INTRODUCTION

Paperlayer is a platform with which people can create new projects and write papers, while collaborating with other users and scholars. Even if one doesn't want to collaborate with anyone and make a project on his/her own, Paperlayer is a perfect solution because, it'd be a back-up for the project with git version control provided. Projects can also be made public/private depending on the user's wishes. Users can invite others to projects in order to collaborate, users can also rate other users and comment on their profiles. Users can also send each other messages. To sum up, it's a great platform for collaboration and back-up.

CURRENT STATUS

At the beginning of the semester, we started as a group of 10 people. In the following weeks we had lost one member, but at the beginning of April one other member joined our group and we are once again 10 people. We arranged our meetings and started our journey as a team. Most of us didn't know each other at first, but as the weeks passed our communication got stronger and more effective, so did our teamwork. From the first week on, we reviewed each other's work and made constructive remarks about their works. From the beginning of our project to this day we developed our project requirements, created user personas, prepared mock-up scenarios, we also constructed our design diagrams, mainly, to make our work clearer, but also, to set our eyes upon what there is to be done. We also planned for the future and set deadlines for the next tasks to come.
Throughout the process we requested and received feedbacks from our customer. Even though some feedbacks were long, we purposefully rearranged our work accordingly. Considering all the work done we know that we came a long way compared to the beginning of the semester, with a longer way to go. We worked hard to accomplish every given task successfully and we are planning on keeping it that way.

AHEAD OF US

From this point on we are planning on increasing our communication within the team even more. We are going to focus on dividing the tasks between us and organize the work for everyone in a better manner. We have already planned for the time ahead of us and we hope that we'll not be missing any deadlines we set. We are thrilled to use the knowledge we acquired from this course in the next one and implement this project to the end. We hope to create a product that everyone loves and uses.

LIST AND STATUS OF DELIVERABLES

Name	Delivery Date	Status
Requirements	**08.03.2020**	Delivered
Scenarios and Mockups	**03.03.2020**	Delivered
Software Design Documents	**24.03.2020**	Delivered
Project Plan and RAM	**21.04.2020**	Delivered

REQUIREMENTS

Requirements are the foundation basis for Paperlayer. We held meetings to discuss how our platform should be and we changed our designs to the better. After deciding what our requirements should be, it became the basis for our future work.

Glossary

- Guest User : The user who is only able to view the profiles that are public
- Registered User : The user who is registered to the system. User in the rest of glossary and requirements imply registered user.
- Project Creator (Poster) : The user who created a certain project.
- Member : Users that collaborate on a certain project.
- Team : A group of members.
- Teammate : The relation between two members.
- Project Coordinators : Members with the highest rank on a certain project.
- Profile Page : A page that stores information about a certain user.
- Workspace : The environment where members perform collaboration within a project.
- Description : The content describes the mechanism and the policy of the regarding the project
- File : The material that is a part of a certain project.
- Search Engine : A search tool which guests and users search content with keywords. Also contains advanced search with filters.
- Semantic Search : Semantic search denotes search with meaning, as distinguished from lexical search where the search engine looks for literal matches of the query words or variants of them, without understanding the overall meaning of the query.
- Filter : Detailed search criterion used in advanced search.
- Event : Journal submission activities, academic conferences, funded projects (e.g Tubitak Projects).
- Public : The content that can be reached by anyone.
- Private : The content that can be reached only by the ones who are allowed.

- Secure Enough Password : Consists of at least six characters (and the more characters, the stronger the password) that are a combination of letters, numbers, and symbols.

1. Functional Requirements

1.1. User Requirements

- 1.1.1.Guest User
    - 1.1.1.1. Guests shall be able to register to the system.
    - 1.1.1.2. Guests shall be able to search for users, papers or projects.
    - 1.1.1.3. Guests shall be able to see upcoming events, project titles and descriptions.
    - 1.1.1.4. Guests shall be able to see public profile pages.
- 1.1.2. Registration and Sign in
    - 1.1.2.1. Users shall be able to register with a unique institution e-mail address, password, and full name.
    - 1.1.2.2. Users shall be able to sign up with their Google Scholar / ResearchGate accounts.
    - 1.1.2.3. Users shall be able to sign in using an email address and a password.
    - 1.1.2.4. Users shall be able to agree to Terms of Service and Privacy Policy while registering.
    - 1.1.2.5. Users shall be able to retrieve their forgotten password.
- 1.1.3. Project Creation and Gathering
    - 1.1.3.1. Users shall be able to post their paper/project ideas/topics to collaborate with other users.
    - 1.1.3.2. Posters shall be able to set the state of the post to "Seeking for Collaborators".
    - 1.1.3.3. Users shall be able to specify requirements for collaboration on their posts.
    - 1.1.3.4. Users shall be able to state their posts as public or private.
    - 1.1.3.5. Users shall be able to send a collaboration request for a public post that is in the "Seeking for Collaborators" state.
    - 1.1.3.6. Posters shall be able to send an invitation to another user to contribute to the post they created that is in the "Seeking for Collaborators" state.
    - 1.1.3.7. Members shall be able to create a suggestion for inviting new users if the project is in "Seeking for Collaborators" state.
- 1.1.4. Project Development
    - 1.1.4.1. Users shall be able share and monitor the submission document, codes, and any other file for the projects they are collaborating on.
    - 1.1.4.2. Posters shall be able to add an event to the post with a description, date, link, location, submission deadline, and type.
    - 1.1.4.3. Posters shall be able to add a milestone to the post with a description and date.

