UE21CS352B - Object Oriented Analysis & Design using Java

Mini Project Report

"Social Media Platform - InstaClique"

Submitted by:

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*6th Semester **H** Section*

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Designation

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January - May 2024

Problem Statement:

The Social Media Platform System is meticulously designed to seamlessly facilitate user connections, content sharing, and diverse interactions. It boasts a robust set of features encapsulated within various entities, each representing a fundamental aspect of the platform's functionality.

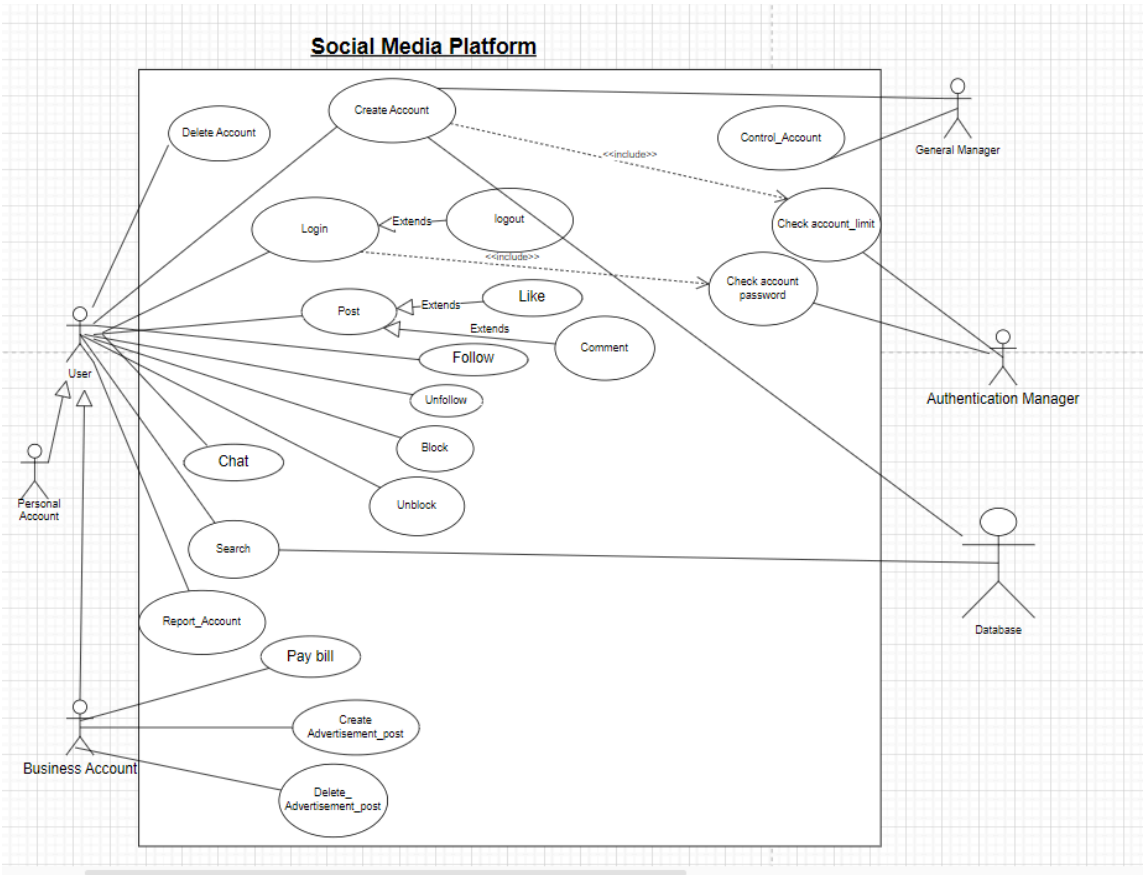
Users, at the system's core, interact through a spectrum of operations that span account management (creation and deletion), authentication processes (secure login/logout), and social engagement (follow/unfollow, like, comment). Furthermore, users can explore and engage with posts through tailored functionalities like displaying their liked or commented content and conducting searches.

Content creation is a key focus, managed by the Post class, which orchestrates operations for creating, deleting, and hiding posts. Messaging capabilities are seamlessly integrated into the system through the Chats class, enabling users to send, delete, and forward messages.

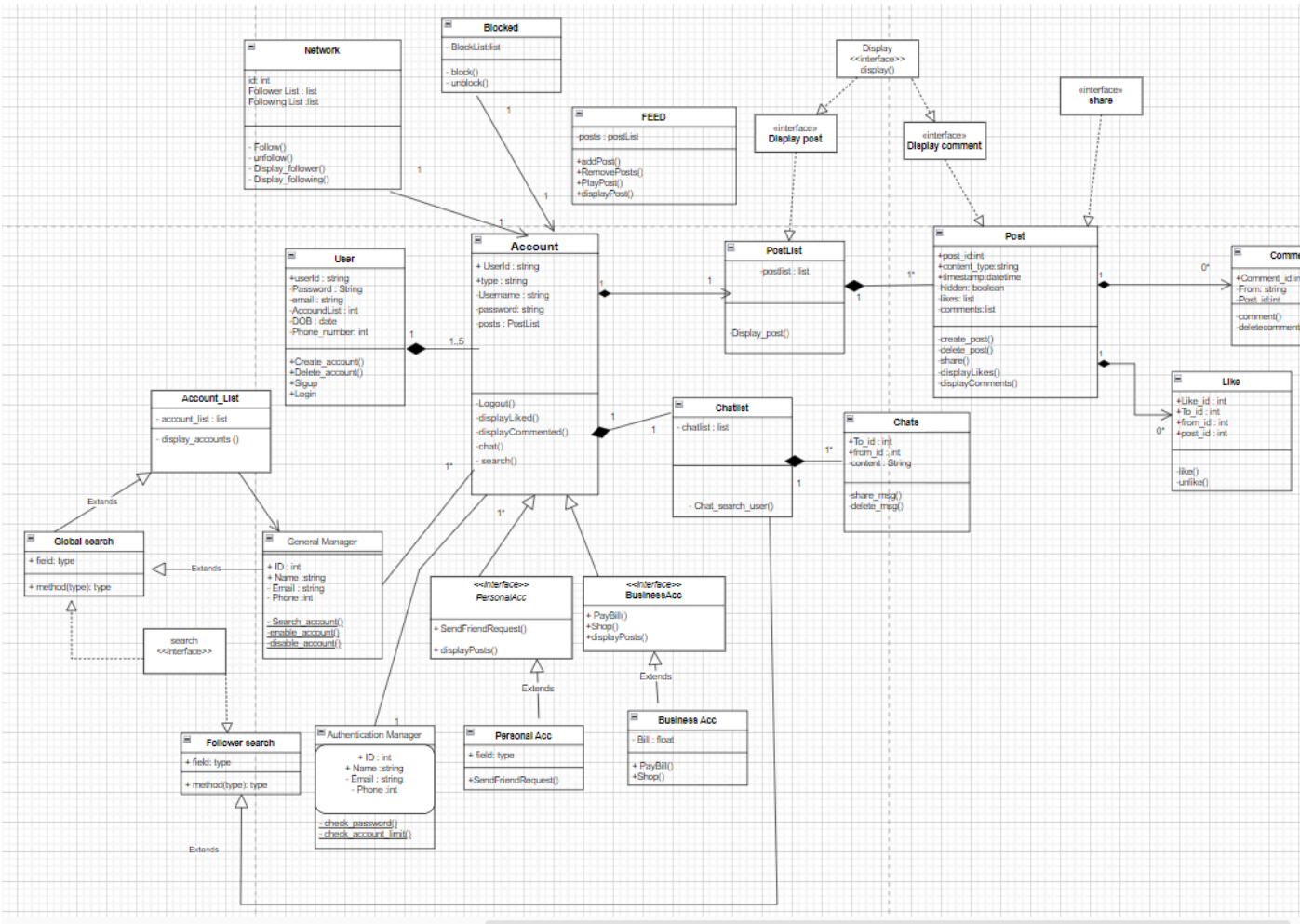
In the realm of user interactions with posts, the system accommodates likes and comments, each handled by dedicated classes. Additionally, the Advertisement Company entity facilitates the posting of advertisements, adding a layer of diverse content to the user experience.

