Design Document

for

MindHive

Version 1.0

Prepared by

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Course: CS253

Mentor TA: Sri Madhan

Date: 15/02/2022

CONTENTS

Revisions

Version	Primary Author(s)	Description of Version	Date Completed
v1.0	All group members	First version of the requirement document	14/02/2022
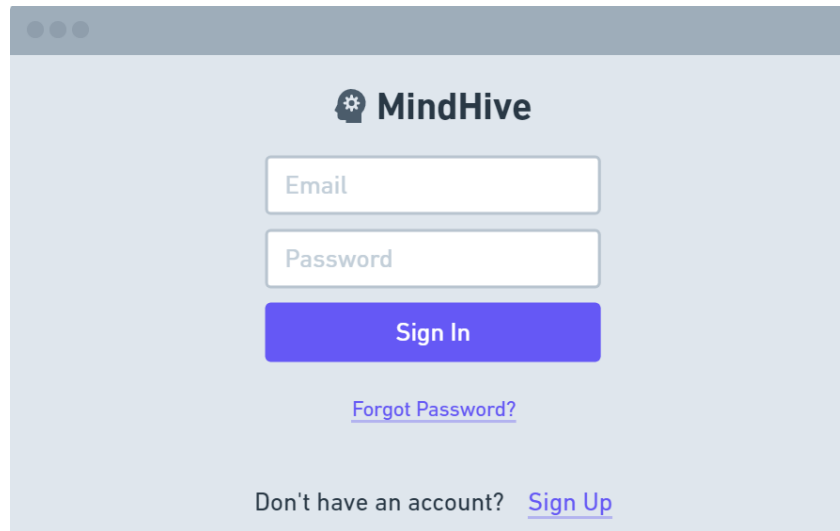
1 Context Design

1.1 Context Model
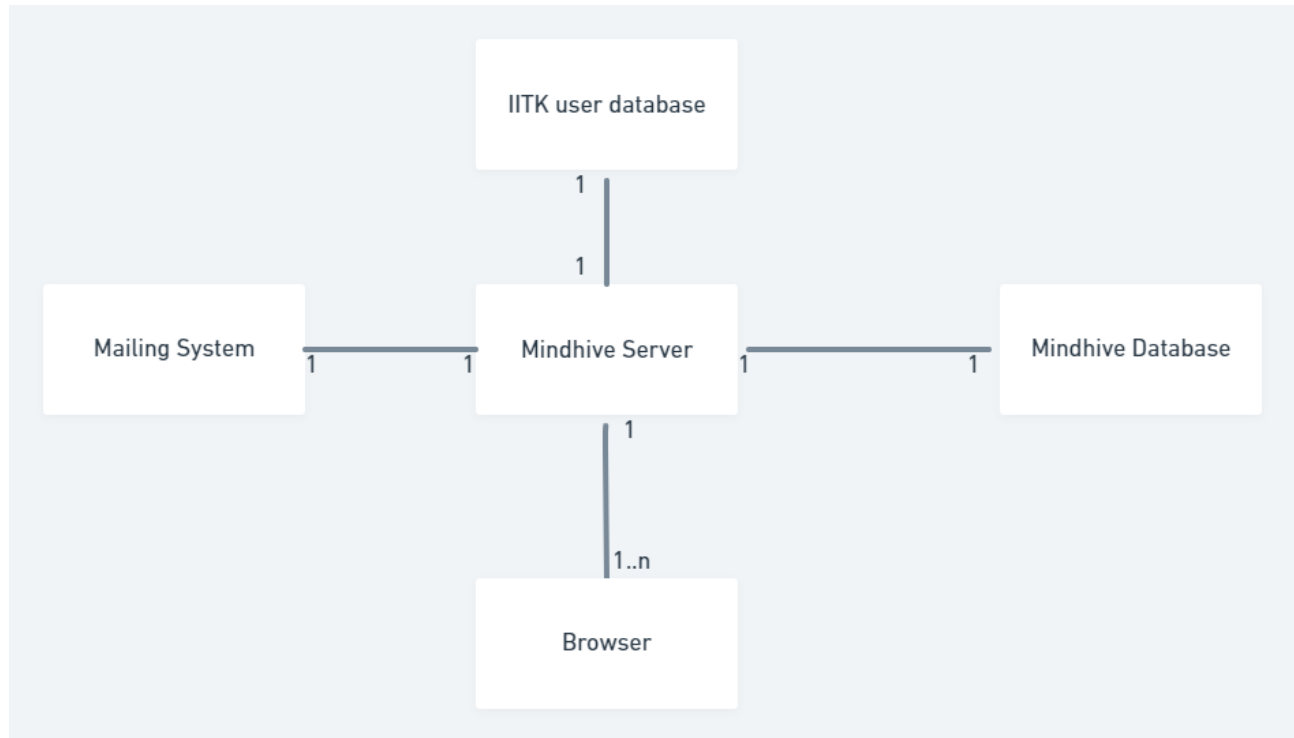
1.2 Human Interface Design

a) Sign In Page

b) HomePage

c) View Question Page

d) Add Question Page

e) Edit Profile Page

f) Following Questions Page (similar to Bookmarks page)
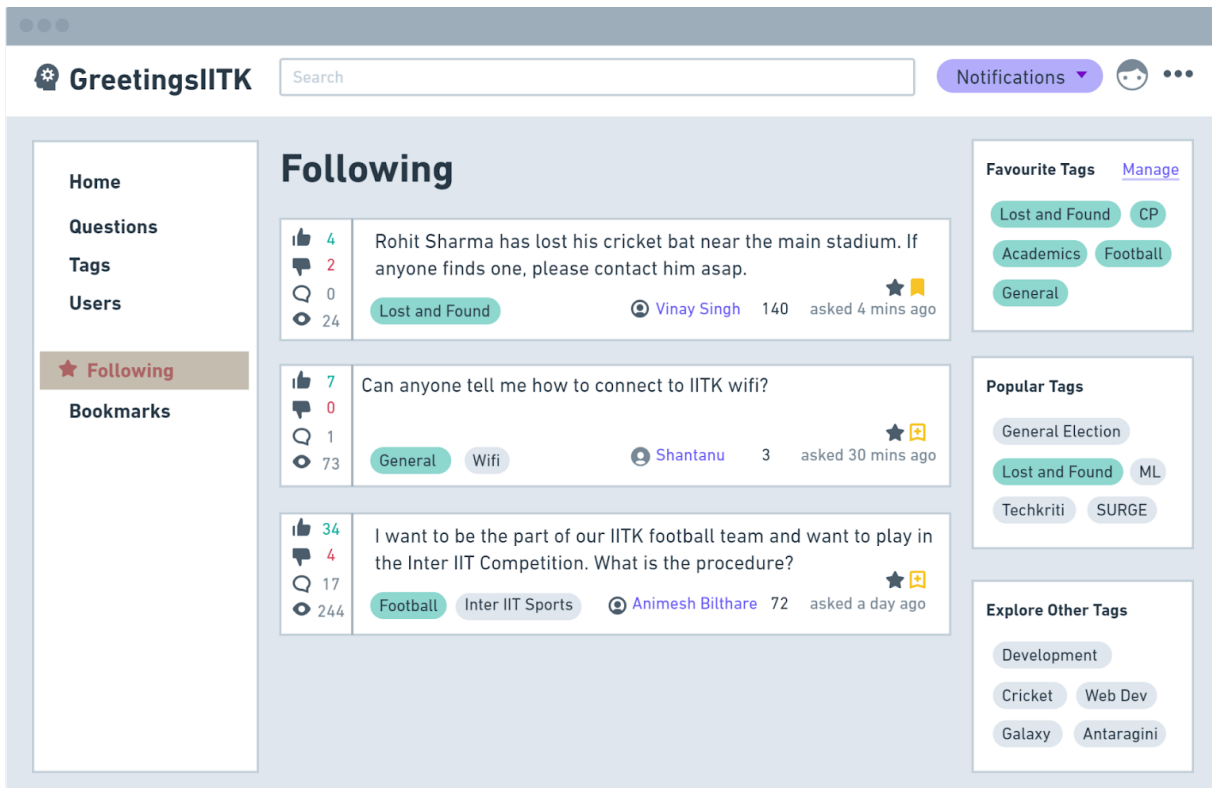
g) Favorite Tags Selection Page after first login

h) Report Page

i) Help/Feedback Page

2 Architecture Design

Our software is a social platform hence security becomes one of the most crucial parts. We have to assure that there is restricted access to the application at each level. Hence we intend to opt a layered architecture pattern for the overall design.

There are four major levels in our layered architecture. Each level will interact only with its neighbouring level and can't directly interact with other levels.

