Project Final Deliverables

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Course: SWE573

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Project Name: Colearning App

Git Repository: Freemind Colearning App

Git Tag Version: v0.9

Deployment URI: Freemind Colearning App

Test Credentials:

Username: realcakelover

Password: 31052022swe

HONOR CODE
Related to the submission of all the project deliverables for the SWE573 2022 Spring semester project reported in this report, I **<A. Berat Sert>** declare that:

- I am a student in the Software Engineering MS program at Bogazici University and am registered for SWE573 course during the 2022 Spring semester.

- All the material that I am submitting related to my project (including but not limited to the project repository, the final project report, and supplementary documents) have been exclusively prepared by myself.

- I have prepared this material individually without the assistance of anyone else with the exception of permitted peer assistance which I have explicitly disclosed in this report.

A.BERAT SERT

1. Project Details

A. Overview

Colearning space platform provides a free learning environment for the users. In other words, this platform encourages users to attend learning spaces which do not have pre-defined rules and specific learning method. It is aimed that each learning space would form a route to best user experience for learning. Learning spaces include question & answer sessions, sharing resources, multiple choice quizzes and meetings. People will be able to search and follow the spaces. Also, the user is planned to be able to follow each other and view the learning spaces of the followed person. The user will be able to earn badges which gives incentive to the users to contribute more due to their activity in the spaces.

B. Functional Requirements

B.1 Registration

B.1.1 Users shall be able to register using e-mail address.

B.1.2 Users shall provide a secure password which is longer than 8 characters and includes one uppercase or one special character.

B.1.3 Users should confirm their e-mail addresses.

B.1.4 Users shall have unique username.

B.2 User

B.2.1 Users shall be able to login in with their e-mails and passwords.

B.2.2 Users shall be able to reset their passwords if they forget password or enter wrong passwords for three times.

B.2.3 Users shall be able to have and edit their own profile pages.

B.2.3 Users shall be able to write brief introduction about themselves.

B.2.4 Users shall earn badges due to their activity.

B.2.5 Users shall be able to search learning spaces with keywords.

B.2.6 Users shall view the recent activity of other users in profile pages.

B.2.7 Users shall be able to ignore the activities of the specific user.

B.2.8 Users shall be able to reward other users to contribute feedback mechanism.

B.2.9 Users shall display badges next to their usernames.

B.2.10 Users shall be able to join any learning space.

B.2.11 Users shall be notified about the activities about learning spaces.

B.2.12 Users shall be able to create learning spaces.

B.2.13 Users shall be able to share invitation link to others.

B.2.14 Users shall be able to add profile picture.

B.3 Learning Space

B.3.1 Learning spaces shall allow both registered and unregistered users to view contents.

B.3.2 Learning spaces shall allow users to ask questions.

B.3.3 Learning spaces shall allow users to respond questions.

B.3.4 Learning spaces shall allow users to share resources.

B.3.5 Learning spaces shall allow users to create quizzes.

B.3.6 Learning spaces shall allow users to form meetings.

B.3.7 Learning spaces shall allow creator user to ignore the activity of specific user in the learning space and prevent displaying.

B.3.8 Learning spaces shall be able to display rewards anonymously.

B.4 Feedback Mechanism

B.4.1 Feedback mechanism shall process the rewards.

B.4.2 Feedback mechanism shall assign badges to users due to the rewards and activities.

B.4.3 Feedback mechanism shall detect ill-intentioned users and ignore them from learning spaces.

B.4.4 Feedback mechanism shall update the badges of users twice in a week.

C. Non-Functional Requirements

C.1 Infrastructure

C.1.1 Django shall be used as framework.

C.1.2 By following MVT design pattern, the data of users and learning spaces shall be stored and retrieved by model.

C.1.3 By following MVT design pattern, the display of the learning space platform shall be rendered by template.

C.1.4 By following MVT design pattern, business logics for feedback mechanism shall be placed in view.

C.1.5 By following MVT design pattern, view shall respond HTTP requests.

C.1.6 The platform language shall be English.

C.1.7 The platform shall support Mozilla and Chrome browsers.

C.2 Data Storage

C.2.1 Relational database shall be used to store users' data.

C.2.2 Relational database shall be used to store the data of learning spaces.

