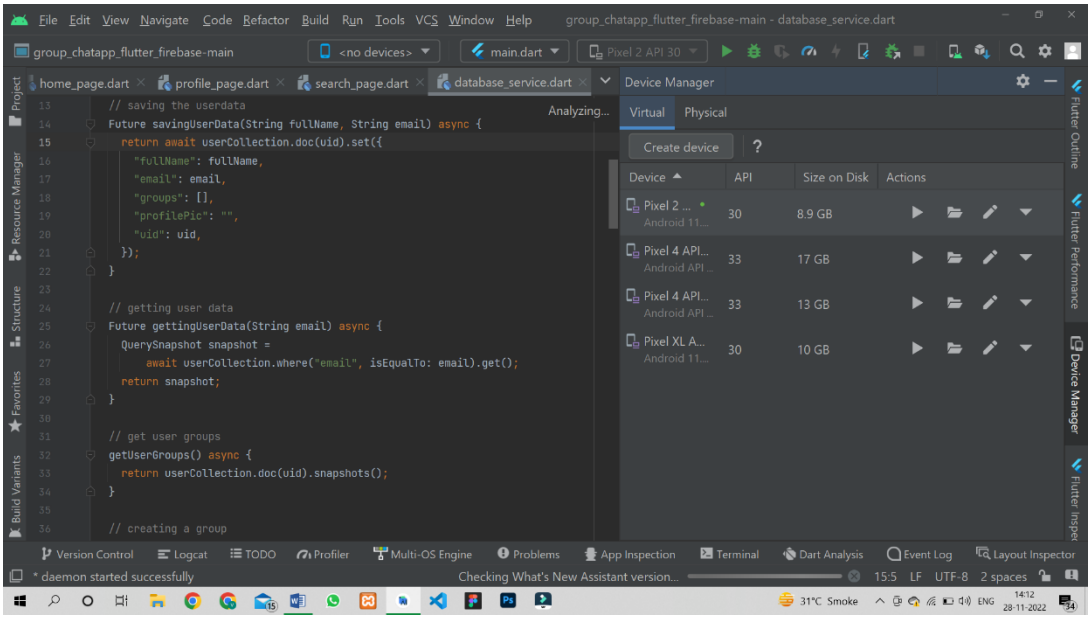


Step 3: Inside Software Information, click 7 times on build number.

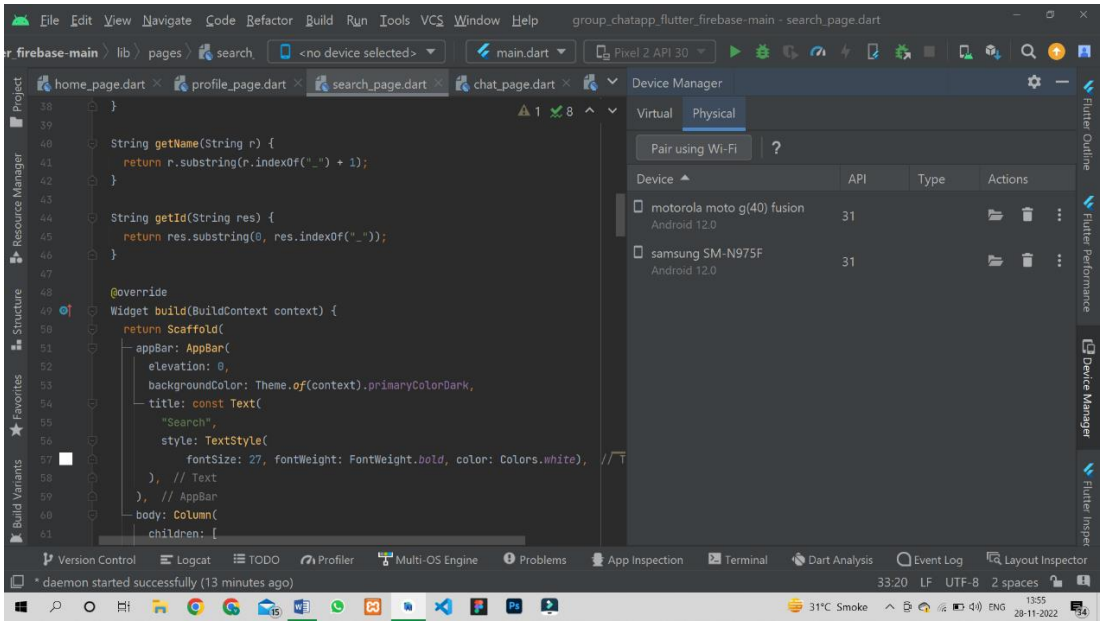


After this the developer mode will be enabled.