The layers are as follows:
   i) Interface layer
   ii) Authentication layer
   iii) Data Management level
   iii) Database

End User Interface

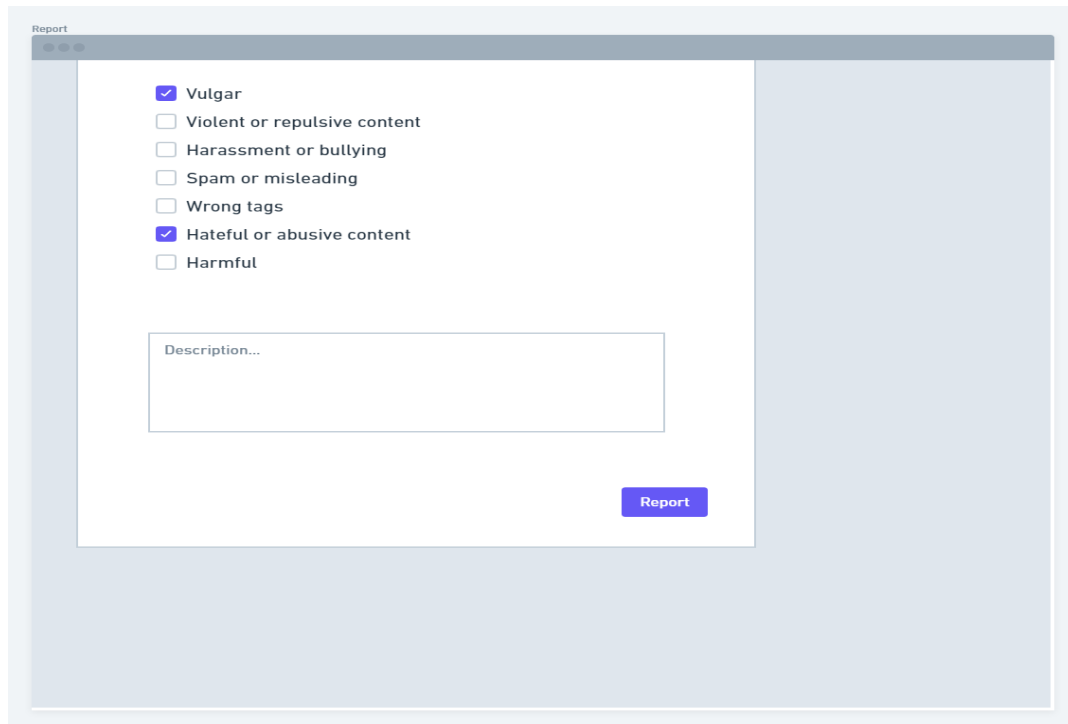| Login	Sign Up	Password Reset	Rights Management

Data Indexing	Data Retrieval	Data editing

Data Base
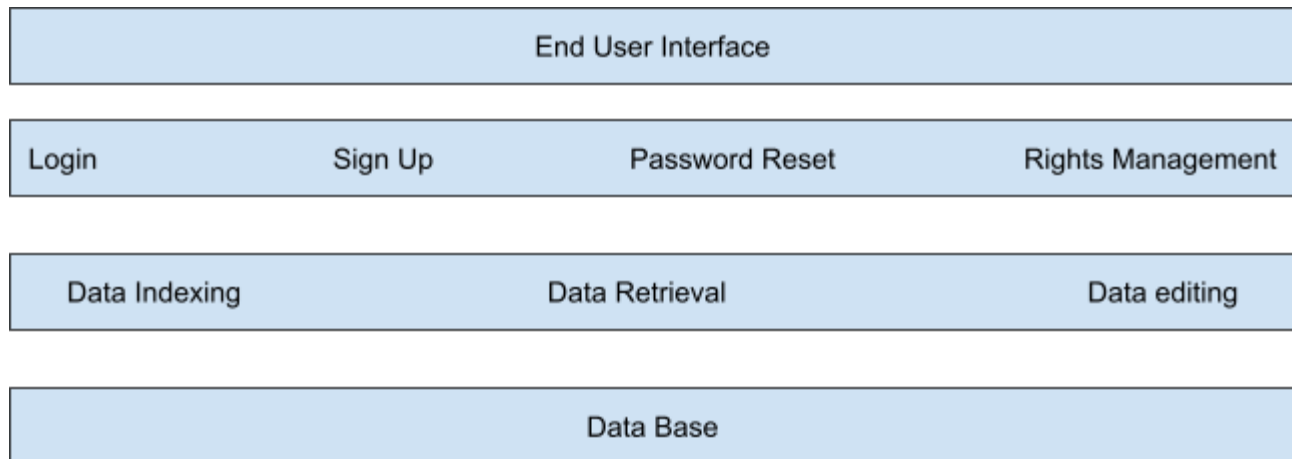
Layered Architecture for the software

Each of the layers mentioned above is fairly complicated within itself. Therefore, at each level of layered architecture, we will use a pipe and filter architecture for the processing and management of system data.

2.1 Authentication layer

i) Pipe filter architecture for Login and Password Reset
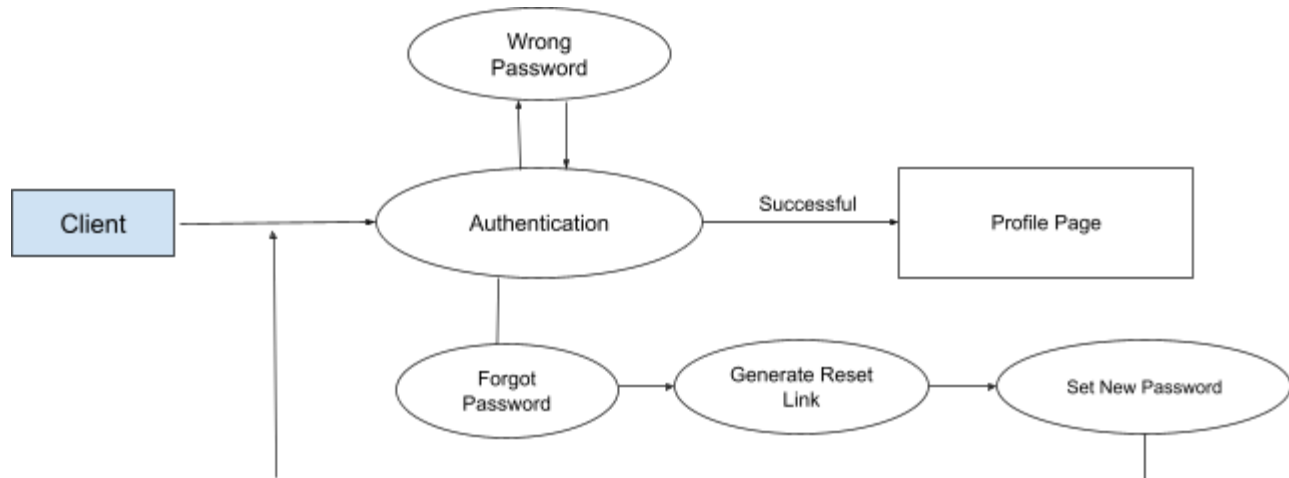
ii) Pipe filter architecture for Sign Up
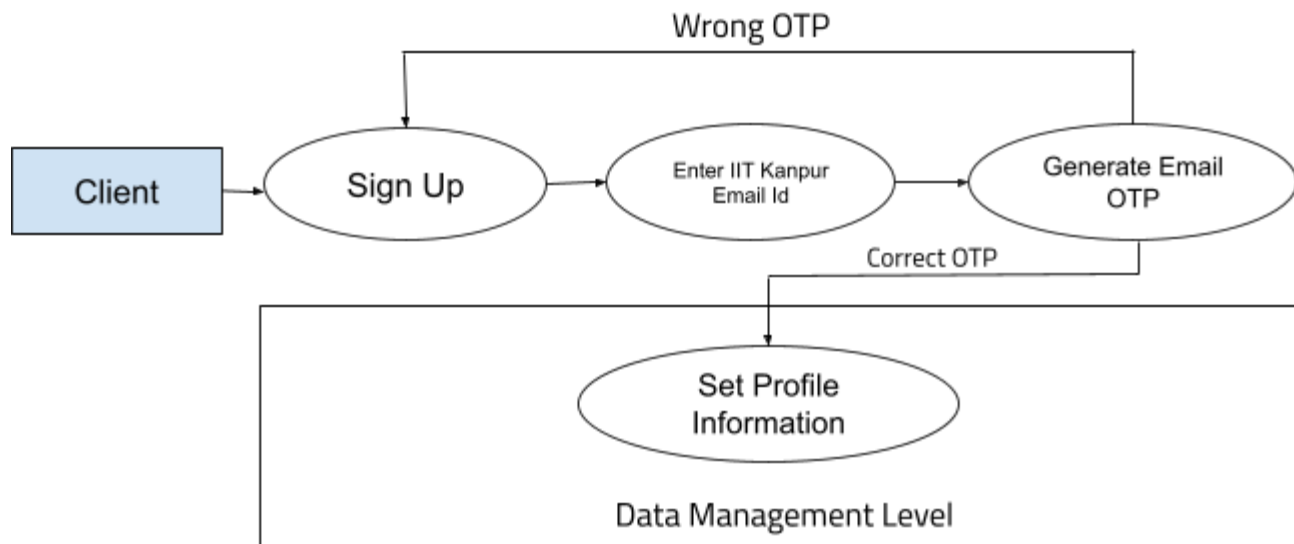
2.2 Data Management Level