C.2.3 NoSQL database shall be used to store badges corresponding to the user.

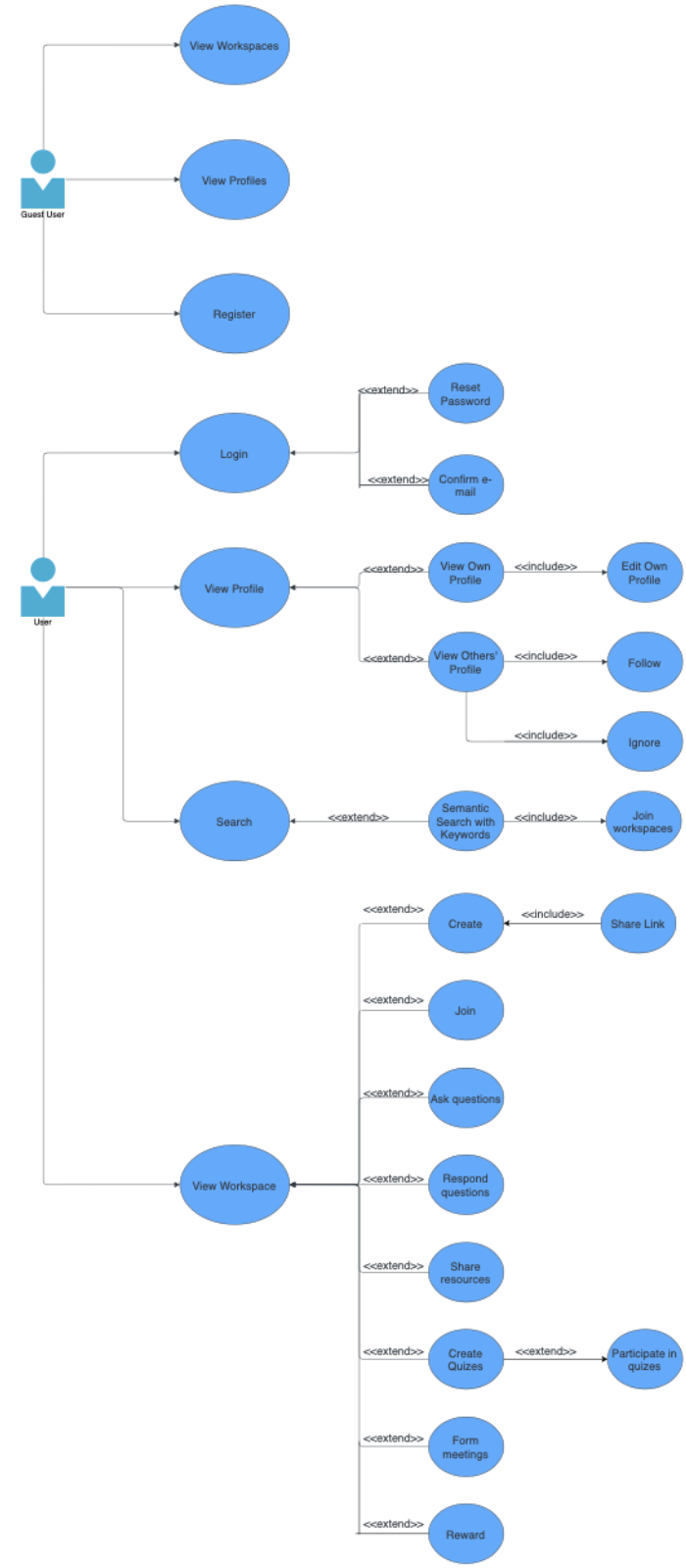
C.3 Security & Privacy

C.3.1 The platform shall not allow the users to manipulate the data of other users.