    - 1.1.4.4. Posters shall be able to change the state of the post.
    - 1.1.4.5. Members shall be able to determine and specify the requirement of the project that they are assigned to.
- 1.1.5. Profile System
    - 1.1.5.1. Users shall be able to edit their profile information.
        - 1.1.5.1.1. Users shall be able to change or add new photos for their profiles
        - 1.1.5.1.2. Users shall be able to change their shown biological gender with one of the given next: 'male','female','do not want to share'
        - 1.1.5.1.3. Users shall be able to decide whether to give the information of their age or not
        - 1.1.5.1.4. Users shall be able to share their interests unrelated to their academic profession such as cosmology, astrology in their profiles.
    - 1.1.5.2. Users shall be able to provide the information regarding expertise, bio, affiliation, recent publications, research area manually or by linking their Google Scholar or ResearchGate accounts
    - 1.1.5.3. Users shall be able to add ratings and comments to their current or previous teammates.
    - 1.1.5.4. Users shall be able to set their information either private or public to all users.
    - 1.1.5.5. Users shall be able to be report other user profiles for these reasons: Disturbing other users, Sharing unrelated or disturbing posts, Spam, Fake Profile, Stolen Account .
    - 1.1.5.6. Users shall be able to decide whether it shall appear or be hidden on the profile page's certain sections: Bio, Age, Gender, Affiliations
- 1.1.6. Search
    - 1.1.6.1. Guests and users shall be able to search events, projects and other users with the search engine.
    - 1.1.6.2. Users shall be able to utilize the advanced search facility to customize the search with filters.
    - 1.1.6.3. Users shall be able to sort search results
        - 1.1.6.3.1 Users shall be able to sort user-related search results with these criteria: alphabet order, connection with common teammates, rating.
        - 1.1.6.3.2 Users shall be able to sort project-related search results with these criteria: alphabet order, relation with users' interest.
        - 1.1.6.3.3 Users shall be able to sort event-related search results with these criteria: alphabet order, date, submission deadline.
- 1.1.7. Follow
    - 1.1.7.1. Users shall be able to follow other users with public profile pages.
    - 1.1.7.2. Users shall be able to send follow requests for private profile pages.
    - 1.1.7.3. Users with private profile pages shall be able to accept or decline the following requests.
    - 1.1.7.4. Users shall be able to keep track of the activities that belong to the followed users and collaborators.
    - 1.1.7.5. Users shall be able to unfollow other users.

- 1.1.8. Project Page:
    - 1.1.8.1. Project Coordinator shall be able to provide the information regarding project manually.
        - 1.1.8.1.1. The coordinator shall be able to provide the title of project.
        - 1.1.8.1.2. The coordinator shall be able to provide the description of project.
        - 1.1.8.1.3. The coordinator shall be able to provide the type of project that what project is for, such as conference, the project for an institution or journal.
        - 1.1.8.1.4. The coordinator shall be able to provide the tags of project.
        - 1.1.8.1.5. The coordinator shall be able to provide the due date of project.
        - 1.1.8.1.6. The coordinator shall be able to provide the accessibility of project.
        - 1.1.8.1.7. The coordinator shall be able to provide the state of project such as Open For Collaborators or Seeking For Collaborators, In Progress.
        - 1.1.8.1.8. The coordinator shall be able to add people to the collaborators of project.
    - 1.1.8.2. Those who're not collaborators can view the project's public information

1.2. System Requirements

- 1.2.1. Search Engine
    - 1.2.1.1 The system shall provide a search engine that supports basic and advanced search.
        - 1.2.1.1.1 Basic search shall support searching with name and tag.
        - 1.2.1.1.2 Advanced search shall support searching with the institution, rating, and skills for the user; project stage, due date and linked event for projects; date, submission deadline, location and type for events.
    - 1.2.1.2 Search engine shall support searching among user profiles, projects, and events.
        - 1.2.1.2.1 Search results shall include the public and followed profiles.
        - 1.2.1.2.2 Search results shall include public projects.
    - 1.2.1.3 Search engine shall support semantic search.
        - 1.2.1.3.1 Semantically related content about the search keywords shall be included in search results.
- 1.2.2. Recommendation
    - 1.2.2.1 System shall support a recommendation system to provide related content to users.
        - 1.2.2.1.1 Recommendation system shall be based on users' previous projects, interest areas, ratings, and skills.
        - 1.2.2.1.2 System shall recommend possible collaborators to project creators.