i) Pipe and filter architecture for Flow of System Data
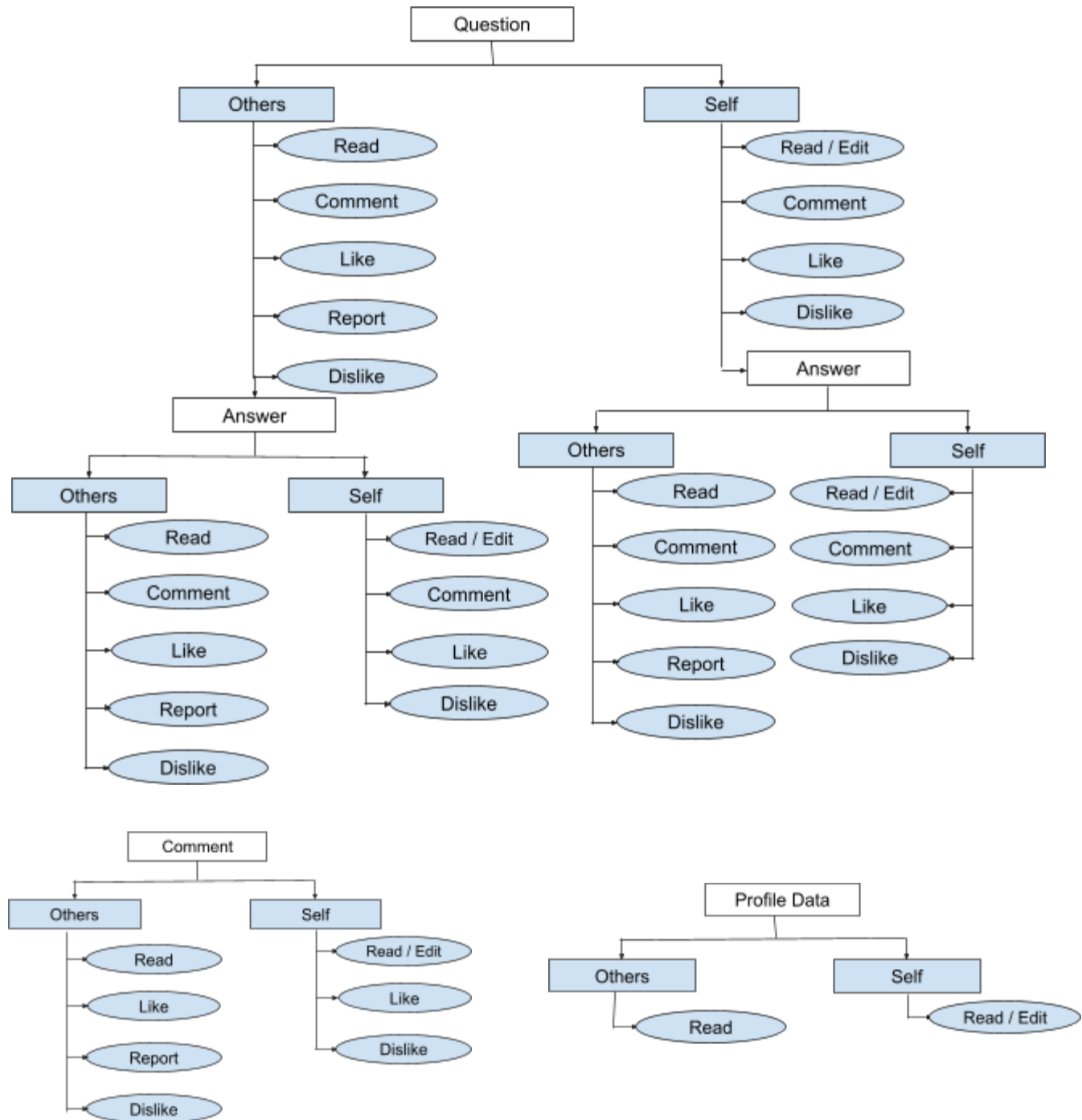
Note - *Self is the user (so it refers to Questions/answers asked/answered by the user)and others are other people's account.*

3 Object Oriented Design

3.1 Use Case Diagrams

3.1.1 Use Case #1 (UC-1 Authentication)
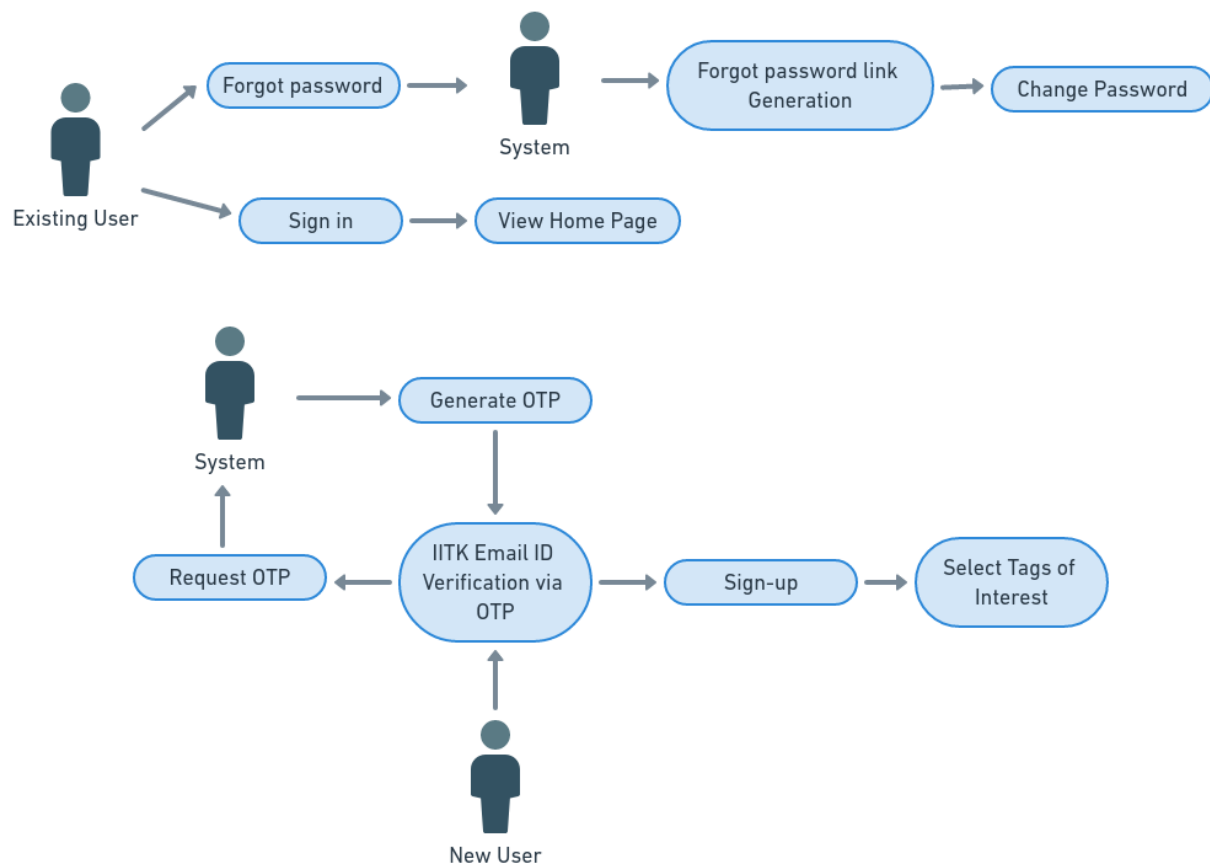
3.1.2 Use Case #2 (UC-2 Search)
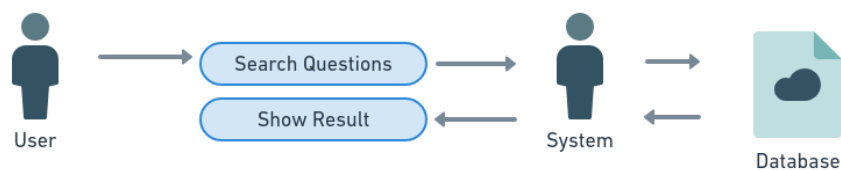
3.2.3 Use Case #3 (UC-3 Forum)
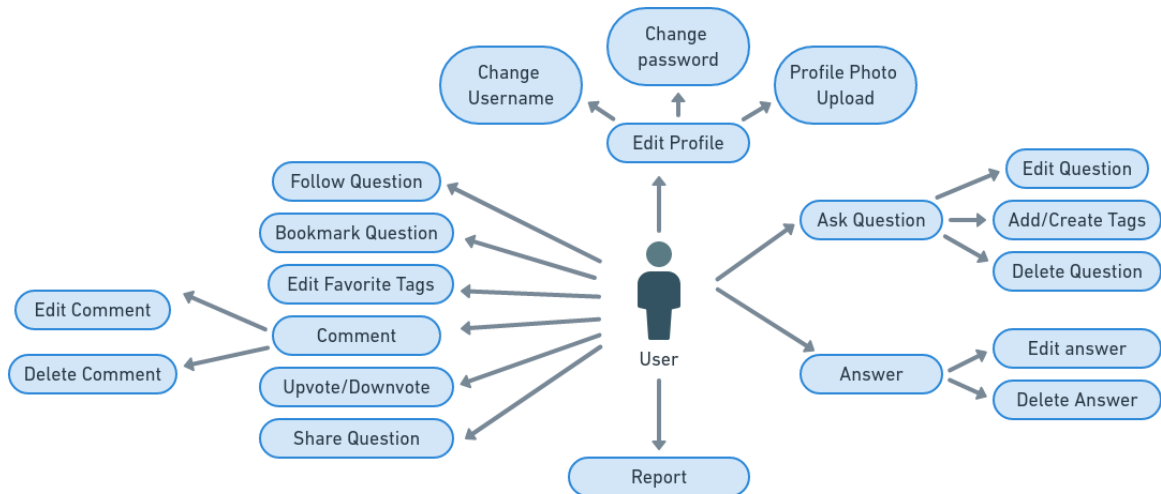
3.3.4 Use Case #4 (UC-4 Administrator)