At the helm of user interactions lies the General Manager (GM) class, empowering users with search functionalities, enhancing the overall discoverability within the platform.

USE CASE DIAGRAM:

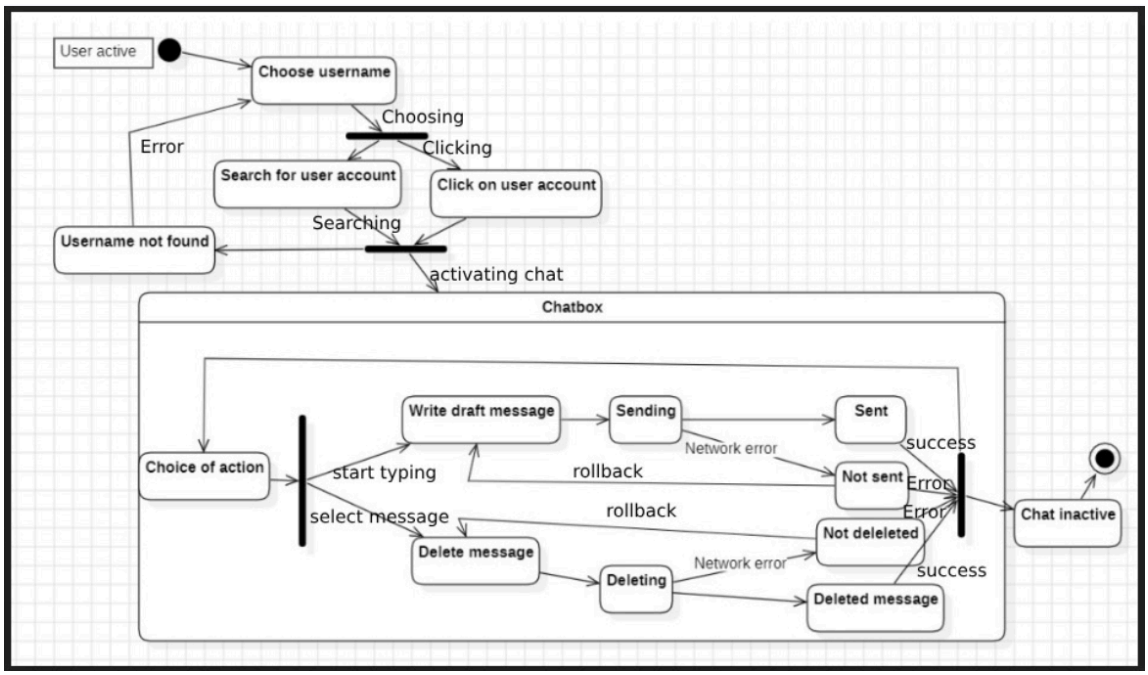


CLASS DIAGRAM WITH SOLID AND GRASP

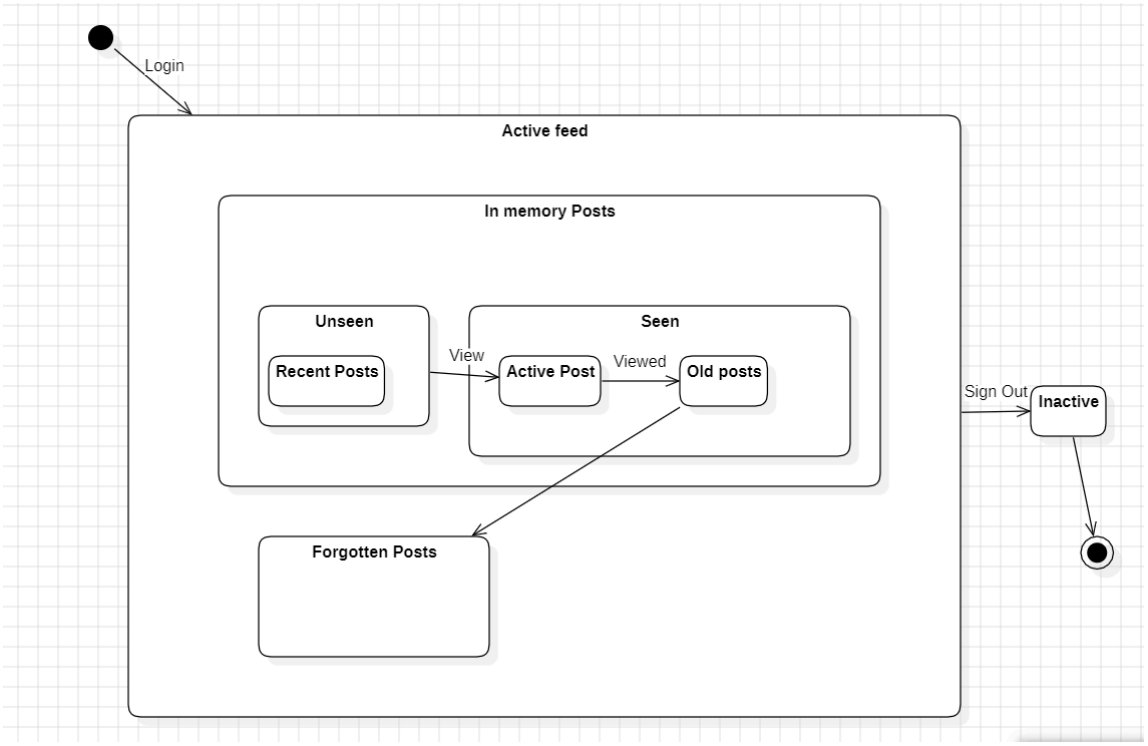


STATE DIAGRAMS:

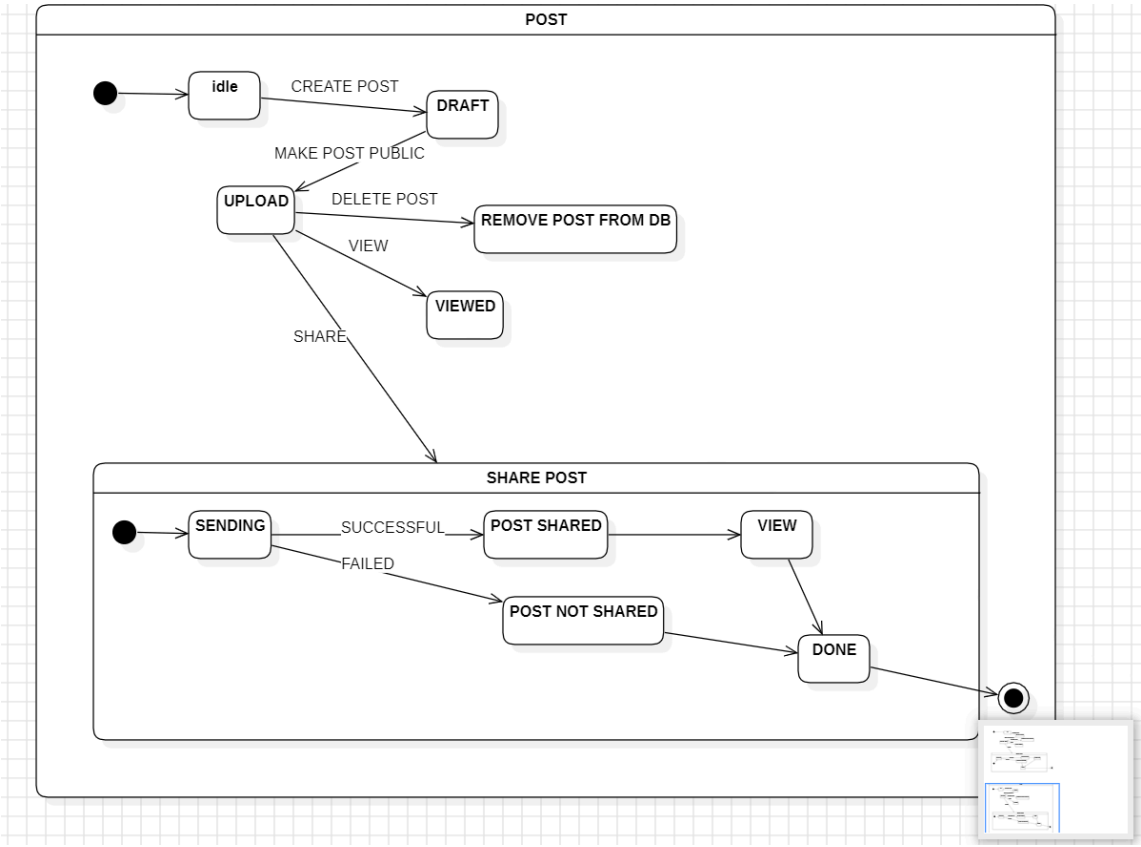
1) Chat :