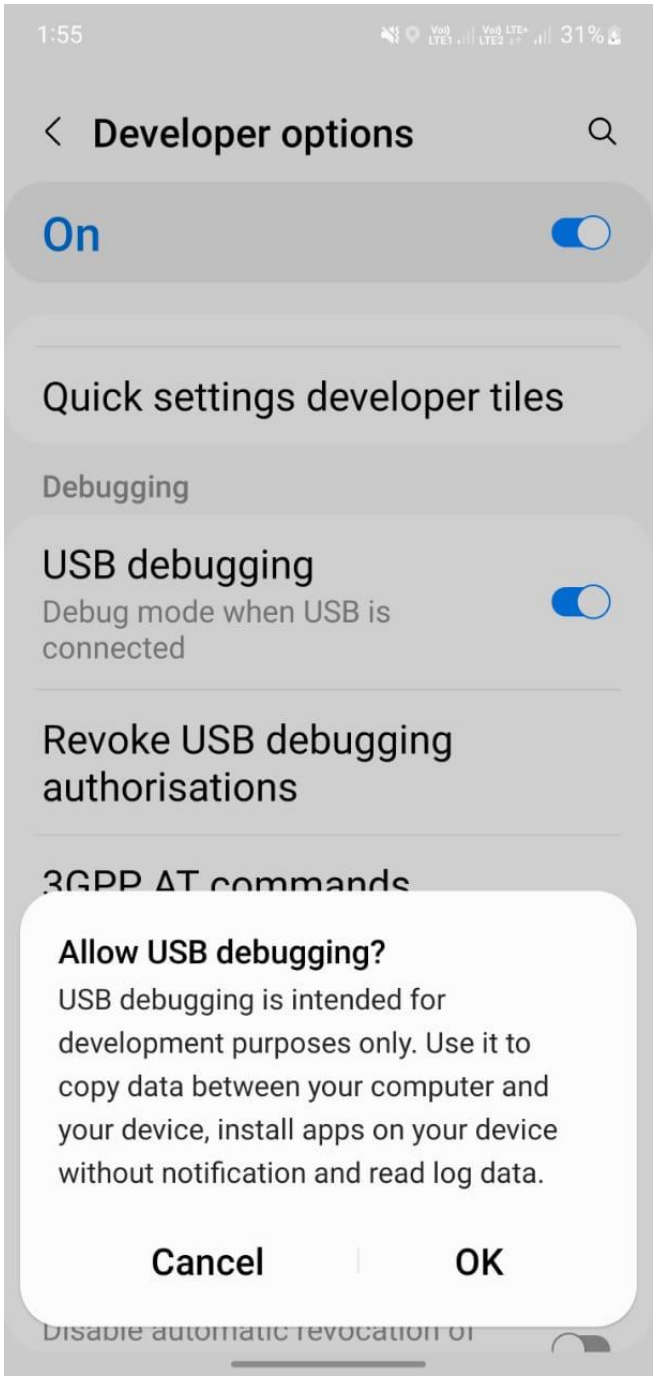
Step 4: On your computer, on the right hand side of your Android Studio Screen, click on Device Manager.



Step 5: In this, click on physical and your (Device Name) phone will be shown if everything is done according to the above given steps.



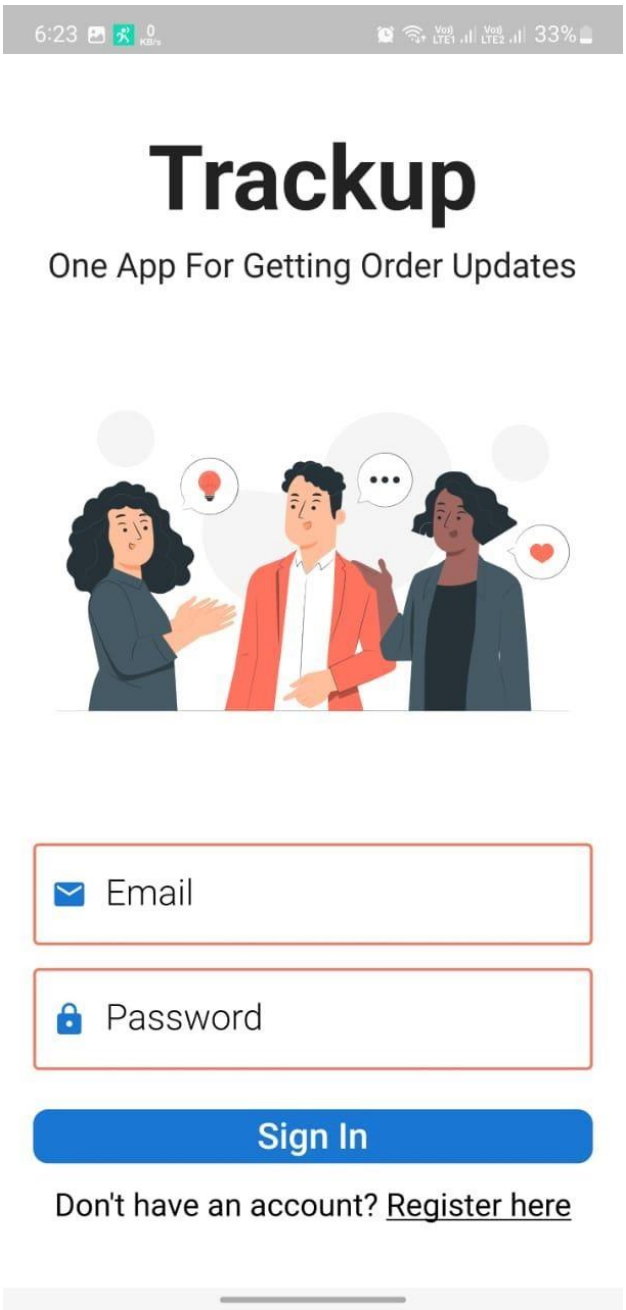
Step 6: Now inside your phone, click on Developer options, Under the section of Debugging, turn on the USB Debugging. And toast message will be shown that allow this computer for USB Debugging.