3.2 Class Diagrams
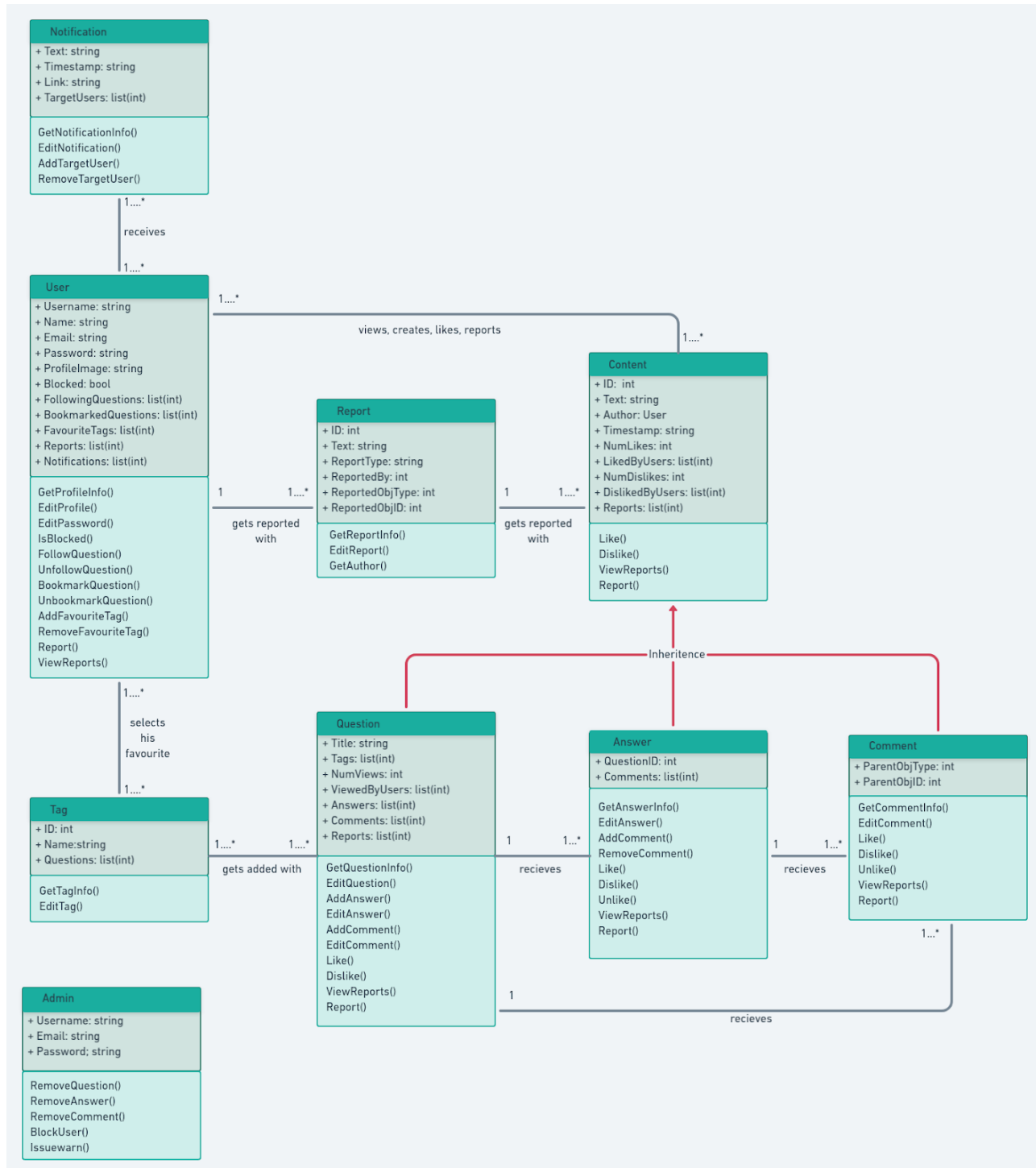
3.3 Sequence Diagrams

3.3.1 Authentication
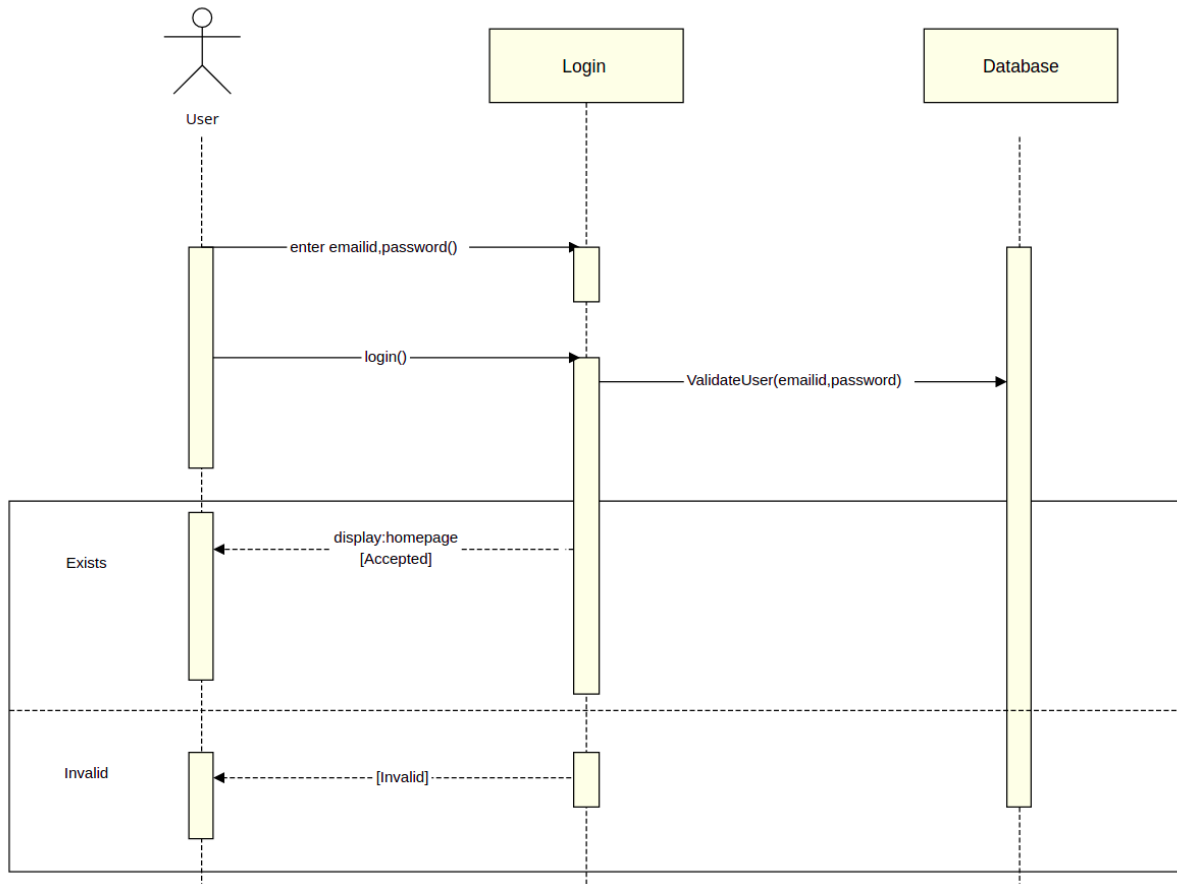
3.3.2 Edit Profile
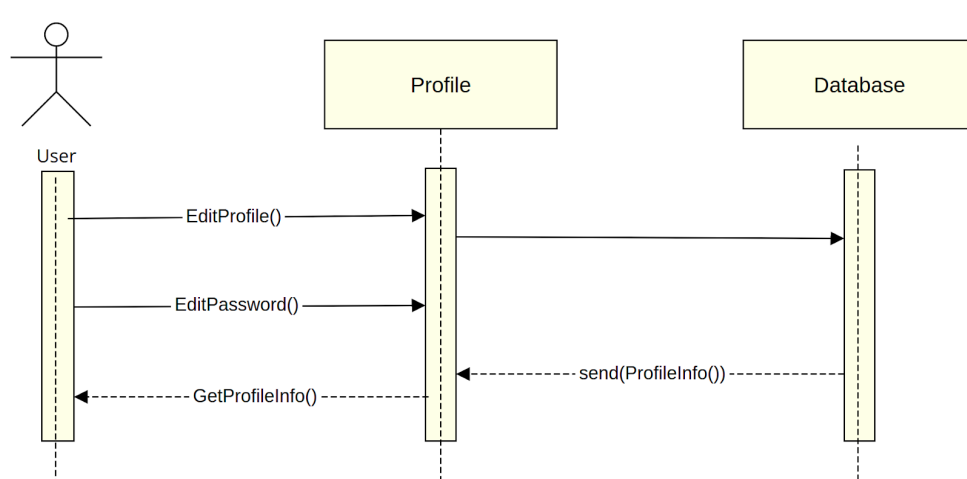