            - 1.2.2.1.3 System shall provide possible project recommendations to users.
- 1.2.3. Notifications
    - 1.2.3.1 System shall provide notifications about user feeds and updates on projects and events.
        - 1.2.3.1.1 System shall notify users in case of follows, follow requests and ratings on their profiles.
        - 1.2.3.1.2 System shall notify users in case of project collaboration requests and updates on milestones, files and polls about collaborated projects.
        - 1.2.3.1.3 System shall notify users in case of stage changes about followed and collaborated projects.
- 1.2.4. Profile Page
    - 1.2.4.1 System shall provide personal profile pages to registered users. (TODO : Delete)
    - 1.2.4.2 System shall ensure that private profile pages are displayed to followers.
    - 1.2.4.3 System shall ensure that guest users can only view ten profile pages per day. (TODO : Delete)
    - 1.2.4.4 System shall provide necessary mechanism for users to link their profile page with Google Scholar or ResearchGate.
- 1.2.5. Project Structure
    - 1.2.5.1 Projects shall consist of stages "Open for collaborators", "In Progress", "Submitted to event", "Published".
    - 1.2.5.2 Projects should support stages "Cancelled", "Reopened".
    - 1.2.5.3 System shall provide a text editor to edit project files.
    - 1.2.5.4 System shall support an upload file functionality for the files that are less than 5MBs.
    - 1.2.5.5 System shall make private projects to be visible by only the collaborators.
- 1.2.6. Project Page
    - 1.2.6.1 System shall provide a project page to the collaborators to be viewed by all the users in the system.
    - 1.2.6.2 System shall ensure that project's private information isn't shown to those who are not collaborators.
    - 1.2.6.3 System shall ensure that guest users can not collaborate or request collaboration.
    - 1.2.6.4 System shall provide necessary mechanism for users to link their profiles with the project.

2. Non-Functional Requirements

2.1.Performance Requirements

- 2.1.1. Respond times should be less than 3 seconds.
- 2.1.2. The system should work 7/24 with no more than 1% downtime.

2.2.Legal Constraints

- 2.2.1. Not allowed the processing of personal data outside the legitimate purpose for which the personal data was collected.
- 2.2.2. Personal data shall be deleted once the legitimate purpose for which it was collected is fulfilled.
- 2.2.3. The controller of personal data has the accountability to ensure that personal data is protected and GDPR requirements respected, even if the processing is being done by a third party.
- 2.2.4. Intention to process personal data beyond the legitimate purpose for which that data was collected, a clear and explicit consent must be asked from the data subject.

2.3.Security Requirements

- 2.3.1. Passwords should be encrypted with SHA-256.
- 2.3.2. System objects should be encrypted with MD5.
- 2.3.3. System should use HTTPS Protocol.
- 2.3.4. System should be backed up to AWS at the end of each day.

2.4.Portability Requirements

- 2.4.1. Mobile Application should support Android 6 or later.
- 2.4.2. Mobile Browsers shall redirect to the mobile application.
- 2.4.3. Web Application should support Chrome, Firefox, Safari or Opera.