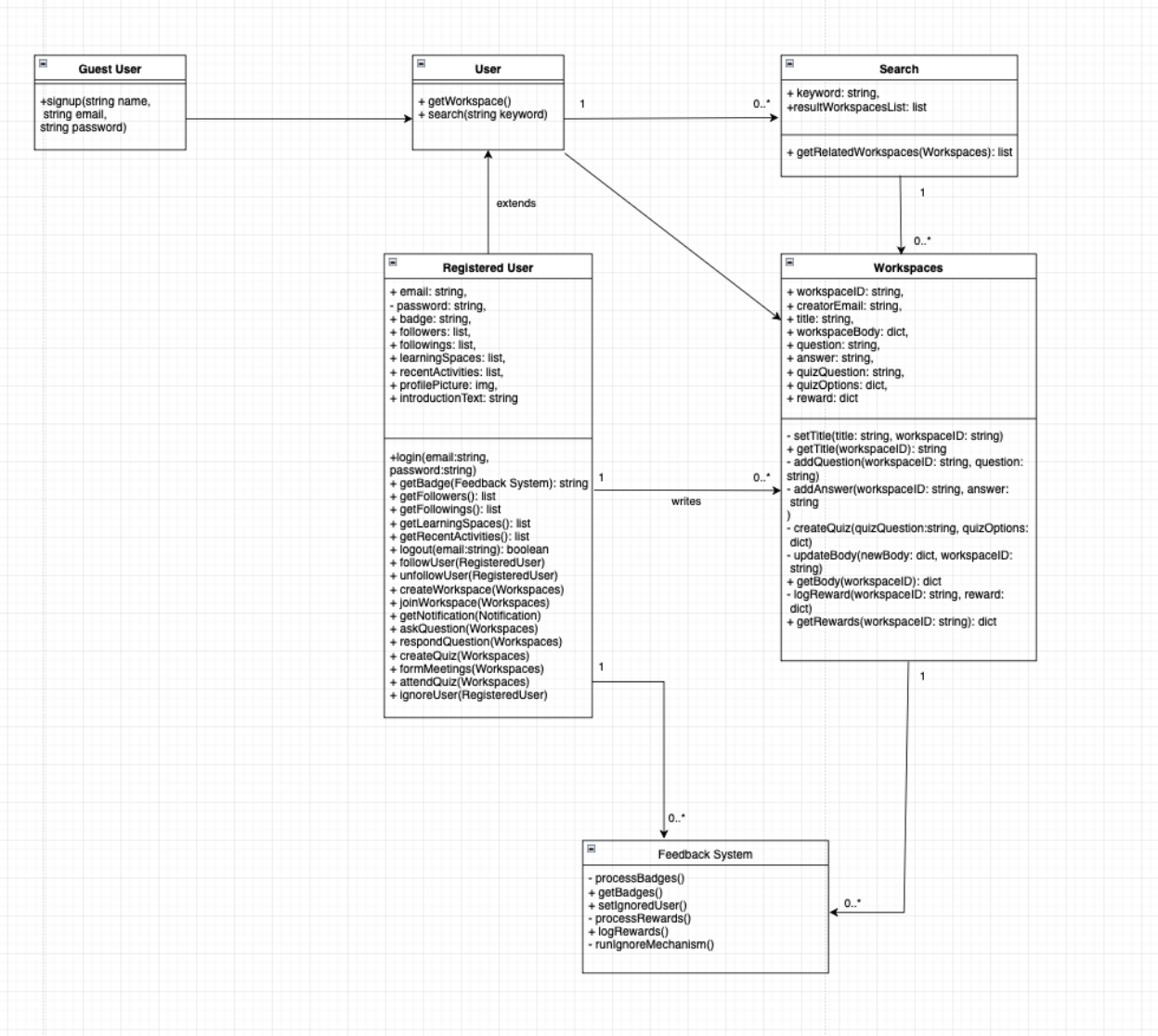
C.3.2 Users shall agree to Terms of Service and Privacy Policy which complies with KVKK and GDPR.