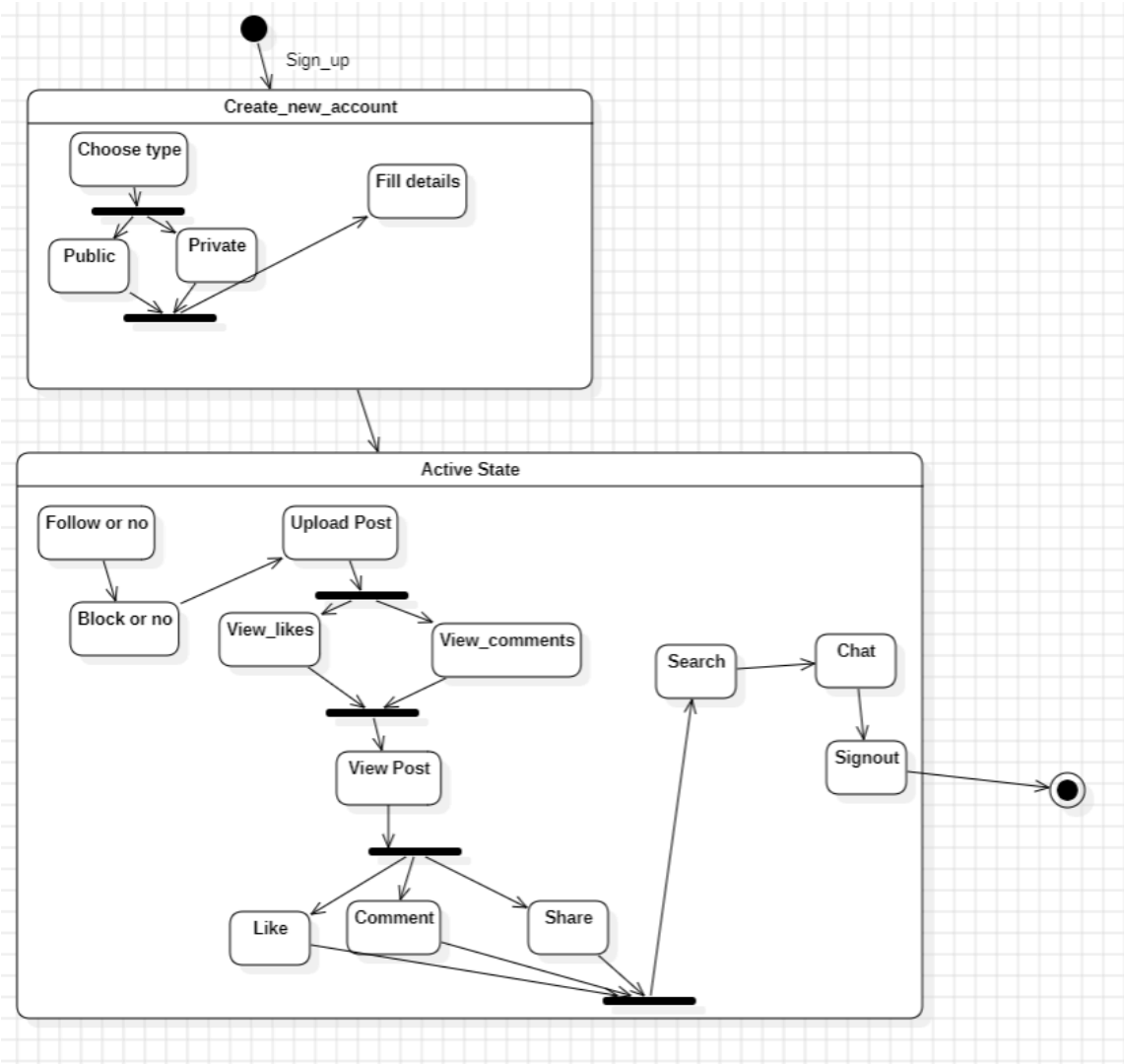
2) Feed


Login
Active feed
In memory Posts
Unseen
Recent Posts
View
Seen
Active Post
Viewed
Old posts
Sign Out
Inactive
Forgotten Posts

3)POST

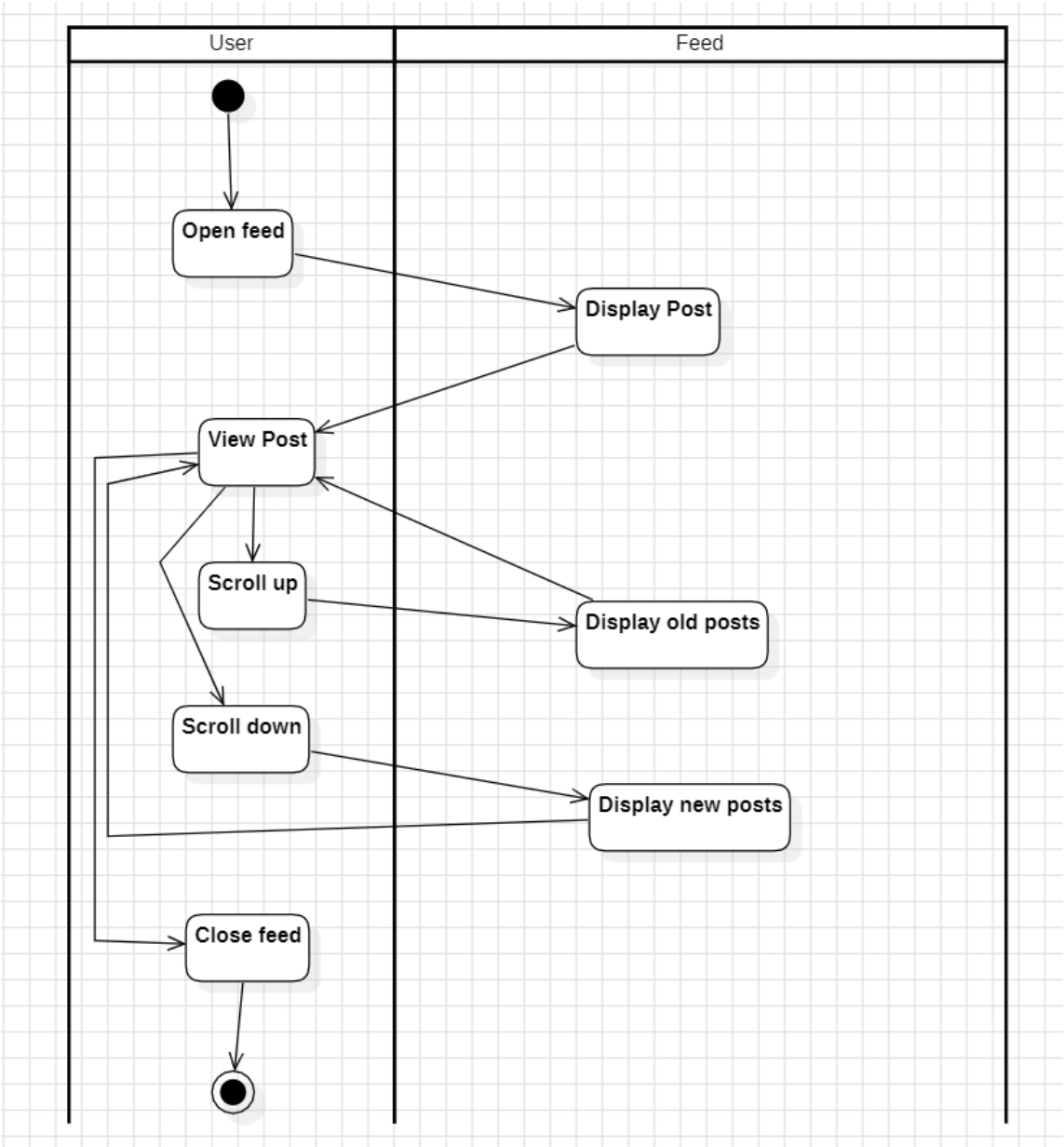

POST
idle
CREATE POST
DRAFT
MAKE POST PUBLIC
UPLOAD
DELETE POST
REMOVE POST FROM DB
VIEW
VIEWED
SHARE
SHARE POST
SENDING
SUCCESSFUL
POST SHARED
VIEW
FAILED
POST NOT SHARED
DONE