3.3.3 System-Admin Interaction
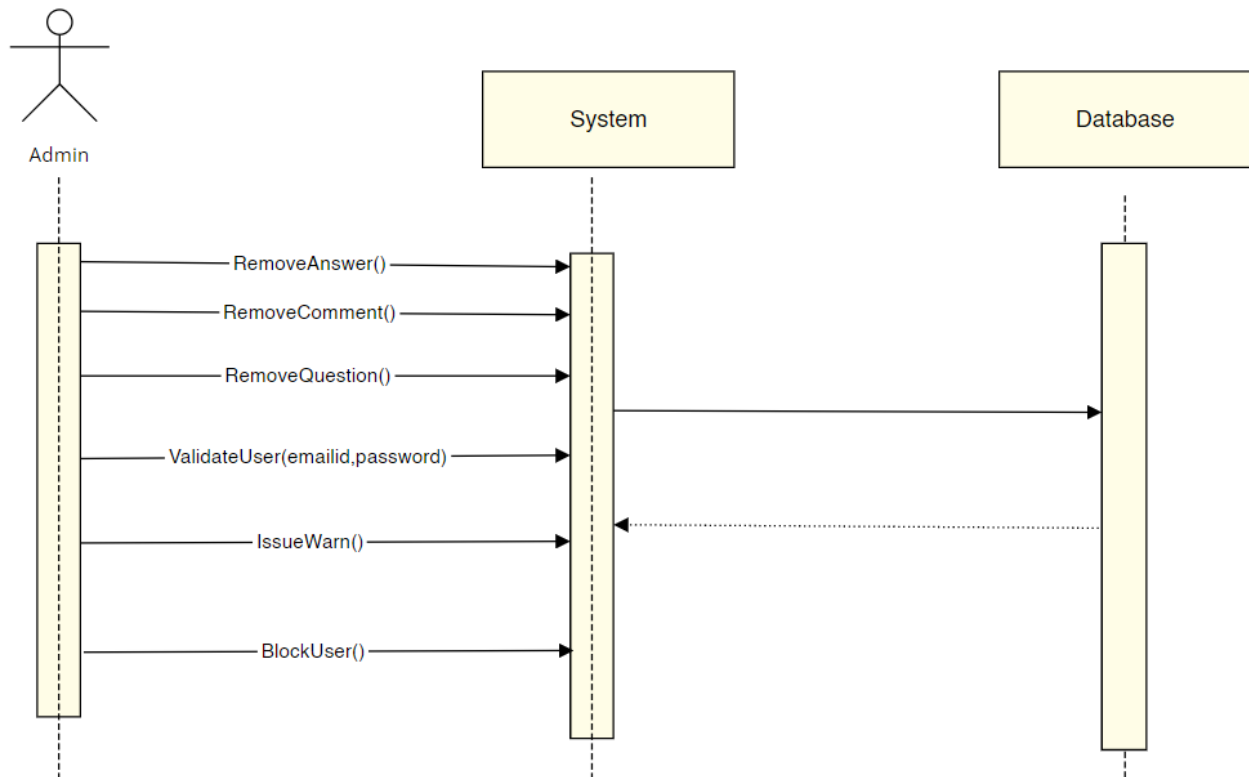
3.3.4 User Registration
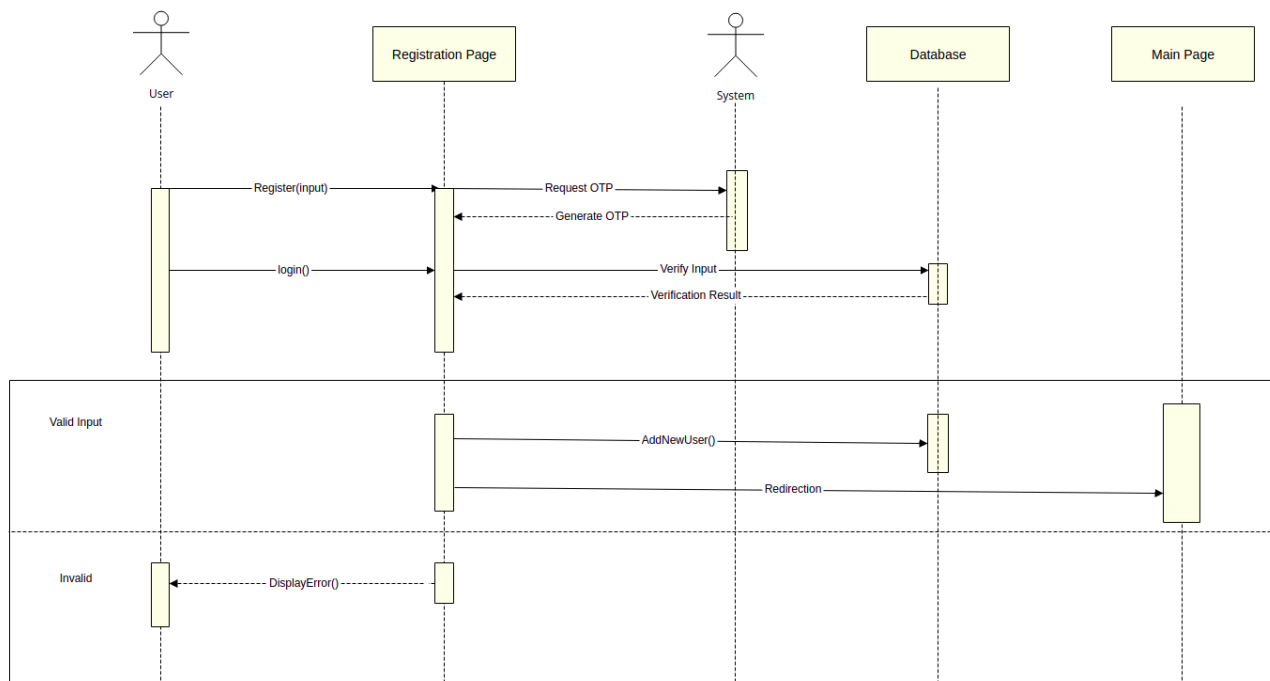
3.3.5 User-System Interaction
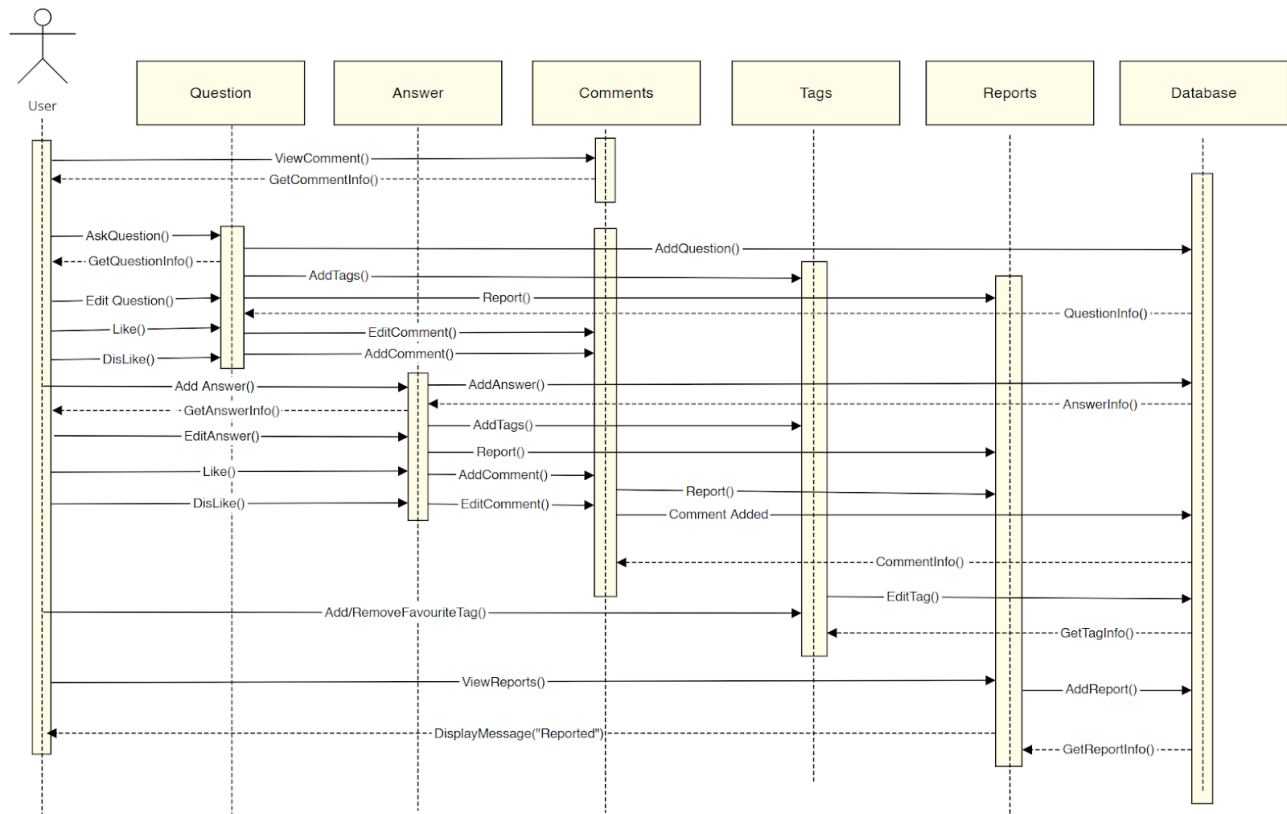
3.4 State Diagrams