D. Design

D.1 Use Case Diagram

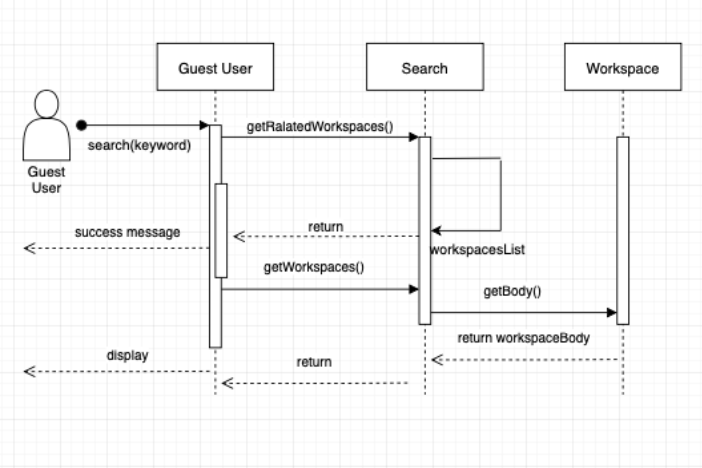


D.2 Class Diagram

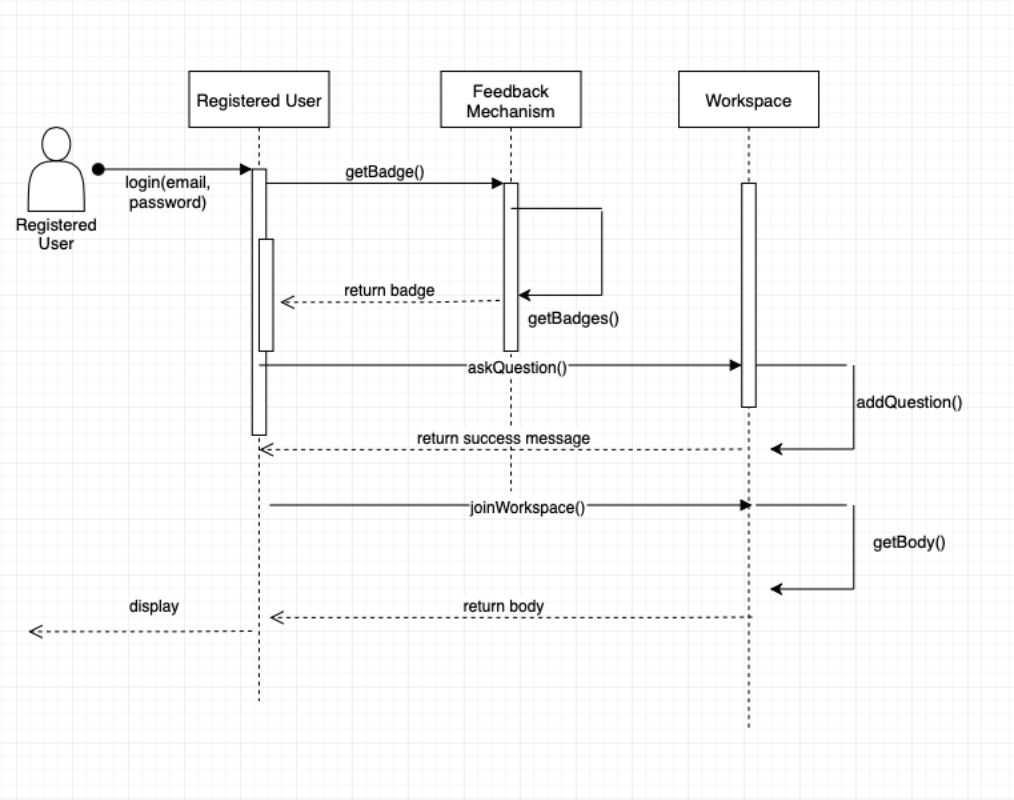


D.3 Sequence Diagrams

D.3.1 Guest User Sequence Diagram

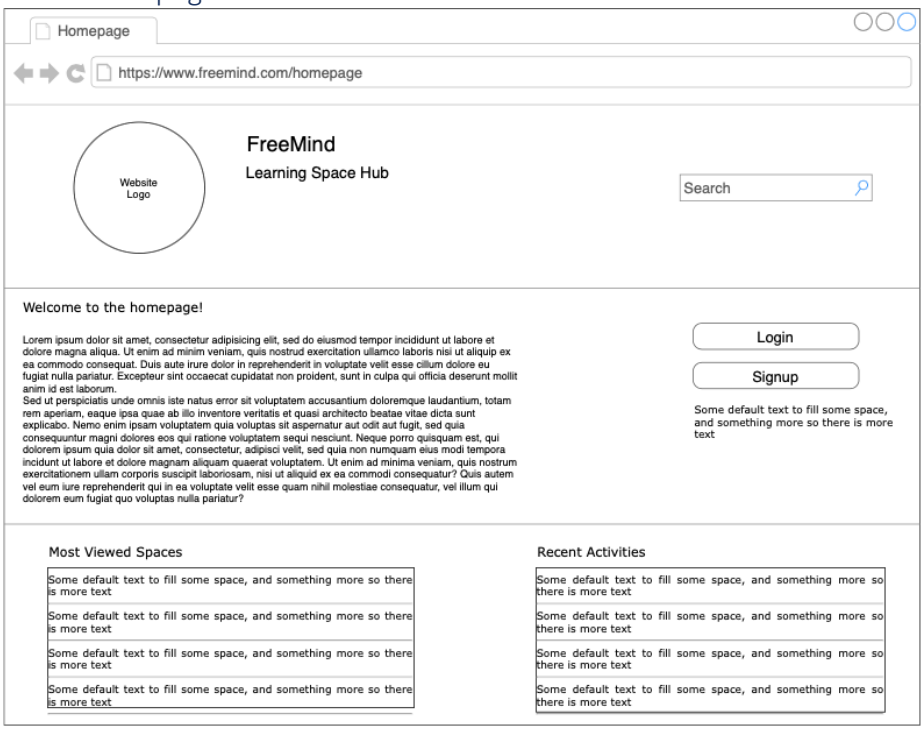


D.3.2 Registered User Sequence Diagram

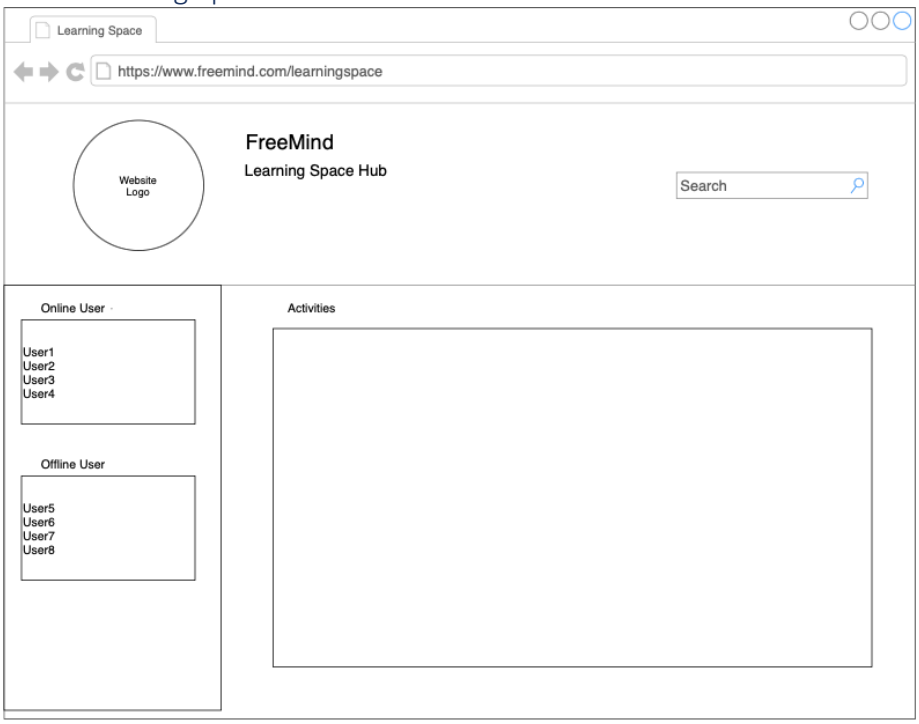


D.4 Mockup Screens

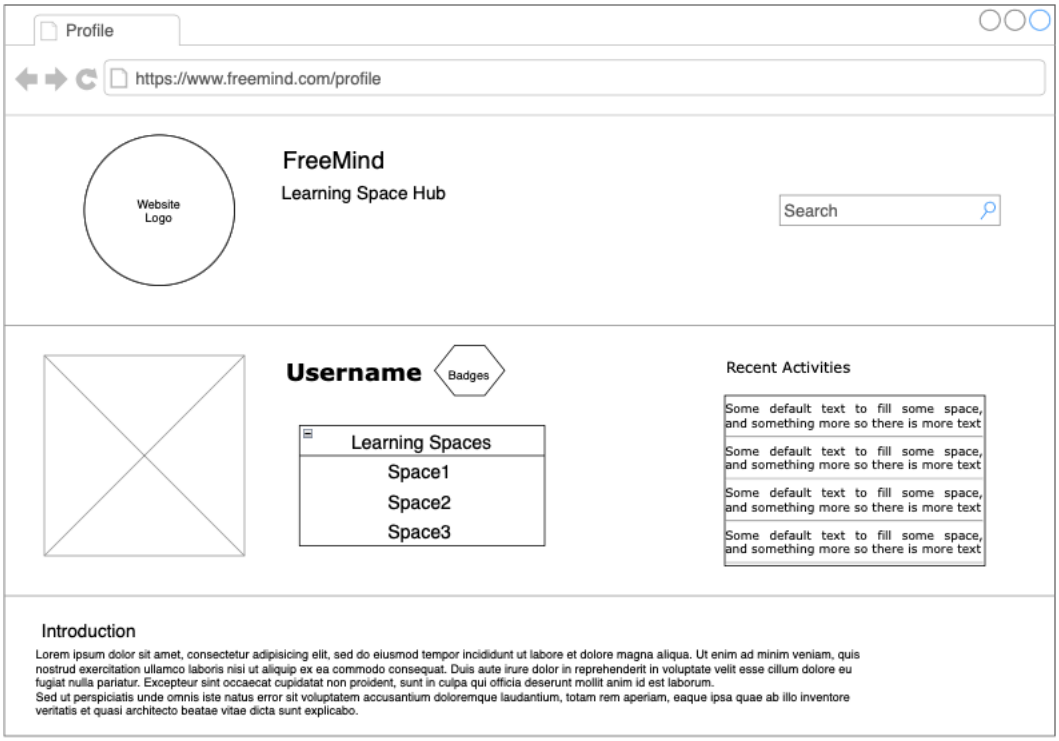
D.4.1 Homepage



D.4.2 Learning Spaces



D.4.3 Profile



E. Status of the Project

Requirement	Status	Note
B.1.1 Users shall be able to register using e-mail address.	Completed	Issue: Login module added
B.1.2 Users shall provide a secure password which is longer than 8 characters and includes one uppercase or one special character.	Completed	Issue: Login module added
B.1.3 Users should confirm their e-mail addresses.	Not Completed	
B.1.4 Users shall have unique username.	Completed	Issue: Login module added
B.2.1 Users shall be able to login in with their e-mails and passwords.	Completed	Issue: Login module added