4) Account

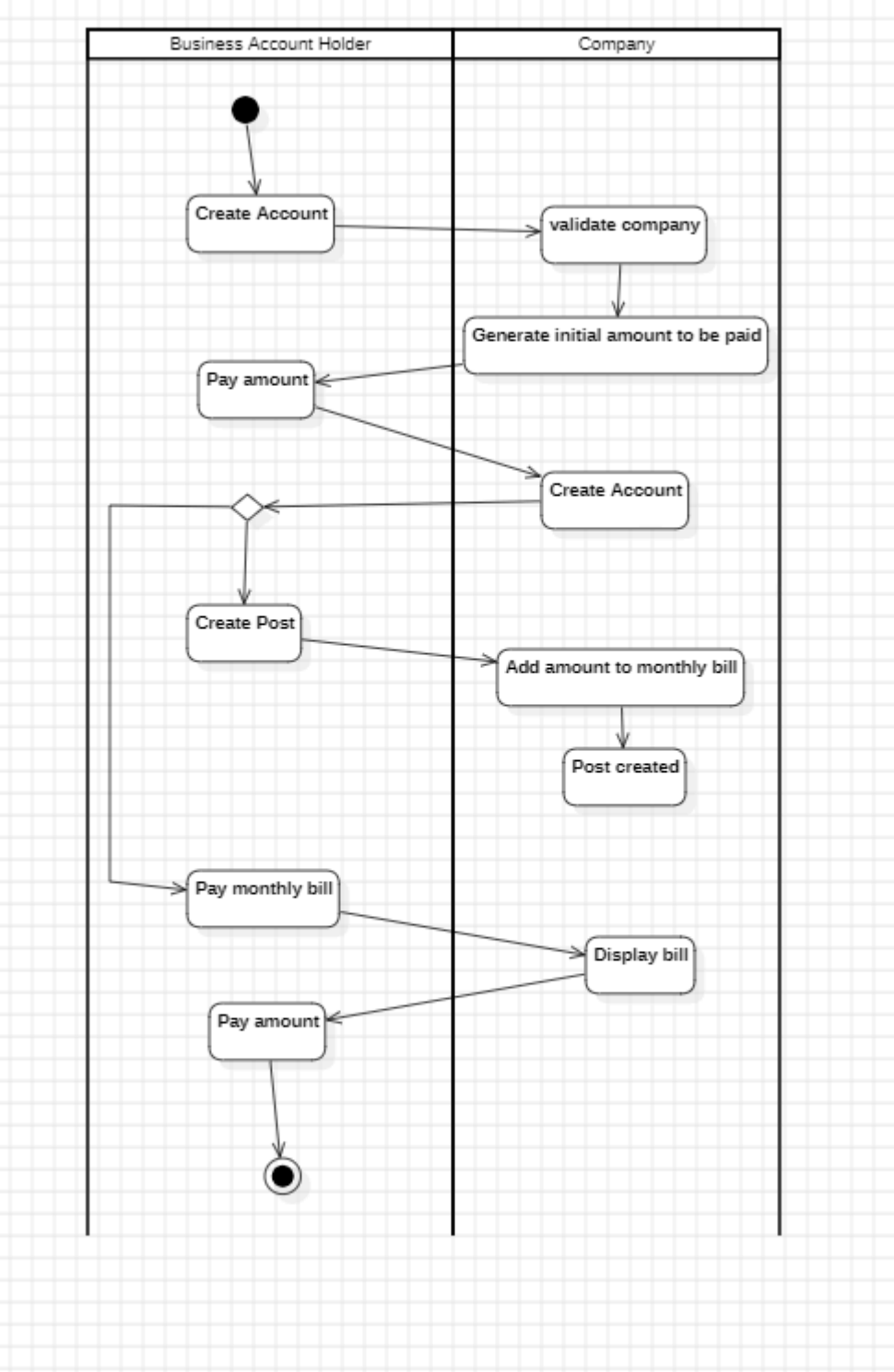

Sign_up
Create_new_account
Choose type
Fill details
Public
Private
Active State
Follow or no
Upload Post
Block or no
View_likes
View_comments
Search
Chat
Signout
View Post
Like
Comment
Share

Activity Diagram:

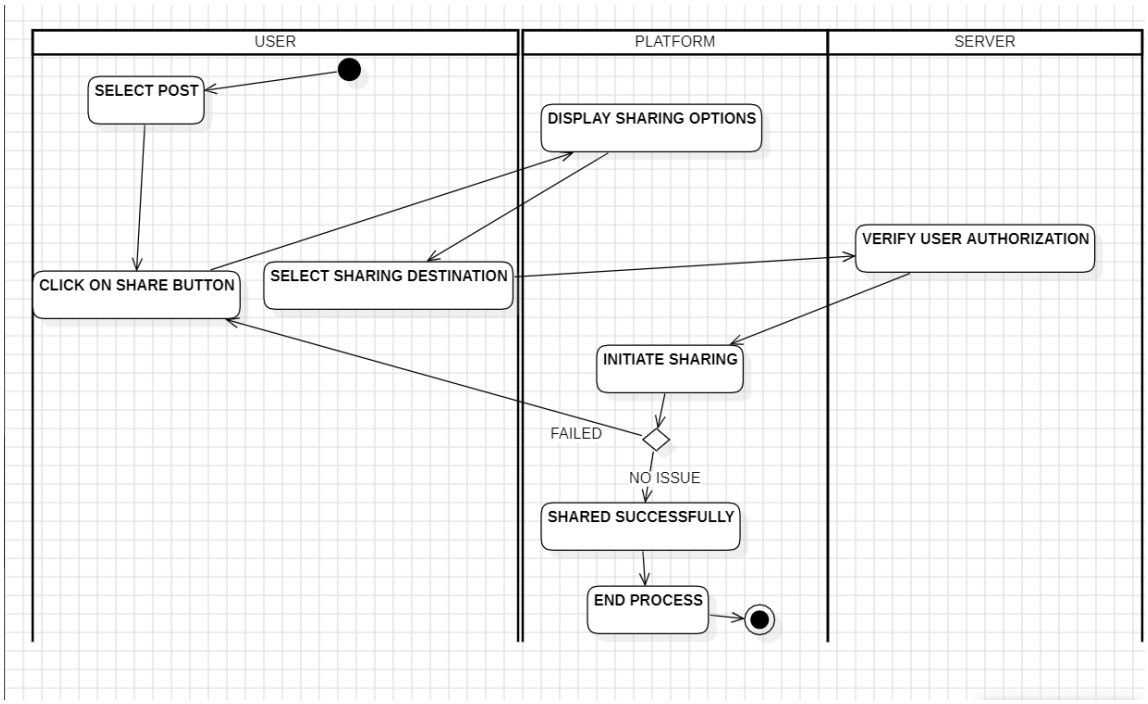
1) Feed



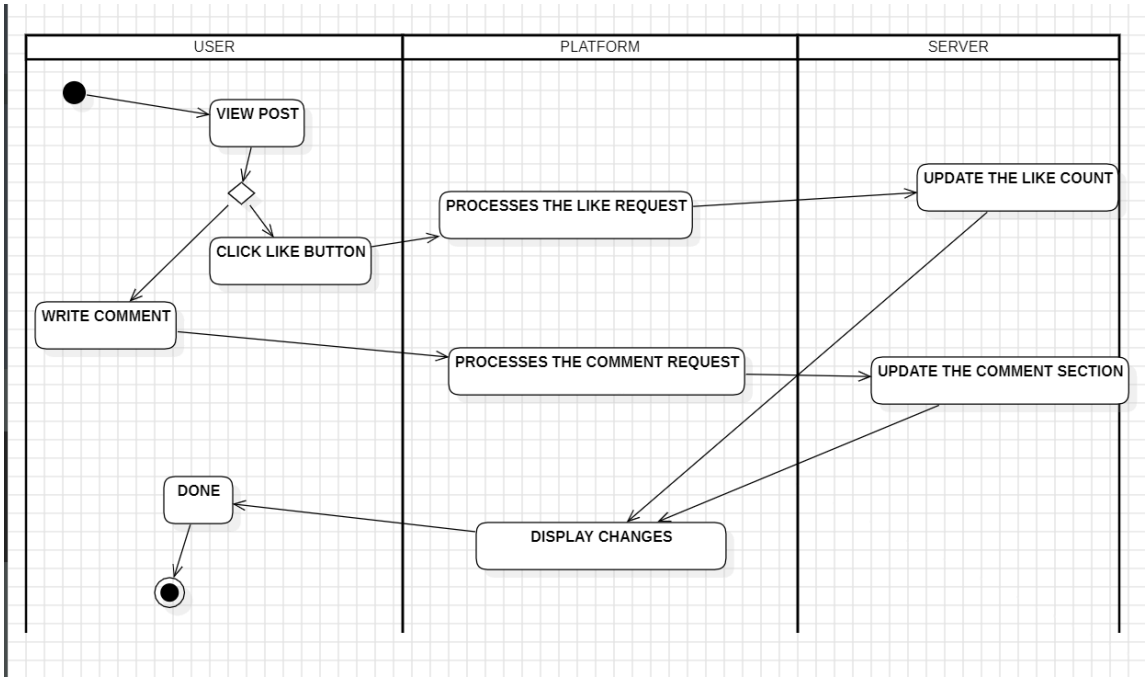
2)Business account



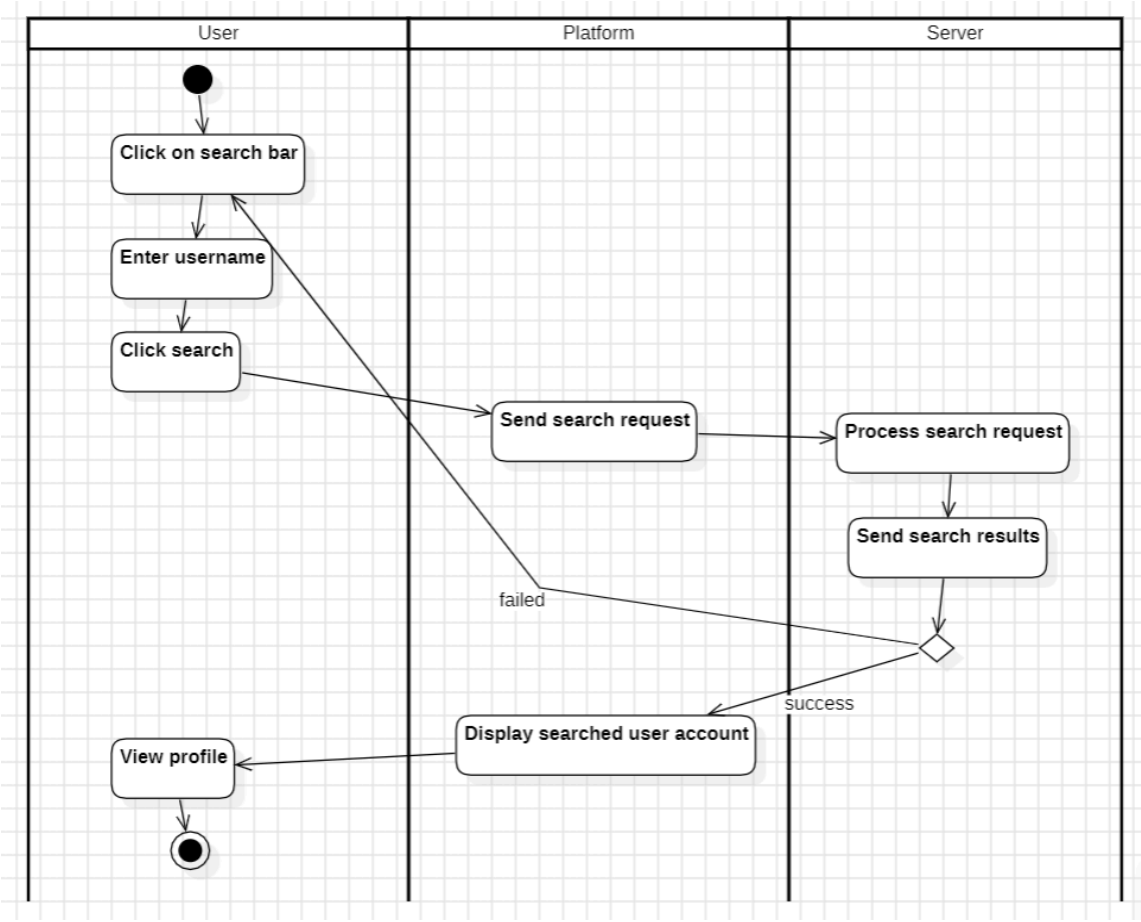
3)SHARE POST


USER
PLATFORM
SERVER
SELECT POST
DISPLAY SHARING OPTIONS
VERIFY USER AUTHORIZATION
CLICK ON SHARE BUTTON
SELECT SHARING DESTINATION
INITIATE SHARING
FAILED
NO ISSUE
SHARED SUCCESSFULLY
END PROCESS