Step 8: Click on Run and the application will be downloaded on your phone.

7.1 SIGNIN

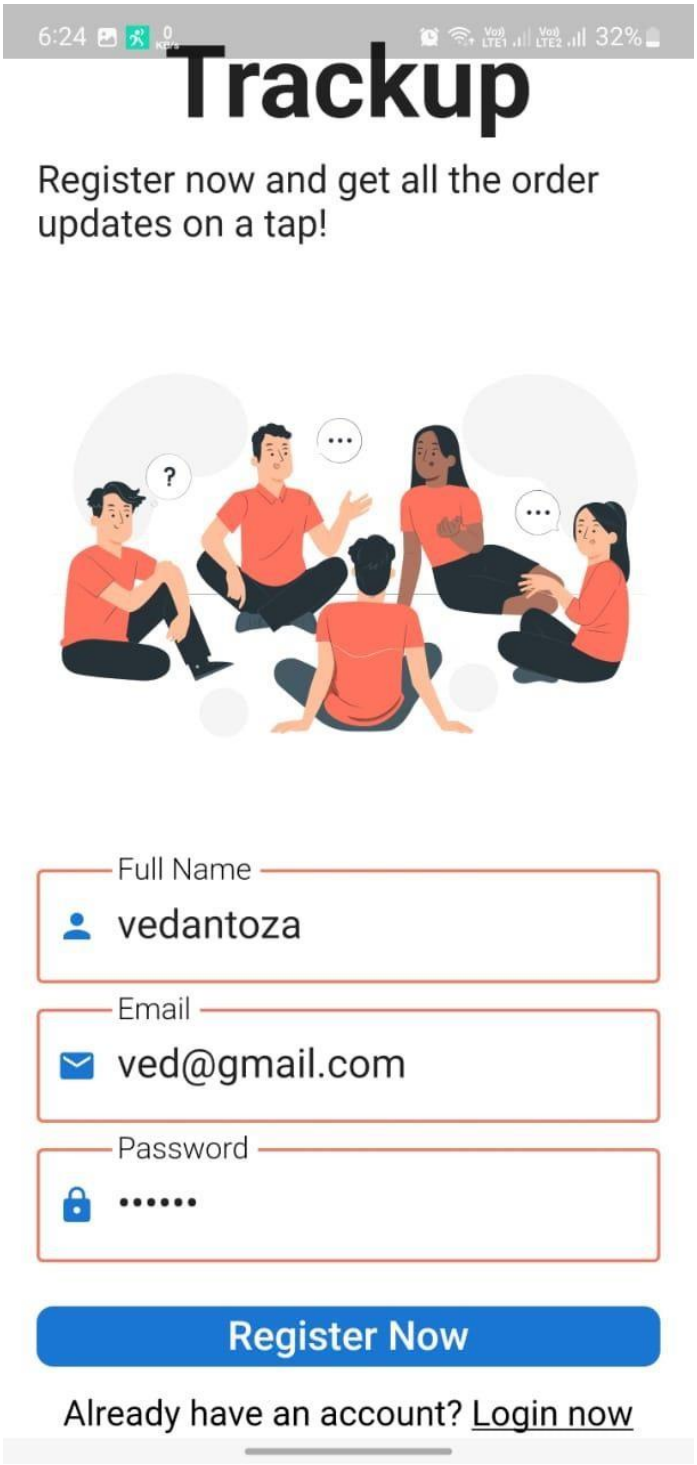
This is the first screen, which is the login screen, which will be shown to the user. If the



user has registered in this, then he/ she will have to login using the entered email and password.