2.5.Implementation-Requirements

- 2.5.1. The application should be dockerized.
- 2.5.2. The implementation of the system should follow W3C standards and W3C Activity Streams Protocol.
- 2.5.3. There shall be a web platform and a native Android application that supports the same functionalities.
- 2.5.4. The color designs of the platform will be made to improve the experience of color-blind people.
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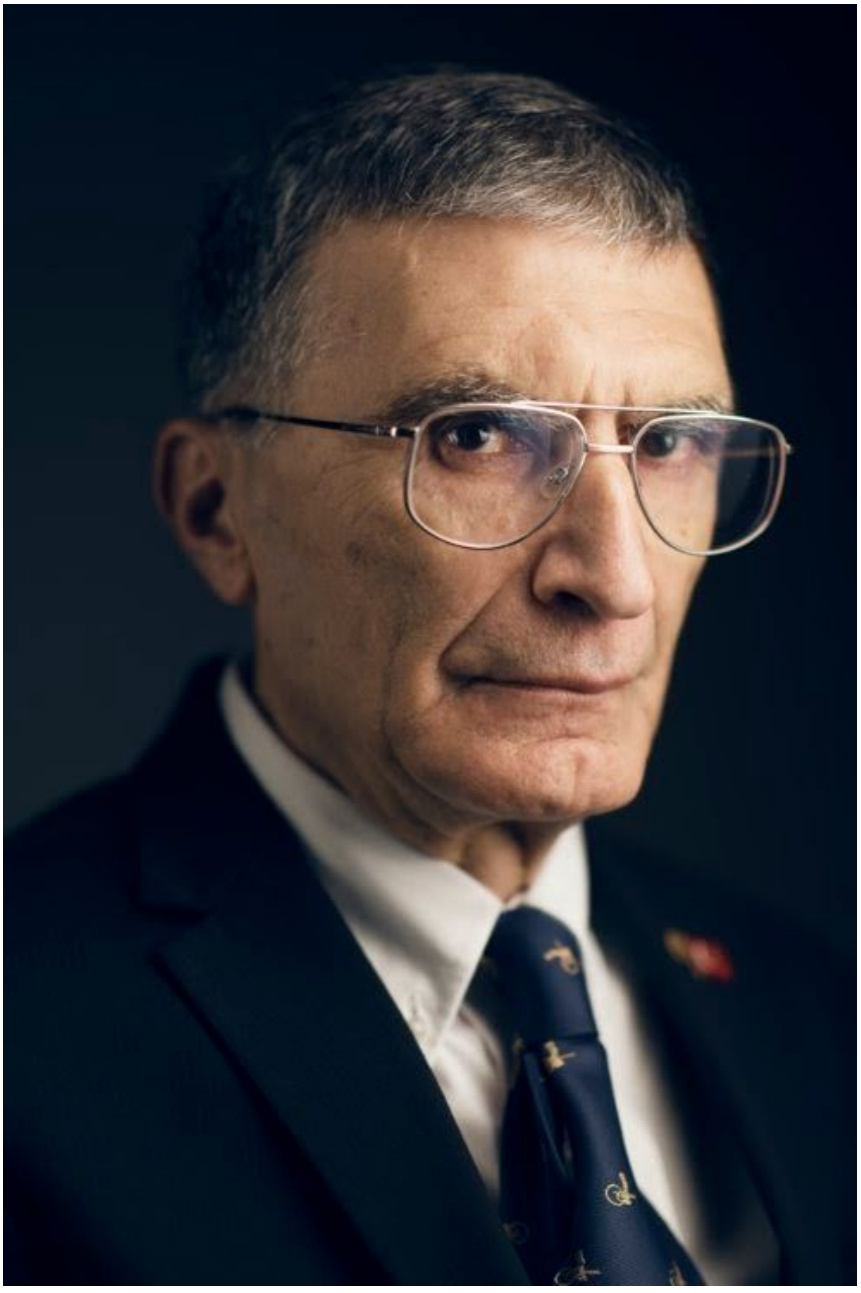
SCENARIOS AND MOCKUPS

Scenarios :
User scenarios are the example use case scenarios for Paperlayer. We made 3 scenarios for different kind of potential customers. We believe that our user scenarios are sufficient for the project.

Scenario 1

Aziz Sancar



Persona

- Age: 73
- Job: Academician, Biochemist, Molecular Biologist, and Scientist.
- Interest Area: DNA repair, Cell line, Cancer treatment

Story

- He graduated from Istanbul University Faculty of Medicine, which he entered in 1963, in first place in 1969. He went to Johns Hopkins University and then to the University of Texas at Dallas. Sancar colonized a gene called photolysis with his consultant Claud Rupert and propagated it at a very high rate in bacteria with his genetic engineering. The enzyme encoded by this gene repairs damaged DNA with ultraviolet lights. This discovery provided Aziz Sancar with a master's degree and then a doctorate (1977). With the development of technology today, he believes that he can do some research about DNA using AI. He decided that he wants to start a project about the DNA sequence using AI at PaperLayer.

Preconditions

- He is a registered user in PaperLayer
- He has some papers on it with some collaborators.
- He has a high rating point and many comments about their projects.

Acceptance Criteria

- 1.1.2.1 Users shall provide a unique email address, a secure enough password, and full name while registering.
- 1.1.3.1 Users shall be able to post their paper/project ideas/topics to collaborate with other users.
- 1.1.3.3 Users shall be able to specify requirements for collaboration on their posts.
- 1.1.3.4 Users shall be able to state their posts as public or private.
- 1.1.3.6 Posters shall be able to send an invitation to another user to contribute to the post they created that is in the "Seeking for Collaborators" stage.
- 1.1.7.1 Guests and users shall be able to search events, projects and other users with the search engine.