B.2.2 Users shall be able to reset their passwords if they forget password or enter wrong passwords for three times.	Partially	Users can change their password with profile edit page. Issue: Profile module added
B.2.3 Users shall be able to have and edit their own profile pages.	Completed	Issue: Profile module added
B.2.3 Users shall be able to write brief introduction about themselves.	Partially	Section for write bio(introduction) added but there is a problem integration to model.

		Issue: Profile module added
B.2.4 Users shall earn badges due to their activity.	Not Completed	
B.2.5 Users shall be able to search learning spaces with keywords.	Completed	Issue: Search Module
B.2.6 Users shall view the recent activity of other users in profile pages.	Partially	Users must click on the username of the target user. Issue: filter by username
B.2.7 Users shall be able to ignore the activities of the specific user.	Not Completed	
B.2.8 Users shall be able to reward other users to contribute feedback mechanism.	Not Completed	
B.2.9 Users shall display badges next to their usernames.	Not Completed	
B.2.10 Users shall be able to join any learning space.	Not Completed	
B.2.11 Users shall be notified about the activities about learning spaces.	Not Completed	
B.2.12 Users shall be able to create, edit, and delete learning spaces.	Completed	Issue: Learningspace Class module
B.2.13 Users shall be able to share invitation link to others.	Not Completed	
B.2.14 Users shall be able to add profile picture.	Not Completed	
B.3.1 Learning spaces shall allow both registered and unregistered users to view contents.	Completed	Issue: Learningspace Class module
B.3.2 Learning spaces shall allow users to ask questions.	Completed	Issue: Learningspace Module
B.3.3 Learning spaces shall allow users to respond questions.	Completed	Issue: Learningspace Module
B.3.4 Learning spaces shall allow users to share resources.	Completed	Issue: Learningspace Contribution Feature
B.3.5 Learning spaces shall allow users to create quizzes.	Not Completed	
B.3.6 Learning spaces shall allow users to form meetings.	Not Completed	