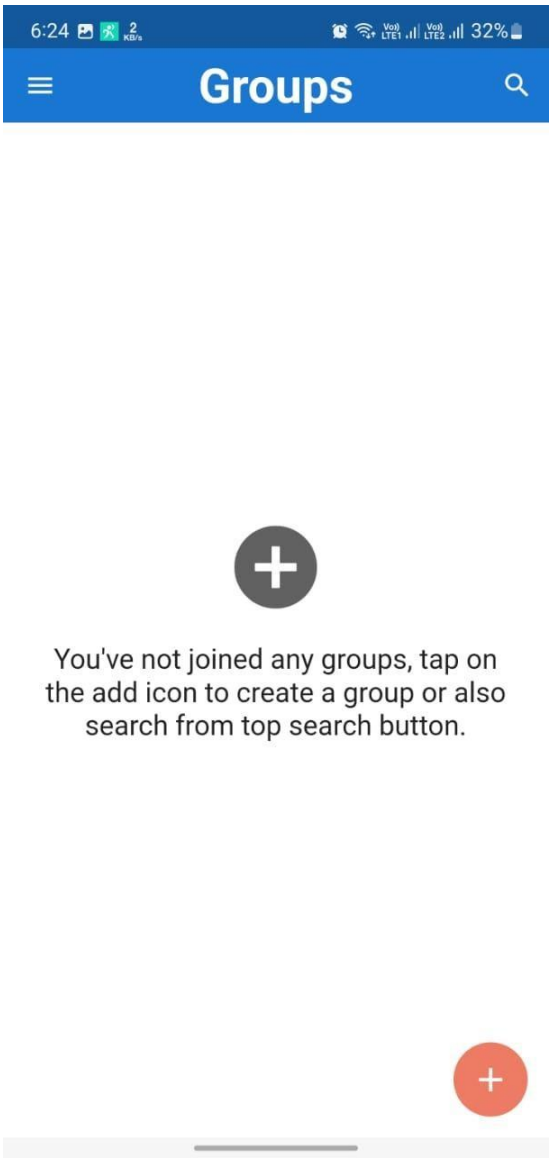
7.2 REGISTER NOW

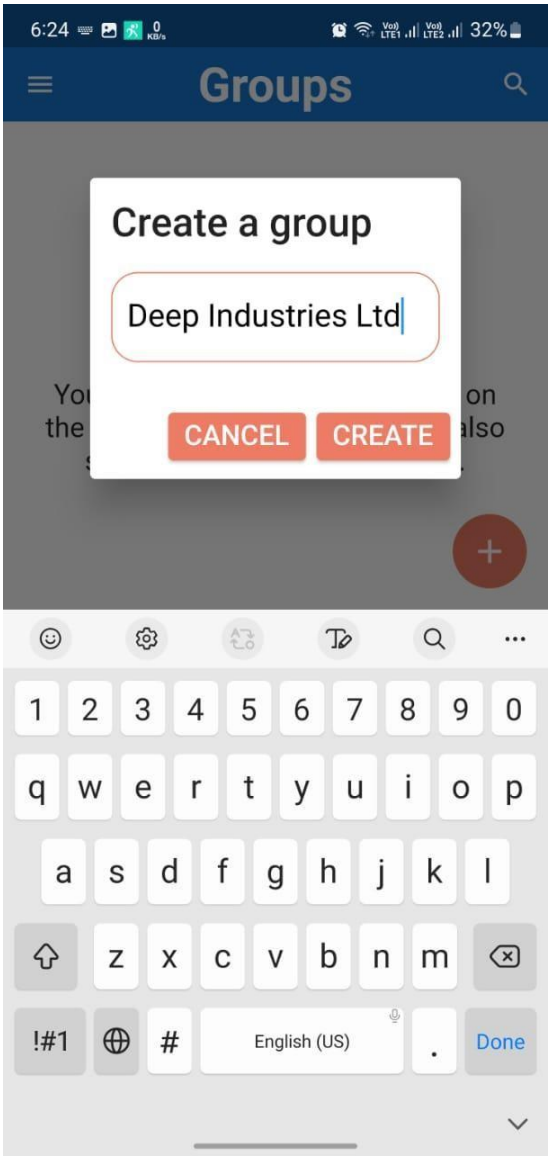
If the user has not registered, then the user can register by entering Username, Email Id and Password. After this will be navigated to the home screen.