Scenario

1. He logs into his account.
2. He clicks ‘create a project’ button on the home page.
3. He specifies the requirements which are title, description, the due date of the project and optional tags for his project on the project page.
4. He uses a search engine by filtering with some tags to select collaborators he wants to work with, he sees collaborators he wants or can work with and sends them a message and invitation link to work on the project.
5. He sets the accessibility of paper as public or private.

Scenario 2

Hakan Gümüşkaya

Persona

- 23 years old
- Recently graduated in Computer Science
- Interested in machine learning

Story

- Hakan has graduated from Bilkent University B.S of Computer Science. He wants to apply for a Ph.D. program at MIT. Before applying there, he wants to collaborate on an academic project. He searches for a platform that he can find academic projects to collaborate, then he starts using PaperLayer.

Preconditions

- Hakan has already registered to PaperLayer.
- Hakan has already logged in to PaperLayer.

Acceptance Criteria

- 1.1.2.3. Users shall be able to sign in using an email address and a password.
- 1.1.6.1. Guests and users shall be able to search events, projects and other users with the search engine.

- 1.1.8.2. Those who're not collaborators can view the project's public information
- 1.2.6.1 System shall provide a project page to the collaborators to be viewed by all the users in the system.
- 1.1.3.5. Users shall be able to send a collaboration request for a public post that is in the "Seeking for Collaborators" state.

Scenario

1. Hakan searches for a project with keyword "machine learning".
2. Hakan goes through projects that are found according to his search.
3. Hakan finds an interesting project according to the project's name and a short description.
4. Hakan goes into the project's details page.
5. Hakan reads the details of the project such as contributor requirements, project goals, due date, workload.
6. Hakan looks at the names of authors and sees that one of the authors is an academician at MIT.
7. Hakan thinks that this is a great opportunity for his portfolio.
8. Hakan decides to collaborate on the project and sends collaboration requests.

Scenario 3

Mehmet Şengör

Persona

- 64 years old
- Lives in Istanbul, Turkey.
- A well-known geologist at ITU(Istanbul Technical University)

Goals

- Searching for academic collaborators for his researches.
- He would like to work from home with his team using a platform.
- He would like to see other academicians' profiles and read about their research.

Story

Mehmet is a well-known academician in geology. He wants to work on his papers with other academicians from various disciplines. Besides, He wants to learn about other science branches by reading papers on different topics. So he needs a platform to find other academicians, view their past papers from their profiles and collaborate with them to publish a comprehensive paper.

Preconditions

- Mehmet is a registered user and currently logged via a web browser on his laptop.
- Mehmet has a past paper that he worked with another academician, İlber.
- İlber is also a registered user and he is logged in via the Android app on his mobile phone.
- Mehmet and Ilber have private profiles.
- Mehmet and Ilber following each other on the platform.

Scenario

Mehmet views his profile page and realizes he does not have a profile photo so he adds one. He also edits his research area to be more specific. After that, he looks for the past papers that he contributed to. Then selects the last paper he worked on to view its details. From the contributor's section of the paper's page, he sees İlber and decides to add a review about this bright and successful fellow academician he worked with. He enters İlber's profile page and adds a review about İlber's work ethic and bright mind. After the review, İlber receives a notification on his Android mobile phone showing the newly added review about him.

Acceptance Criteria

- 1.1.3.2 Registered users shall be able to comment & rate Registered users if they worked together with.
- 1.1.5.1 Registered Users shall be able to edit profile photos, his/her password, institutions, and expertise.
- 1.1.5.5 Registered Users shall be able to see private profiles that they are following.

- 1.2.5.3 The system should send notifications when a user gets a new comment or rating.
- 1.2.5.6 The system shall send notifications via e-mail or the website or the application according to the user's preferences.
- 1.2.7.2 The profile page shall provide information about the research area.
- 1.2.7.3 The profile page shall provide information about recent publications.
- 1.2.7.6 The profile page should have a comments and rating section.
- 1.2.7.7 The profile page shall provide the follower information which is the number of followers, the number of followed users and links to profile pages followers and followed users.