B.3.7 Learning spaces shall allow creator user to ignore the activity of specific user in the learning space and prevent displaying.	Not Completed	
B.3.8 Learning spaces shall be able to display rewards anonymously.	Not Completed	
B.4.1 Feedback mechanism shall process the rewards.	Not Completed	
B.4.2 Feedback mechanism shall assign badges to users due to the rewards and activities.	Not Completed	
B.4.3 Feedback mechanism shall detect ill-intentioned users and ignore them from learning spaces.	Not Completed	
B.4.4 Feedback mechanism shall update the badges of users twice in a week.	Not Completed	
C.1.1 Django shall be used as framework.	Completed	
C.1.2 By following MVT design pattern, the data of users and learning spaces shall be stored and retrieved by model.	Completed	
C.1.3 By following MVT design pattern, the display of the learning space platform shall be rendered by template.	Completed	
C.1.4 By following MVT design pattern, business logics for feedback mechanism shall be placed in view.	Not Completed	
C.1.5 By following MVT design pattern, view shall respond HTTP requests.	Completed	
C.1.6 The platform language shall be English.	Completed	
C.1.7 The platform shall support Mozilla and Chrome browsers.	Completed	
C.2.1 Relational database shall be used to store users' data.	Completed	Issue: DB Connection module
C.2.2 Relational database shall be used to store the data of learning spaces.	Completed	Issue: DB Connection module
C.2.3 NoSQL database shall be used to store badges corresponding to the user.	Not Completed	

C.3.1 The platform shall not allow the users to manipulate the data of other users.	Completed	
C.3.2 Users shall agree to Terms of Service and Privacy Policy which complies with KVKK and GDPR.	Not Completed	

F. Status of Deployment

In the early stage of the project, I dockerized the project for preventing further issues about environment changes. Here you can find the link: Docker Container Issue for Dev Environment

My docker version: Docker version 20.10.8, build 3967b7d

Docker compose version: docker-compose version 1.29.2, build 5becea4c
There are the steps to run project locally.

1) Open docker in your computer.
2) Open terminal.
3) You should go to the folder where 'docker-compose.yml' is located. ('term-project/docker-compose.yml')
4) First, you should build docker image by running the 'docker-compose build' command.
5) Then, run the command "docker-compose up".
6) Both postgresql and app will be working.
7) Open your favorite browser and route to "localhost:8000/".

Also, I deploy the project using docker image. I used Digital Ocean for the deployment.
Basically, Docker image registry has been used to upload the APP to the remote host. Then, the environment configuration and port mapping has been made. Now, it is working at the URI below.

Deployment URI: Freemind Colearning App

G. System Manuel

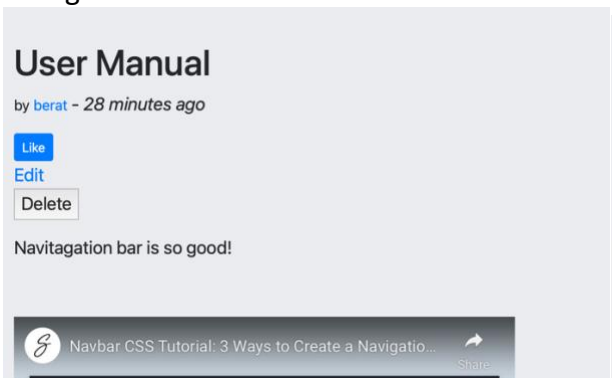
In 'term-project' folder, it can be found that requirement.txt and Dockerfile. However, since the application need database configuration from the environment, you cannot run without Docker container. The postgre database of the APP uses IP filtering so it is impossible for local computer to connect the production database from local computer. Therefore, using Django's build-in virtual environment does not run the APP. Conclusion, you need to follow the steps above in Status of Deployment to run in your computer.