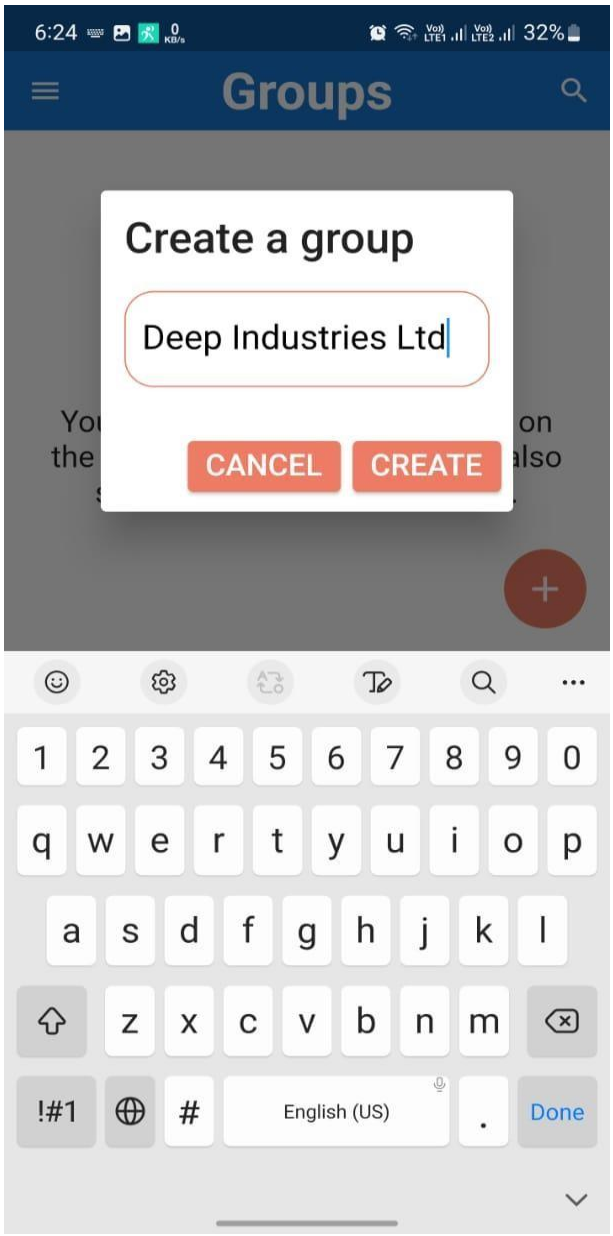


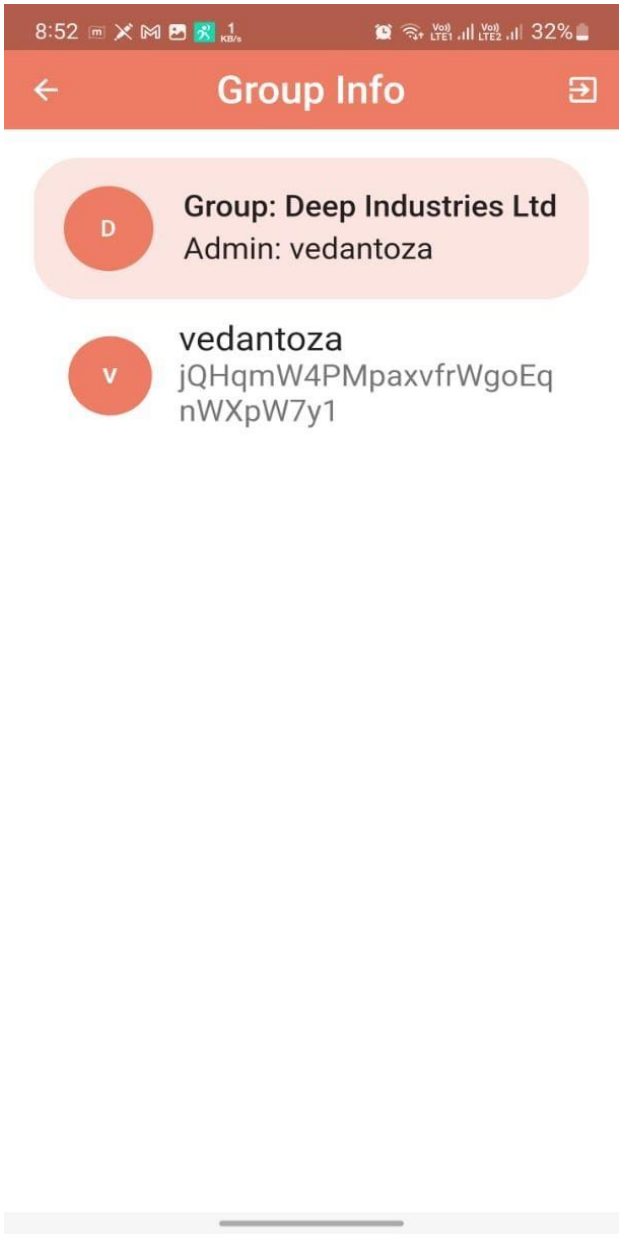
7.3 **GROUPS**

Once the user has logged in, he or she will be redirected to the home screen of the application.



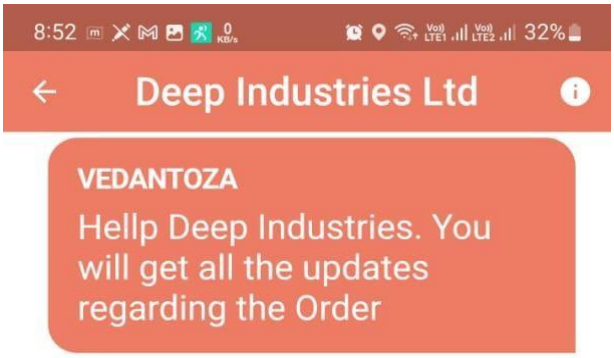


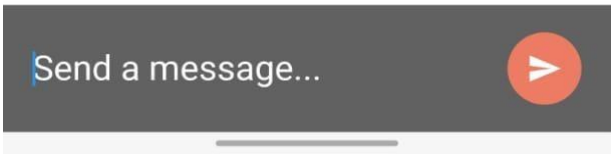

6:24
32%
Groups
Create a group
Deep Industries Ltd
CANCEL
CREATE
English (US)
Done

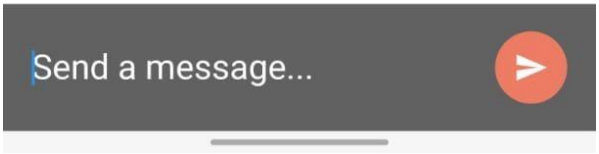

8:52
32%
Group Info
Group: Deep Industries Ltd
Admin: vedantoza
vedantoza
jQHqmW4PMpaxvfrWgoEq
nWXpW7y1