Overall State Diagram
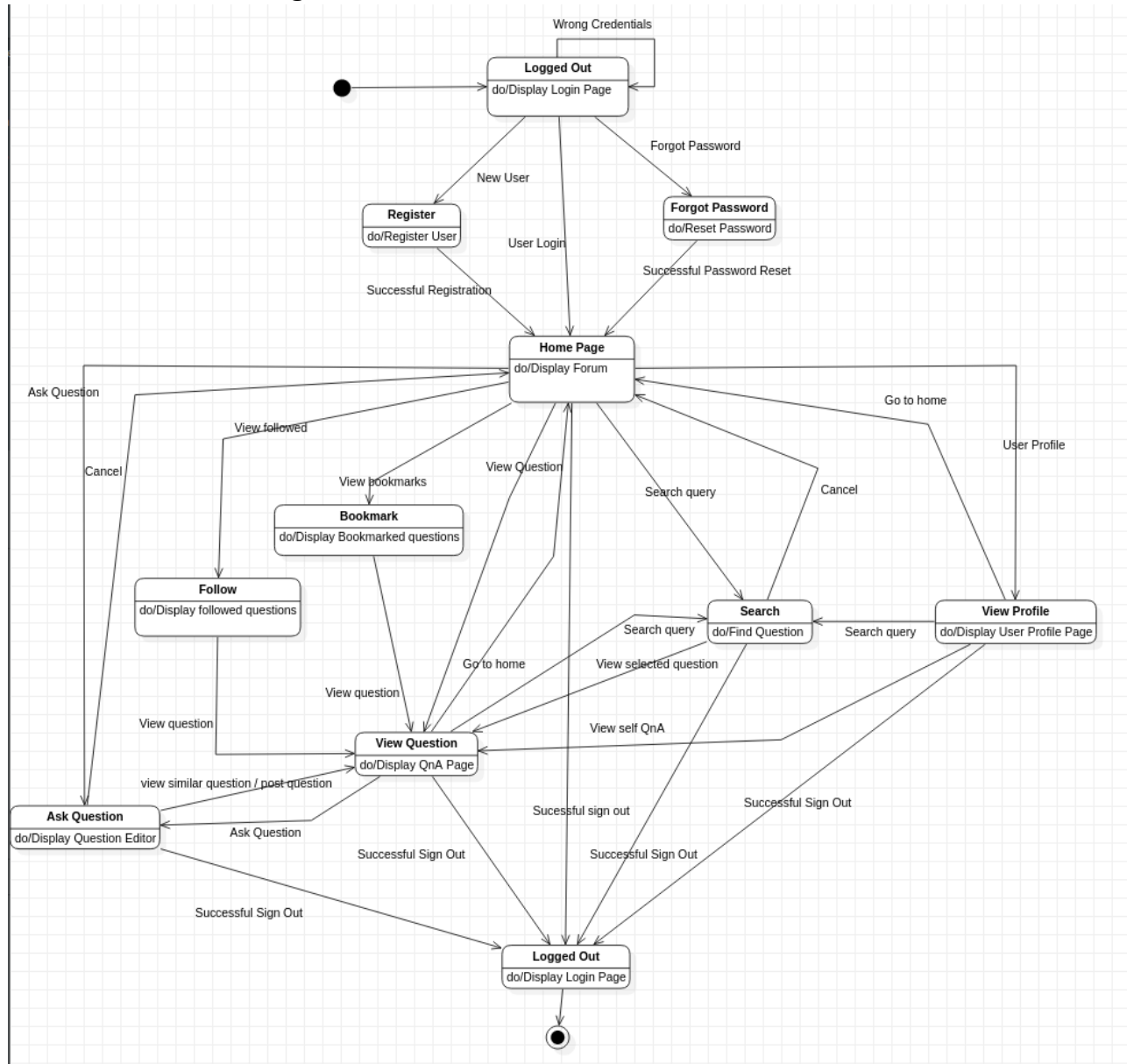
Note:- Here we have stated two Logged out states to simplify the state diagram.