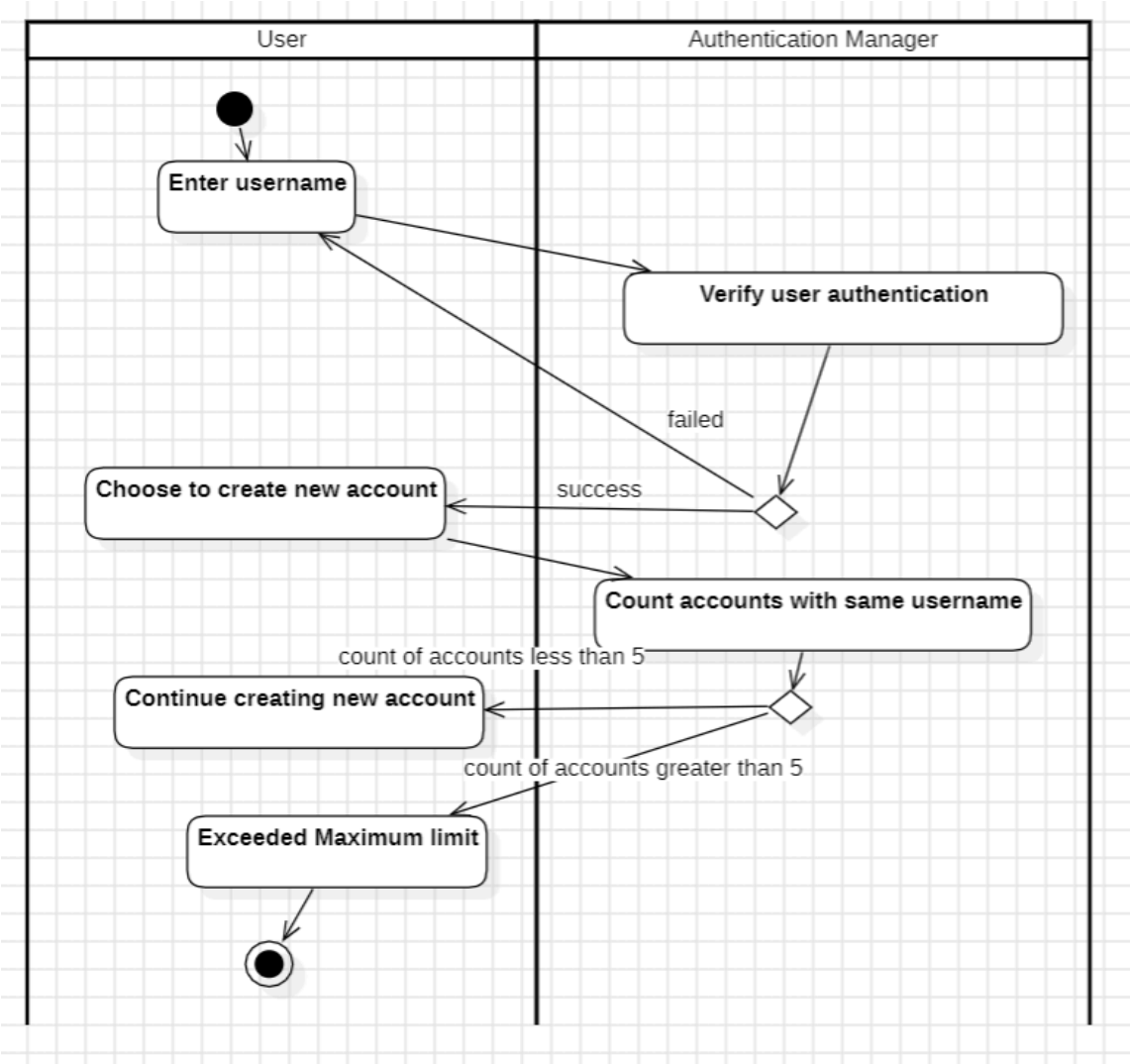
4)LIKE OR COMMENT ON POST



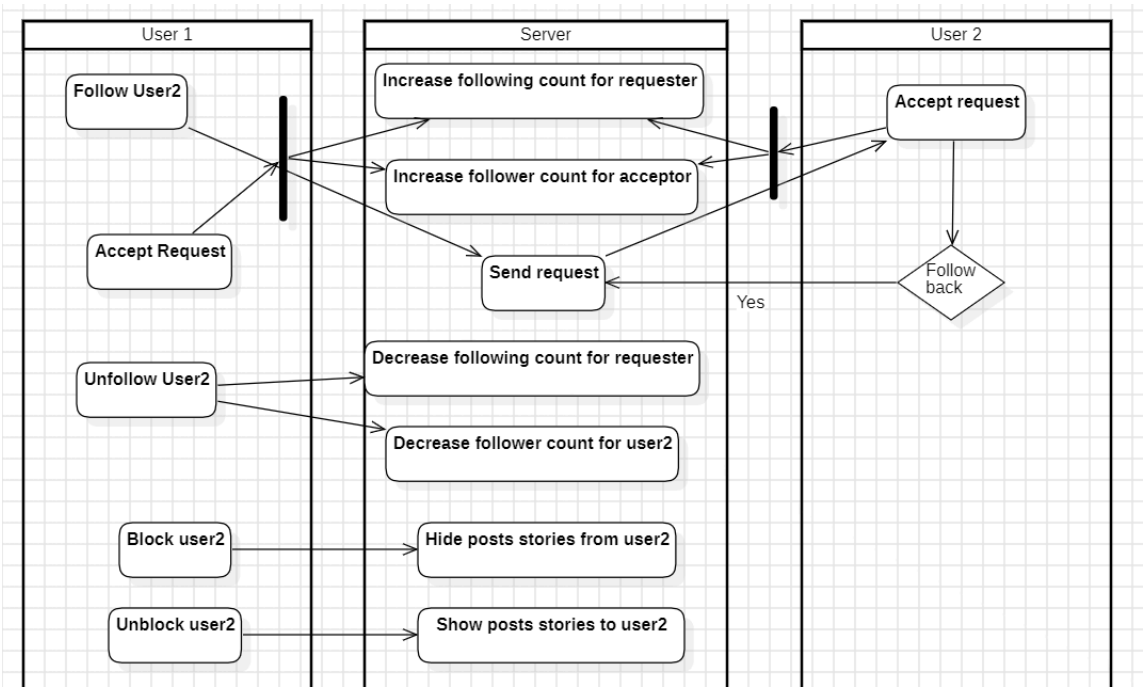
5)Search Post



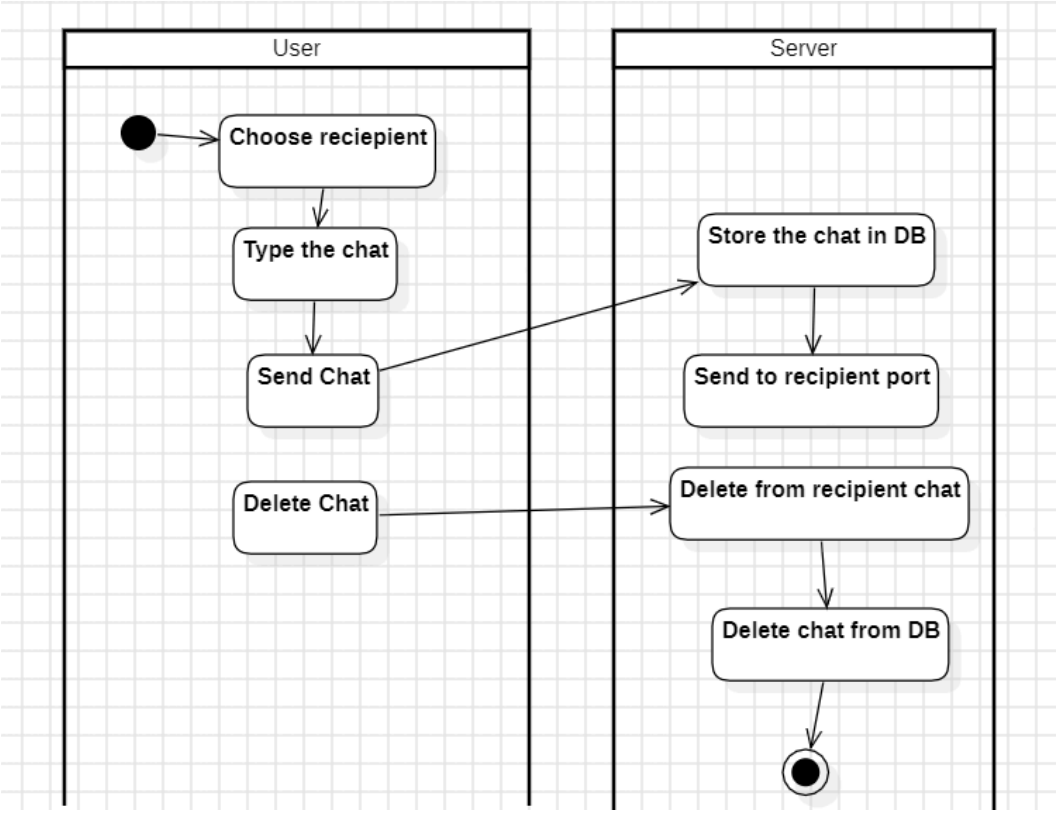
6)Authentication Manager(check number of accounts per username)



7) Expand Network



8) Chat


User
Server
Choose reciepient
Type the chat
Send Chat
Delete Chat
Store the chat in DB
Send to recipient port
Delete from recipient chat
Delete chat from DB

Architecture Patterns:

Factory:(creational design pattern)

(i)Factory design pattern has been used for account creation

(ii) The Factory Design Pattern abstracts away the creation of display objects like likes and comments. It allows you to create these objects dynamically based on a provided string identifier ("like" or "comment"). This promotes flexibility and maintainability by separating the creation logic from the client code and enabling easy addition of new display types in the future.

Singleton:

Singleton has been used to get the userId of the logged in account every time.

Facade:(structural design pattern)

Facade is used for search functionality. For global search of all accounts and follower accounts search ; Facade is used.

Chain of responsibility: (Behavioural Design Pattern):

Used during removal of followers,wherein to handlers are concrete for dealing with follower list and following list updation.
The handle client is called from the controller which triggers the
execution to happen.

Individual contributions of the team members.

Sreeja:
Post upload , Post Delete, Display Post these three happen in profile,
comment on a post , view all the comments on a post , like a post , delete the comment for a post , unlike a post, share a post .