7.4 CHAT

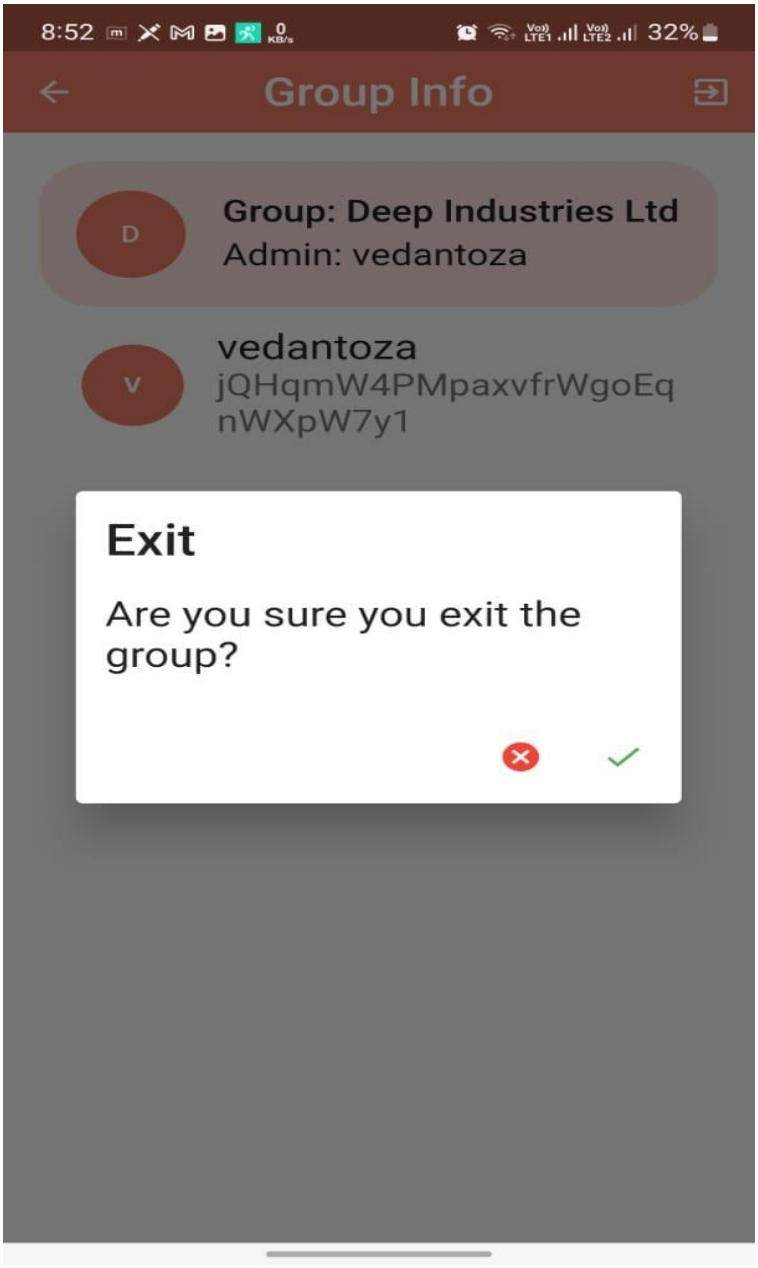
The client of the user will now simply have to login and enter inside this group, for getting the order updates.