Registration
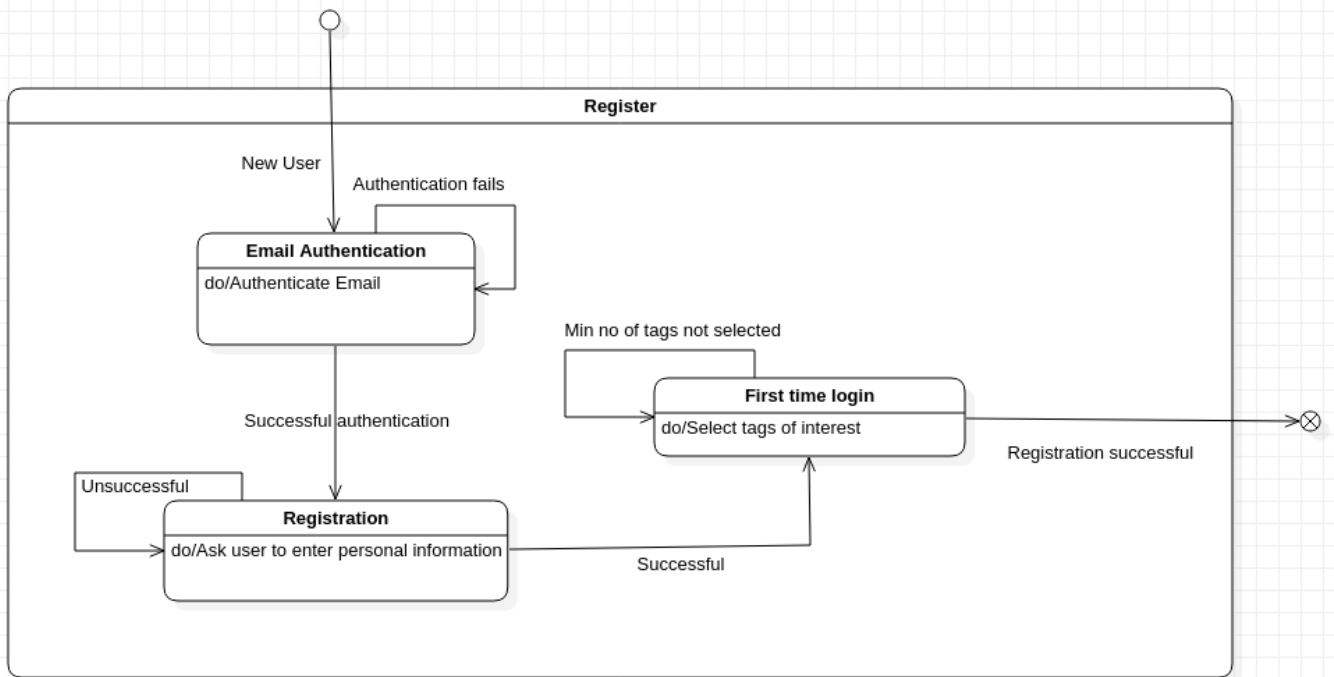
Forgot Password
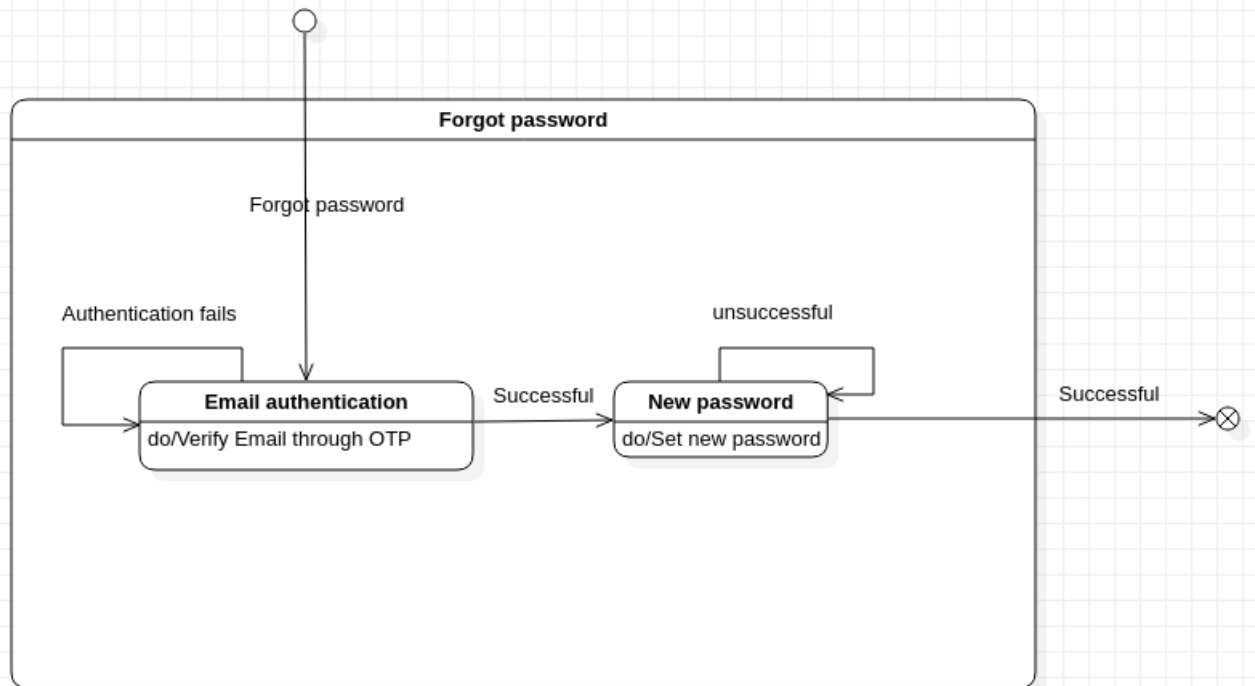
View Question
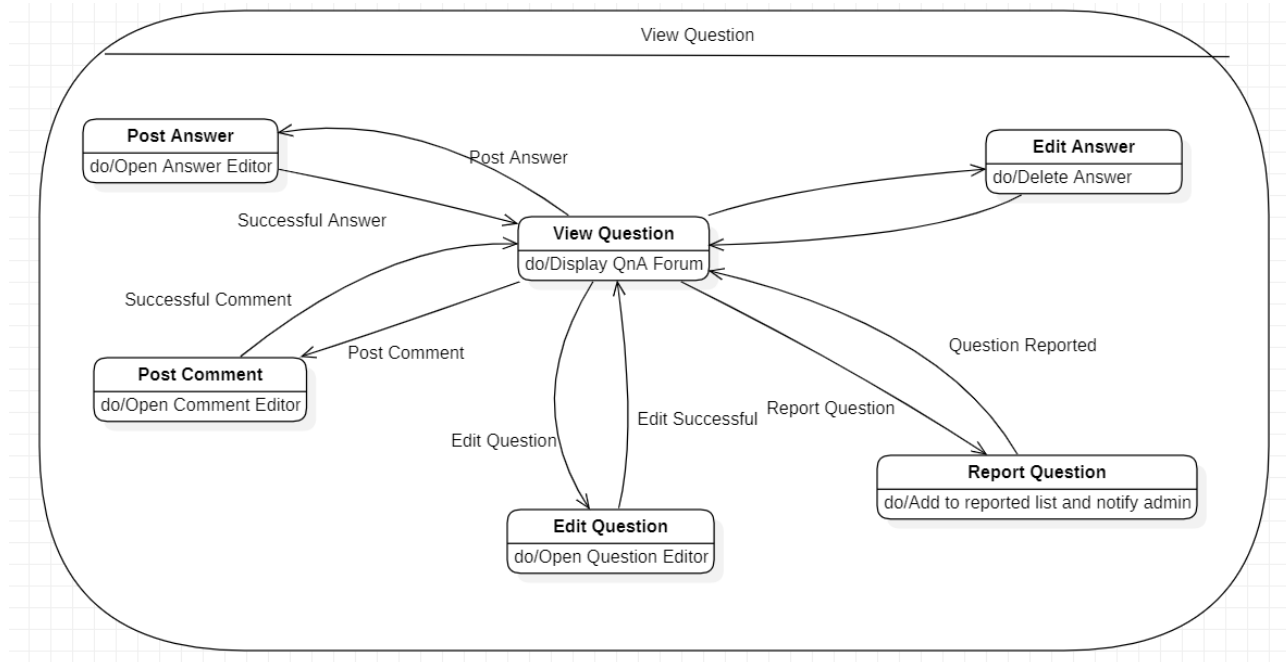
Search
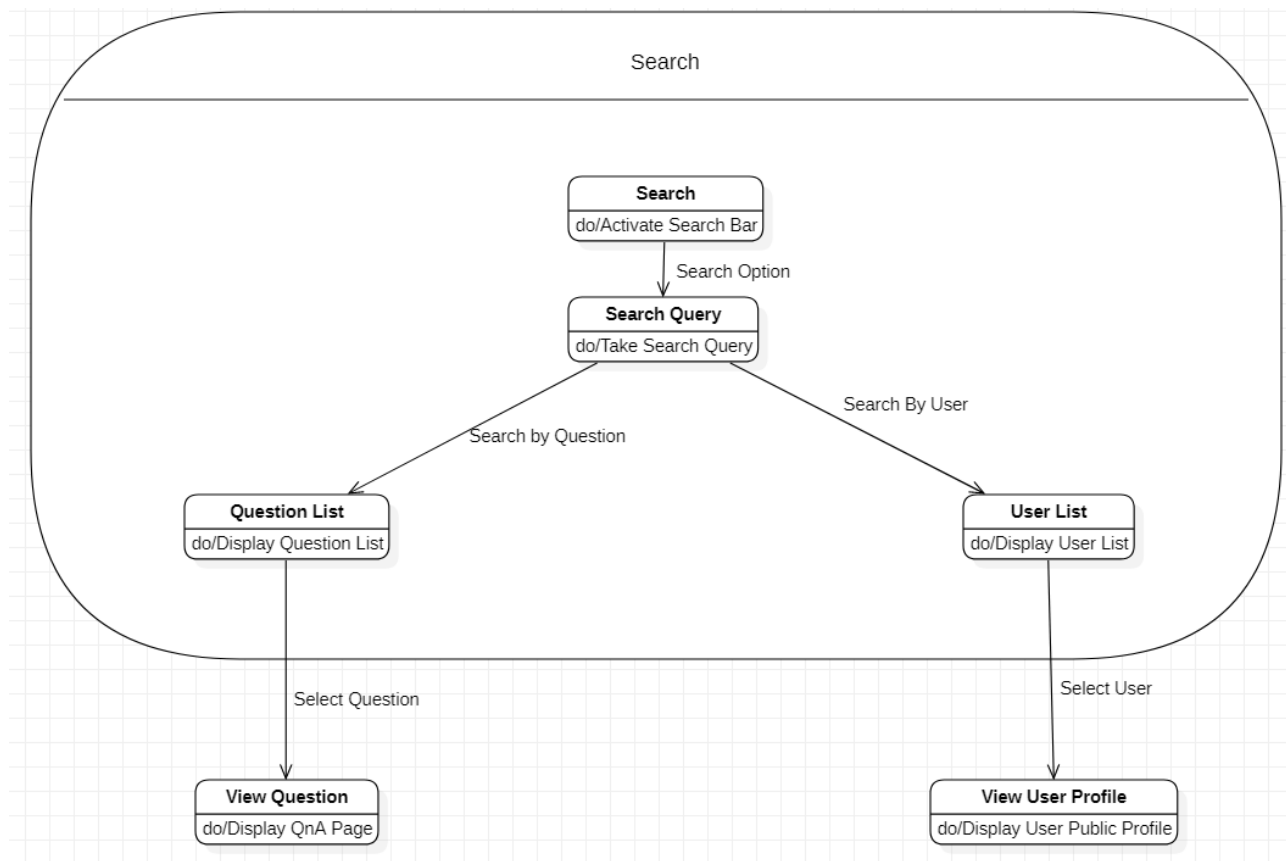
User Profile
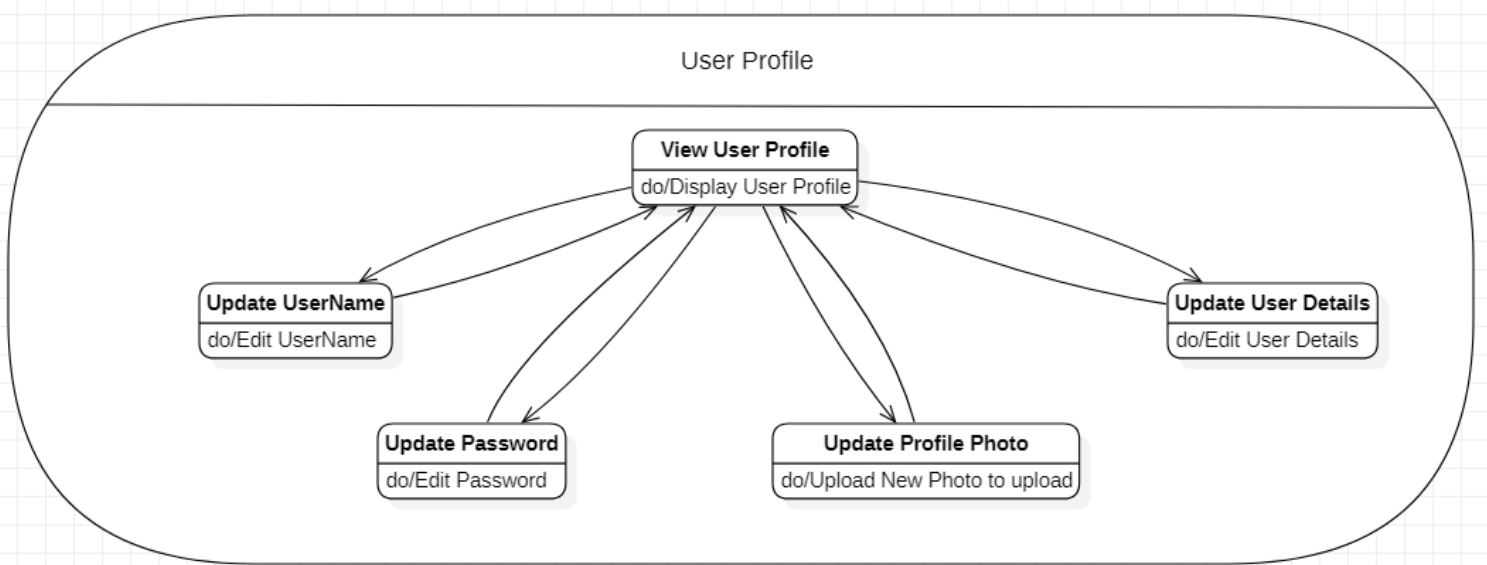
4 Project Plan