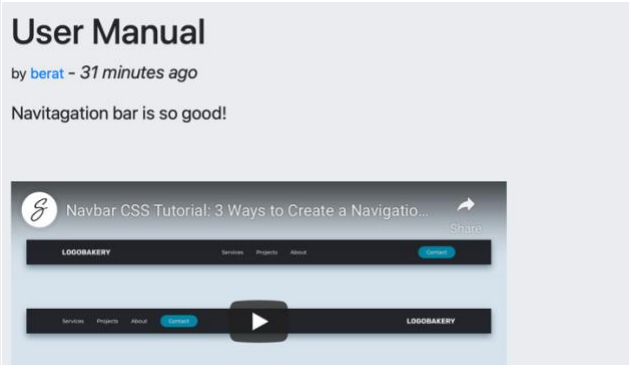
H. User Manuel

The colearning app Freemind allows both registered and unregistered users to view learningspaces. Via using navigation bar as can be seen in figure below, it is possible to route in learningspaces by typing keyword for searching or click on list learningspaces to reach recent learningspaces. You do not need to be registered to view learningspaces.

Navigation Bar:

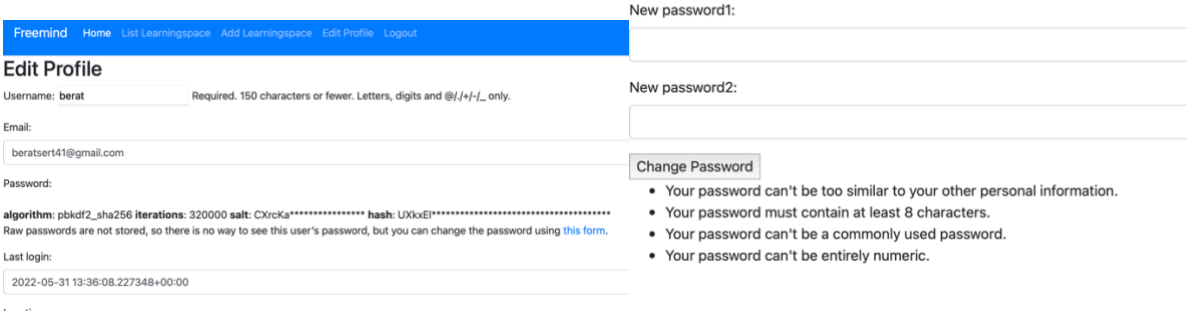
However, if the user desires to create learningspace, the user must be registered to be app and login to the account. Also, only the owners can edit or delete the learningspace. Other registered users can contribute the learningspaces and the registered and unregistered users will be able to view contributions in the corresponding learningspace. Again, only the owner of the contribution change.

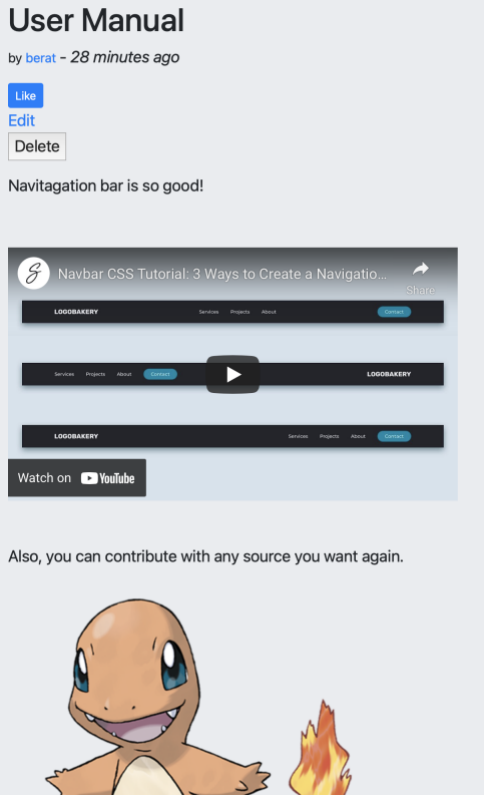




While creating a learningspace or contributing to a learningspace, it is possible to add images and Youtube content with html embed code.

Also, there is 'Edit Profile' page for changing username, password, and email.





I. Test Results