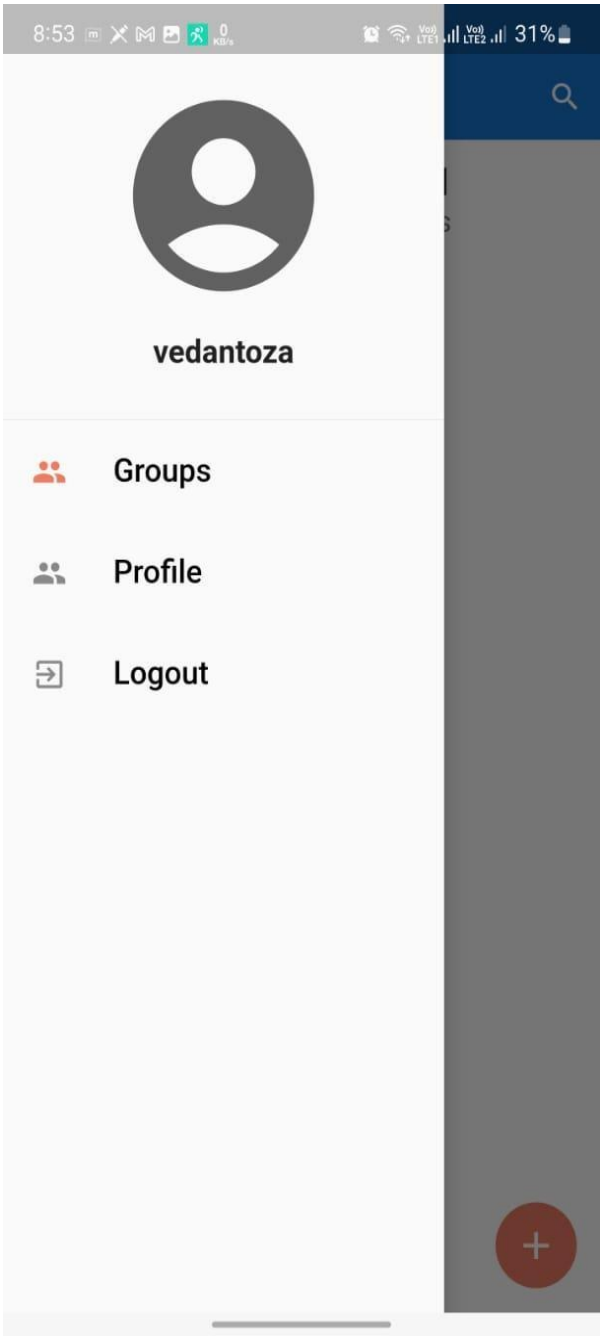


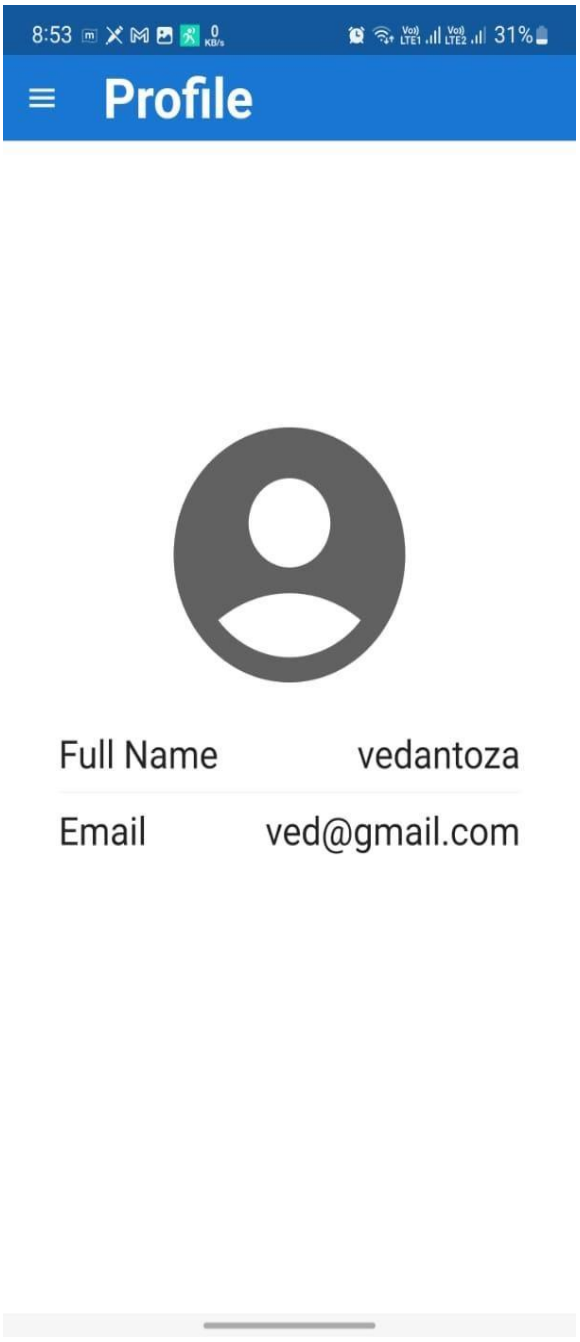
If the client doesn't want to continue the deal, he or she could exit the group by clicking on the exit button in the top right corner.



7.5 **PROFILE**

On clicking the profile button in the drawer menu, the user could check the username and email.





Chapter 8 – TEST CASES

The objective is to test the functionality of the Mobile application. Testing is doneb on both, front-end and back-end of the application on the Windows environments. The features, which are to be tested, are Login Page, Signup Page, home page, Product details page, profile. All the major functionality of the application should work as intended and the pass percentage of test cases should be more than 95% and there should not be any critical bugs.

LogIn/Register for (User/ Admin) Test case:

ID	Test Cases	Input Data	Steps of execution	Expected Output	Result
1	User is able to login	Email, Password	Click on login button	"Registered Successfully"	**Pass**
2	User is able to register	Email, Full name, password	Click on register button	"Registered Successfully"	**Pass**

Client-Side Test Case:

ID	Test Cases	Input Data	Steps of execution	Expected Output	Result
1	Create Group	Name of Group	Click on Create	"Created Successfully"	**Pass**
2	Join Group	Join Group	Click on join Group Button	"Joined Successfully"	**Pass**
3	Exit from Group	Exit From Group	Click On Exit from group	"Exited Successfully"	**Pass**
4	Send order updates	Input Text	Write message	"Sent Successfully"	**Pass**