Gantt Chart
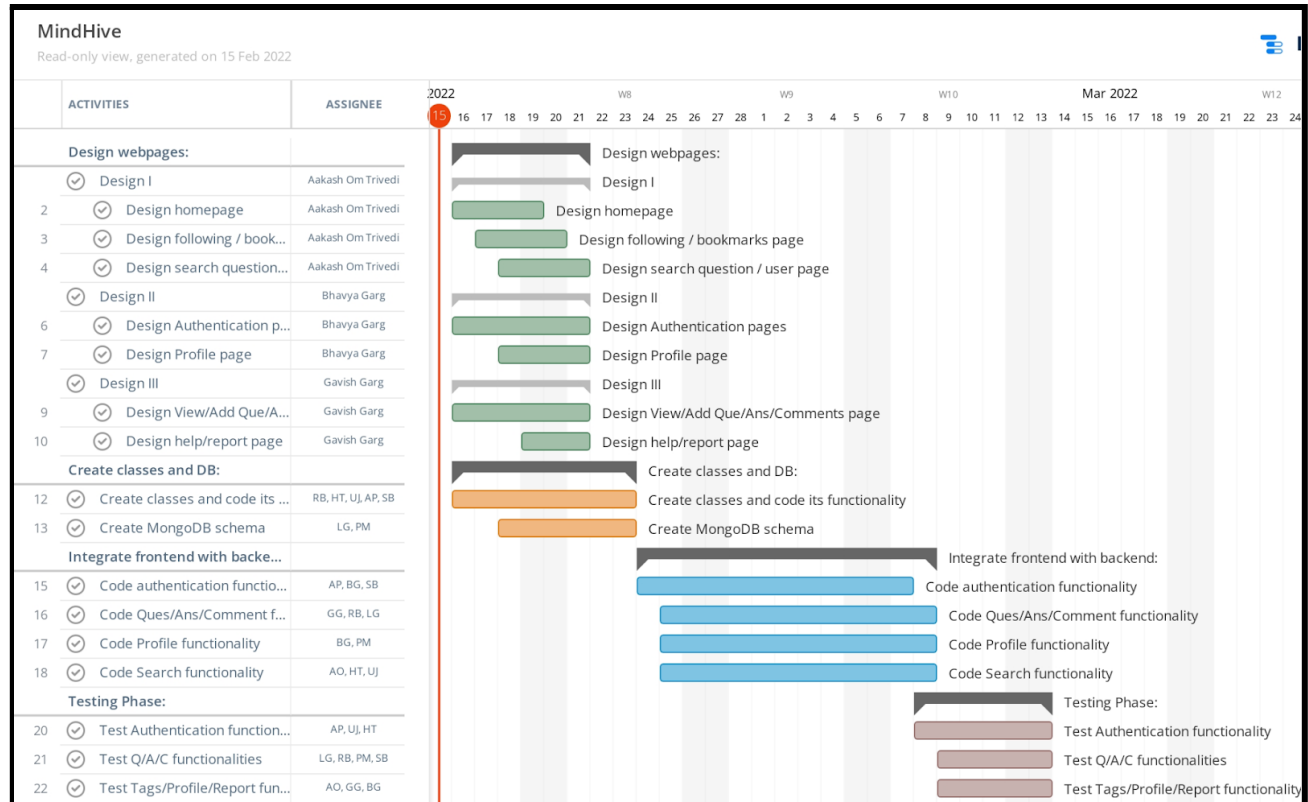
Initials:
>   *RB - Rishav Bikarwar*
>   *AP - Adi Pratap Singh*
>   *BG - Bhavya Garg*
>   *GG - Gavish Garg*
>   *LG - L Gokulnath*
>   *UJ - Ujwal Jyot Panda*
>   *HT - Harsh Trivedi*
>   *AO - Aakash Om Trivedi*
>   *SB - Sahil Bansal*
>   *PM - Parth Maniar*

Appendix A - Group Log

MEET DATE	TOPIC DISCUSSED	DURATION
5 January 2022	We discussed the topic that we can choose and about the things that we have to learn in the process.	90 minutes
11 January 2022	We finalized 2 topics and then discussed pros and cons of both, and made our final project choices.	120 minutes
14 January 2022	We started working on the features of the project and everyone gave their ideas.	120 minutes
14 January 2022	We had a meeting with the professor to ask some doubts.	60 minutes
21 January 2022	We made the UI of our product roughly so that it is easy to see what we have to make and what are the features.	120 minutes
23 January 2022	It was our first meeting with our TA so we asked some doubts in SRS and also he gave some valuable tips.	90 minutes
25 January 2022	We divided the team for different parts of the SRS and have several meetings within groups	90 minutes
26 January 2022	Meet to combine the work of different persons and cleared each other doubts	180 minutes
27 January 2022	Meet with TA to clear the doubts in SRS.	30 minutes

30 January 2022	Final meet before SRS submission	60 minutes
3 February 2022	Go through the template to get a basic understanding	60 minutes
8 February 2022	Made the work distribution plan for the all diagram	90 minutes
13 February 2022	Meet with TA to clear our doubts	60 minutes
14 February 2022	Meet to make the plan for the implementation	90 minutes
15 February 2022	Final meet before design submission	60 minutes