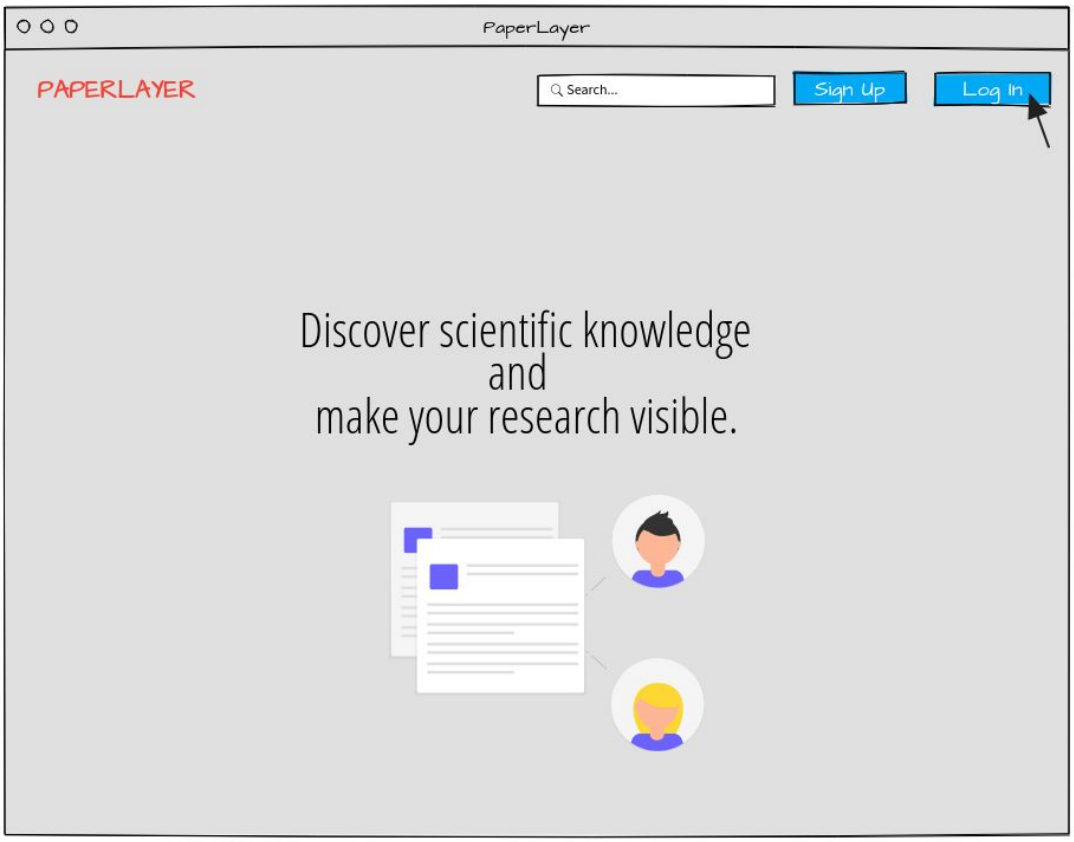
Mock-ups:
We prepared three mock-ups for the web, for our 3 user scenarios. We also created a mobile mock-up for the 1st scenario. The goal of the mock-ups is to visualize what our platform needs and how it meets its requirements. Our mock-ups include: Welcome Page, Home Page, Login Page, Project Creation Page, Search Page, Project Page, Profile Page and Own Projects Page.

Scenario 1

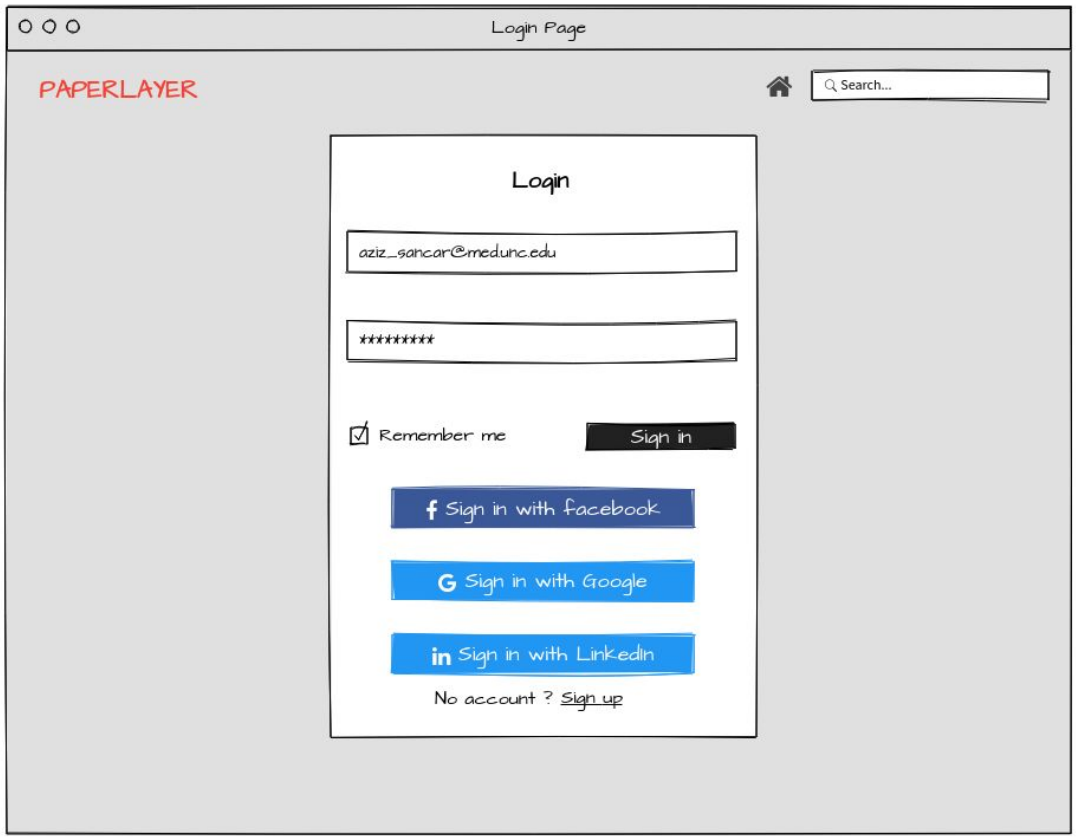
Registered user will create a project post and look for possible collaborators.