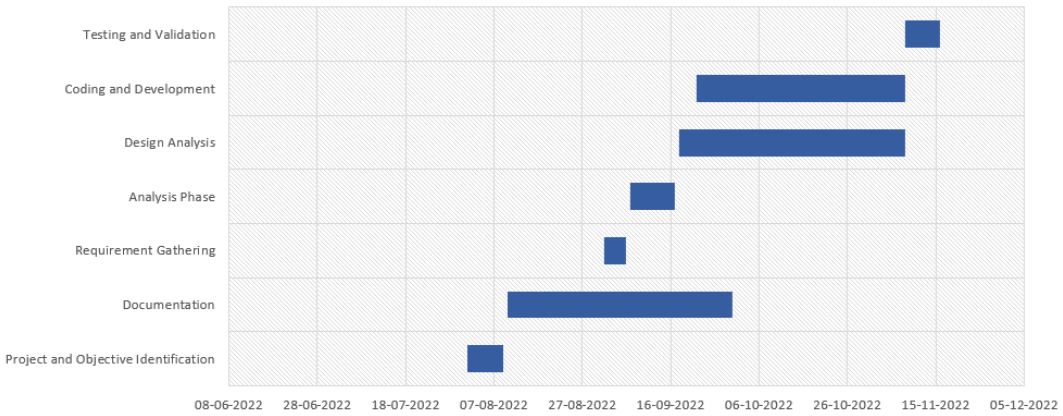
Admin Test Case:

ID	Test Cases	Input Data	Steps of execution	Expected Output	Result
1	Join Group	Join Group	Click on Join Group Button	"Joined Successfully"	**Pass**
2	Create Group	Name if Group	Click on Create	"Created Successfully"	**Pass**
3	Exit From Group	Exit from group	Ckick on exit From group	"Exited Successfully"	**Pass**

4	Send order updates	Input Text	Write Message	“Sent Successfully”	**Pass**

Project planning

Sr.No.	Task to Complete	Estimated time
1.	Project and Objective Identification	1st August 2022- 9thAugust 2022
2.	Documentation	10th August 2022 - 31th September 2022
3.	Requirement Gathering	1st September 2022 - 6th September 2022
4.	Analysis Phase	7th September 2022 - 17th September 2022
5.	Design Analysis	18st September 2022 -8th November 2022
6.	Coding and Development	22nd September 2022 - 8th November 2022
7.	Testing and Validation	8th November 2022 - 16th November 2022
8.	Future Work	17th December 2022 onwards



Chapter – 9 CONCLUSION AND FUTURE WORK

9.1 Conclusion

The Application will be for those who wants to make their business look professional. All the businesses updates can be shared to a particular client via this Application. Be it order updates or be it a reminder of payment, everything can be done in this Application, so as to make your business look more professional to the clients.

9.2 Future scope

All of us have got amazing chat applications around us. But when it comes to professionalism, ourproject will definitely help the businesses in the upcoming upgraded versions.

For example, adding Task reminders is really necessary. But merging task application with ours, will be like a cherry on top. So, in future adding task application with our application will help the businesses to help them cover up there tasks easily. Also, in future the companies will get an optionto do the payment via the application by getting redirected to the payment gateway. Also, the clientsof the company could send the feedback regarding the order received. Also, the companies could see the feedbacks. Also setting reminders of any new order requirements could be send to the clients in future.

Annexure

Our spirituous efforts are directed towards leading our student community to such an acme of technical excellence that can satisfy the requisition of the industry, the nation and the globe at large. The generation of an entirely different community of students aiming at attaining technical expertise and utilizing the technical know-how in the service ofmankind is at the root of our efforts. We have the following aims before us.

- To offer guidance, motivation and inspiration for full growth of hidden traits.
- To impart technical and need-based education by conducting elaborated training programs.
- To shape and mold the personality of future generation.
- To construct fertile ground for resting dire challenges.
- To cultivate the feeling of belongingness amongst the faction of engineers.

Establishment:

U. V. Patel College of engineering (UVPCE) situated in Ganpat Vidyanagar campus was established in september-1997 under the aegis of Mehsana District Education Foundation with a view of educating and training young talented students of Gujarat at the field of engineering and technology to meet the needs of industries in Gujarat and beyond for the growth of the industries.

The College is named after Shri Ugarchandbhai Varanasi Bhai Patel, a leading industrialist of Gujarat, for his generous support. It is a self-financed institute approved by All India Council for Technical Education (AICTE), New Delhi, the Government of Gujarat and now it became the constituent college of Ganpat University.

The College is spread over 25 acres of land and is a part of Ganpat Vidyanagar Campus. It has two ultra-modern buildings of architectural splendor measuring 6100 sqm. and 2700 sqm., for housing class rooms, tutorial rooms, seminar hall, offices, drawing hall, workshop, library, well equipped different departmental laboratories, several computer labs with internet connectivity through 1 Gbps Fiber link, satellite link education center with two-way audio and one-way video link with Gandhinagar etc. Placement plays a key role in shaping the future of the students, and keeping this in mind; the institute has forged healthy relations with the prominent industries. These tie-ups are mutually beneficial. The industries get a chance to employ the resources of the institute for their R & D. In turn they extend every possible help to the institute especially with regard to providing hands-on training to the students. As part of this initiative, Incubation Centre/Startup activities have also been developed.

References

[1] Github – Ishan Developer “Chatter-App”

[2] Youtube – Flutter and Firebase Authentication Email & Password Login/ SignUp