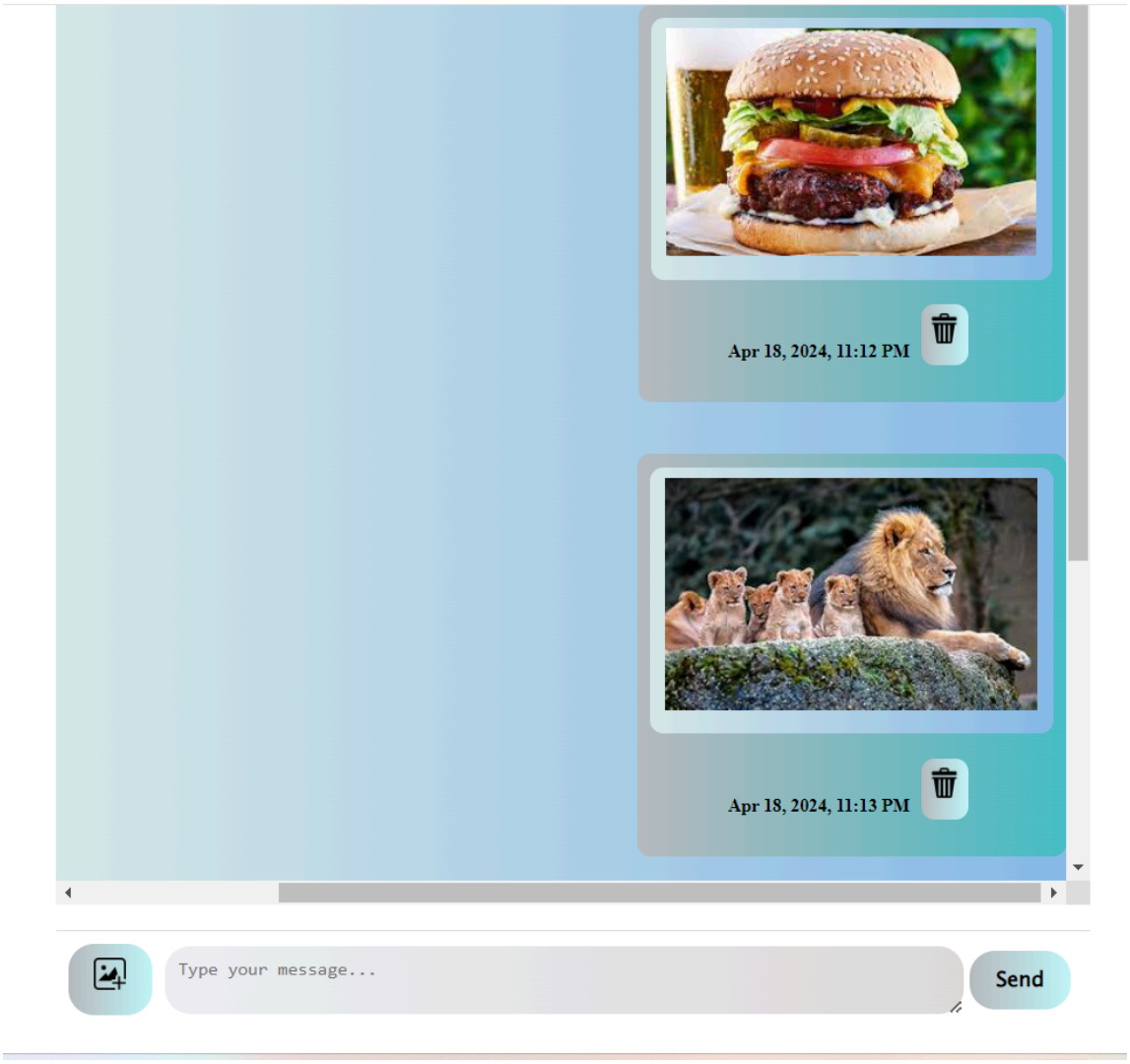
Prarthana:
Account creation for personal account, account creation for business account, add post for personal account, add post for business account, profile for personal account, profile for business account, pay bill for business account, feed for each account.
Usecases: Feed, Business Account

Vaishnavi :
Login and signup , authenticating the credentials and checking if a username has at maximum 5 accounts , report account for user and general manager enabling and disabling user accounts and sending emails.

Prisha Senthilkumar :
The usecases handled is Networks and Chats.
Network comprises of handling the follow,unfollow,block,unblock options.
Chat comprises of adding followers to your chatlist,chatting with followers.Send message,Delete message.
When a post is shared it is shared in the chat history.

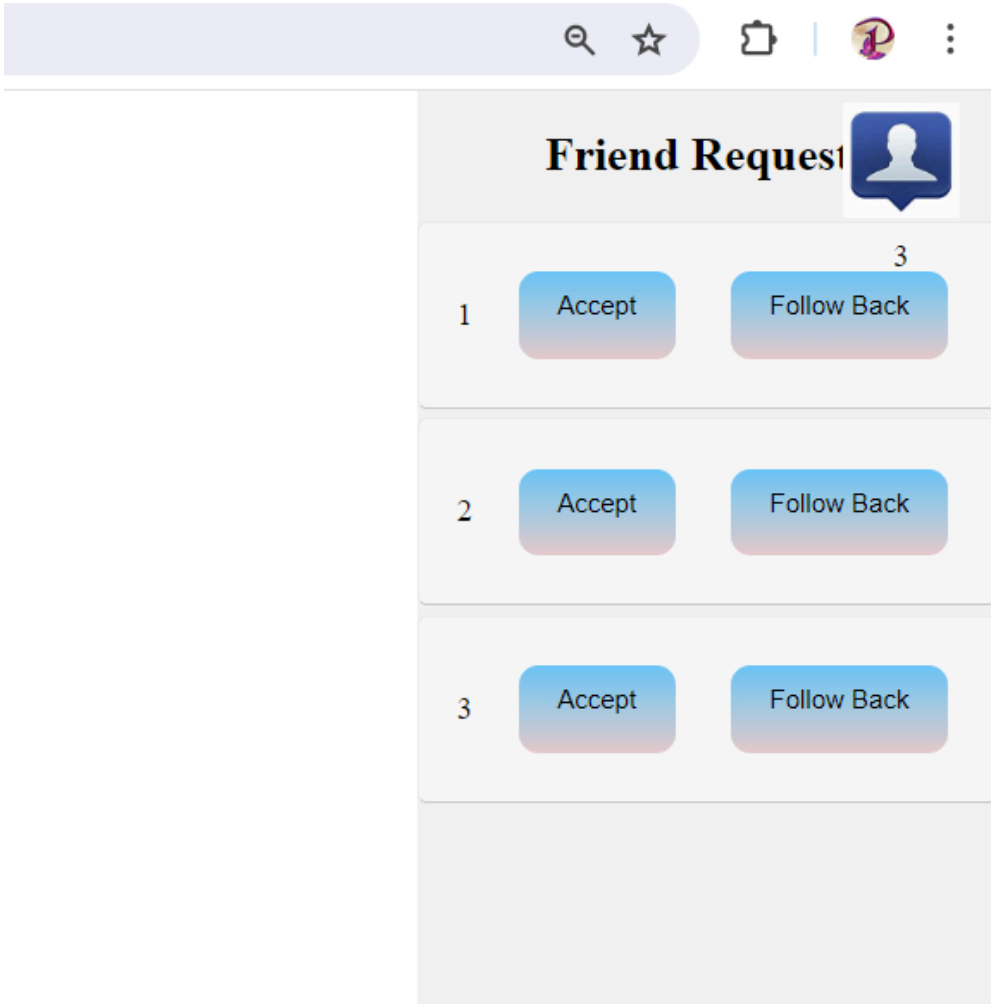
Working and Screenshots:

Chats:



Network:

Can request,follow,followback,block,Accept request,Remove followers.



FEED:

with like post,unlike post ,comment ,delete comment ,share post included

Like: 1

Enter Comment... Send Comment ♥ View All Comments

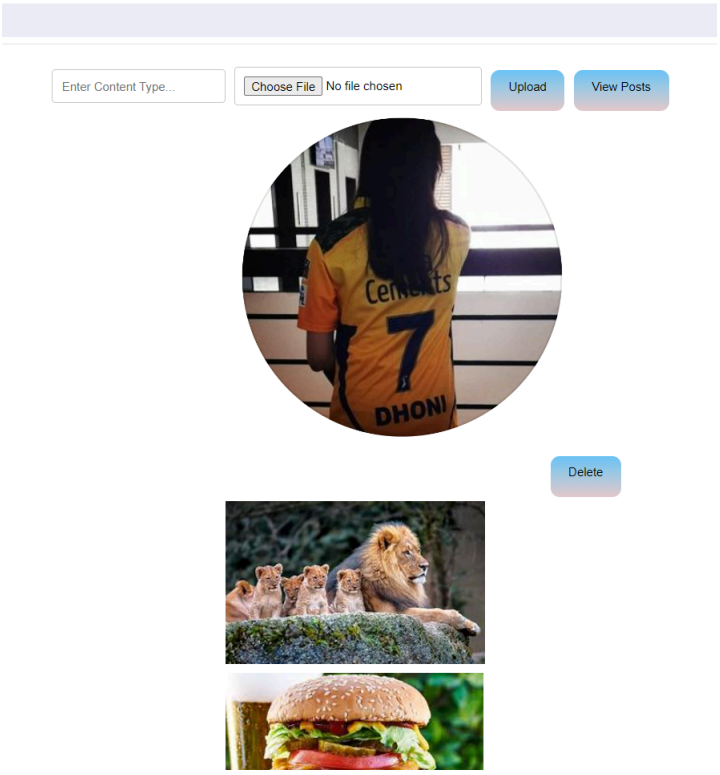
Share

Shared Data

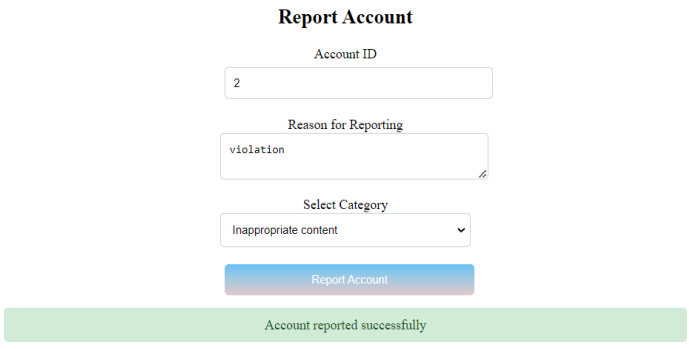
101

PROFILE

with upload post, view post , delete post ability

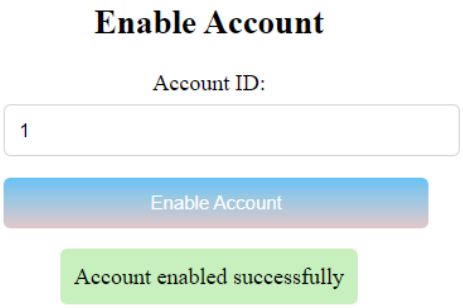


Report Account :



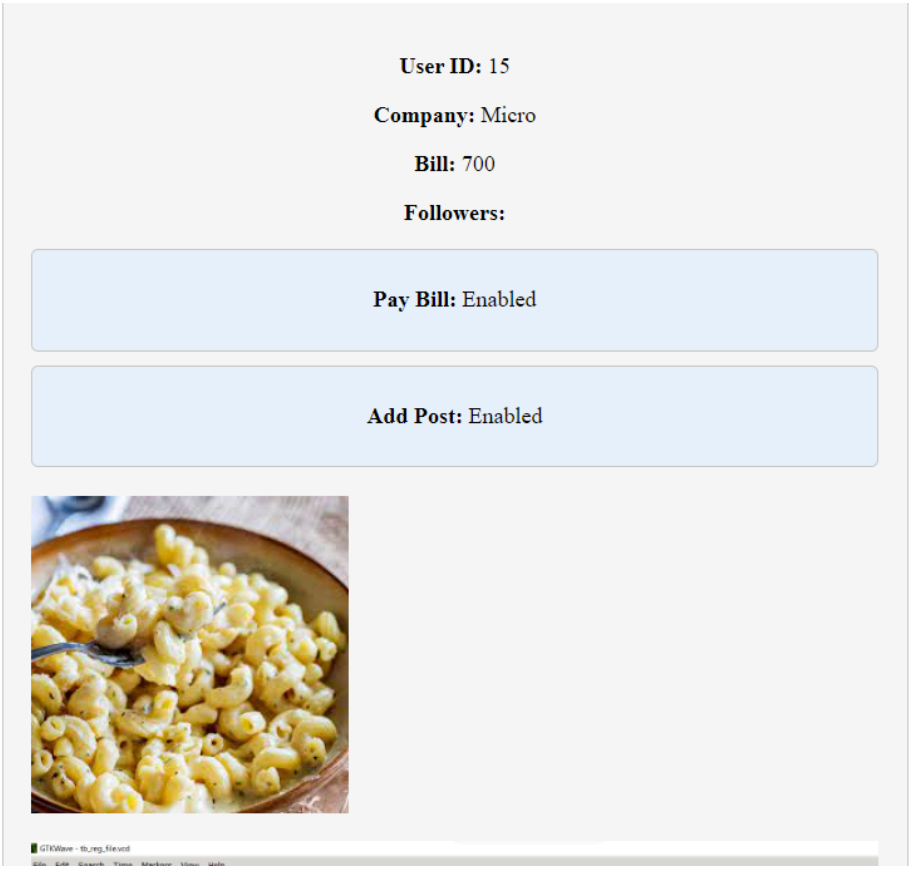
SIGN UP:

ENABLE ACCOUNT:

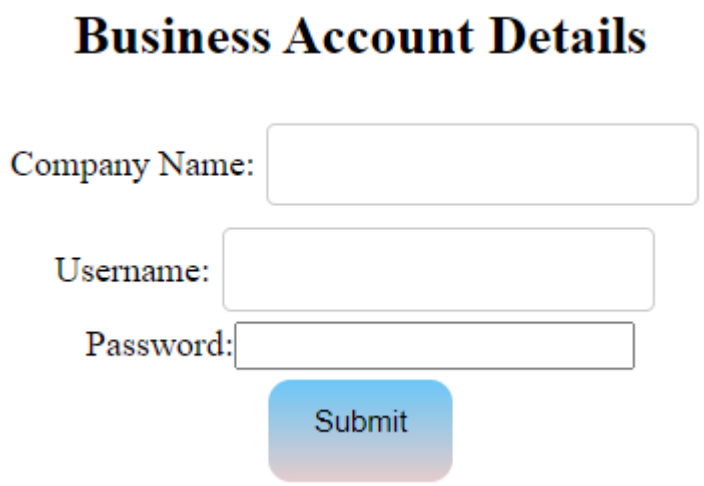
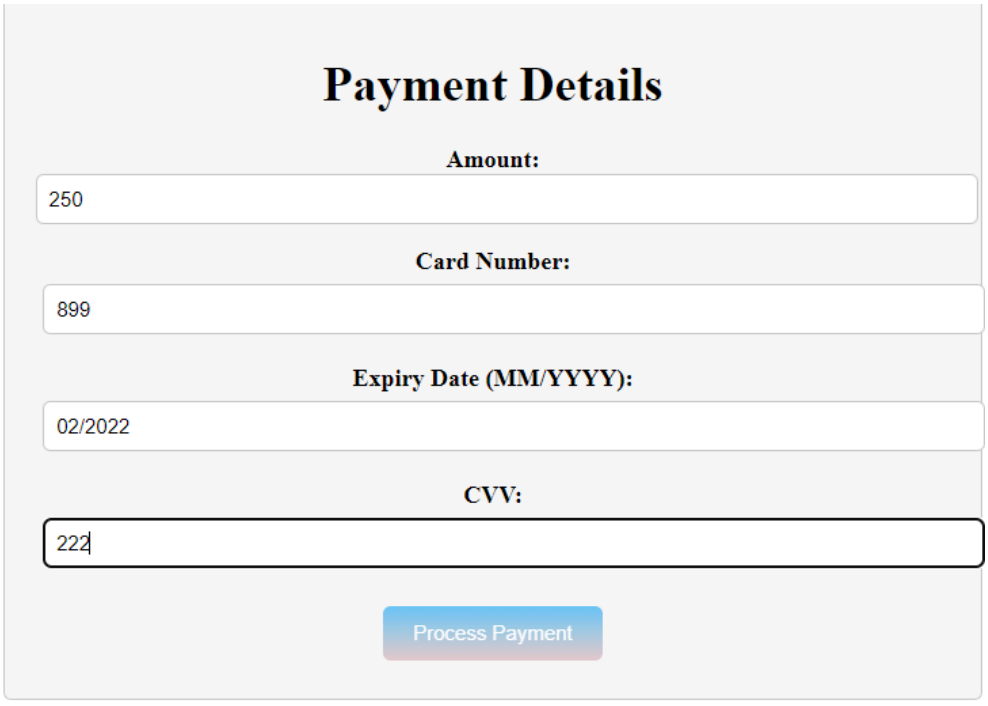


DISABLE ACCOUNT:

Business Account Profile:



Business Account Creation:



Business Account Payment details.