Flow

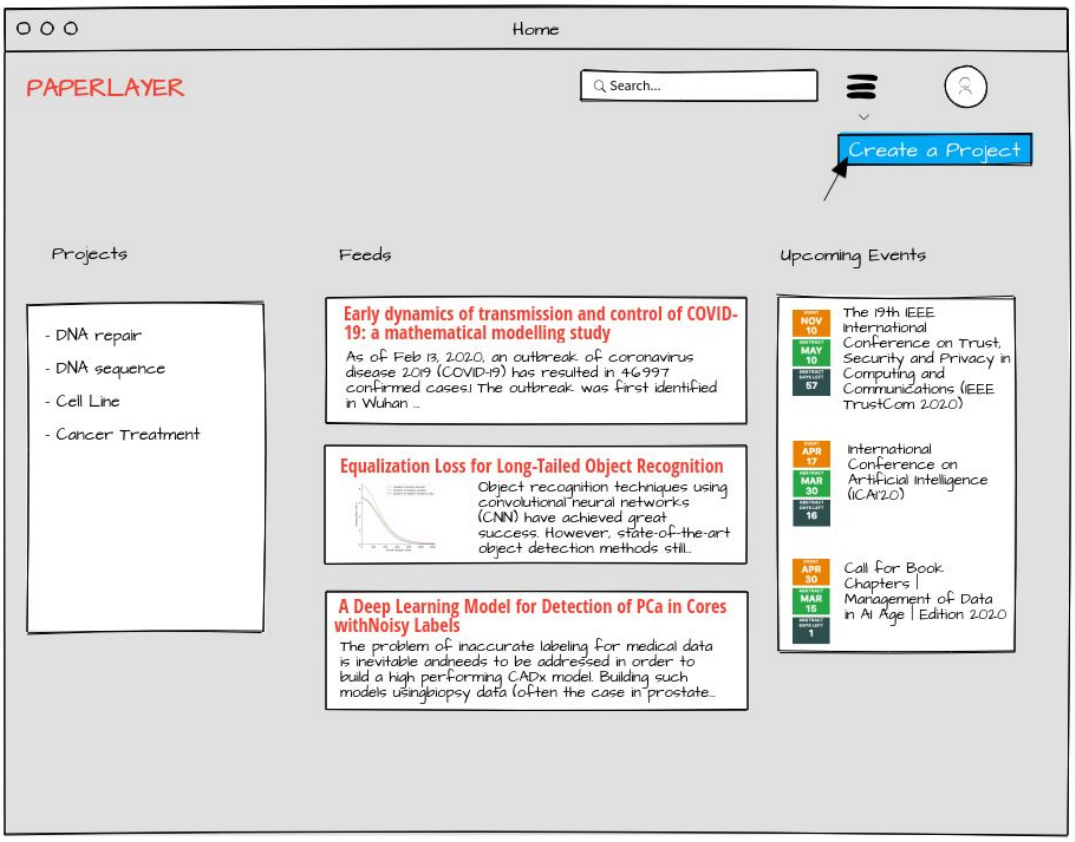
- After registered user entered the website PaperLayer, user logs into his/her account.



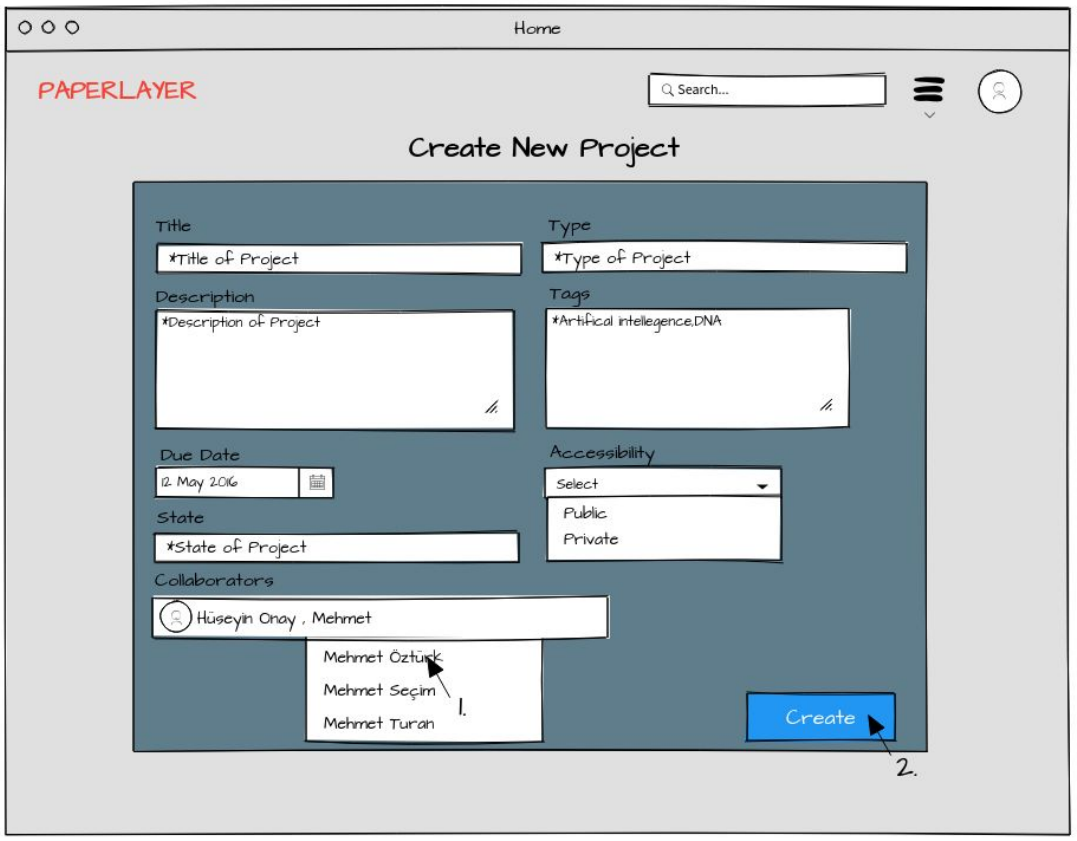
- After entering the user information and password, they are directed to the main page.



- User clicks on 'Create a Project' to create a new project from the menu on the main page.



- On the project page, after the user fills in the blanks to specify the requirements, he/she can create a new project.

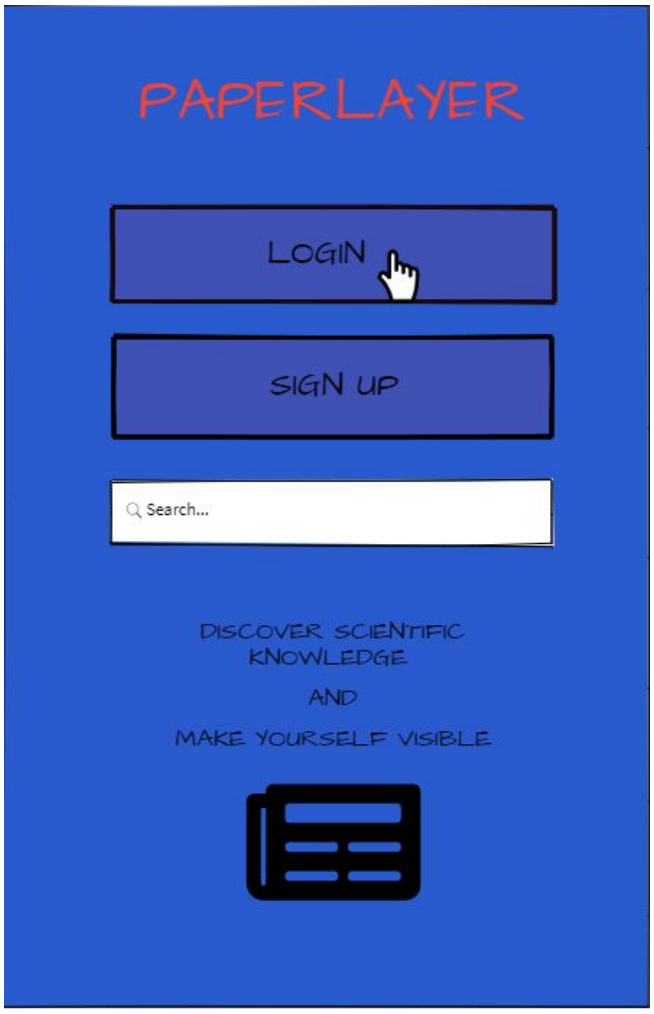


Scenario 1 (Mobile)

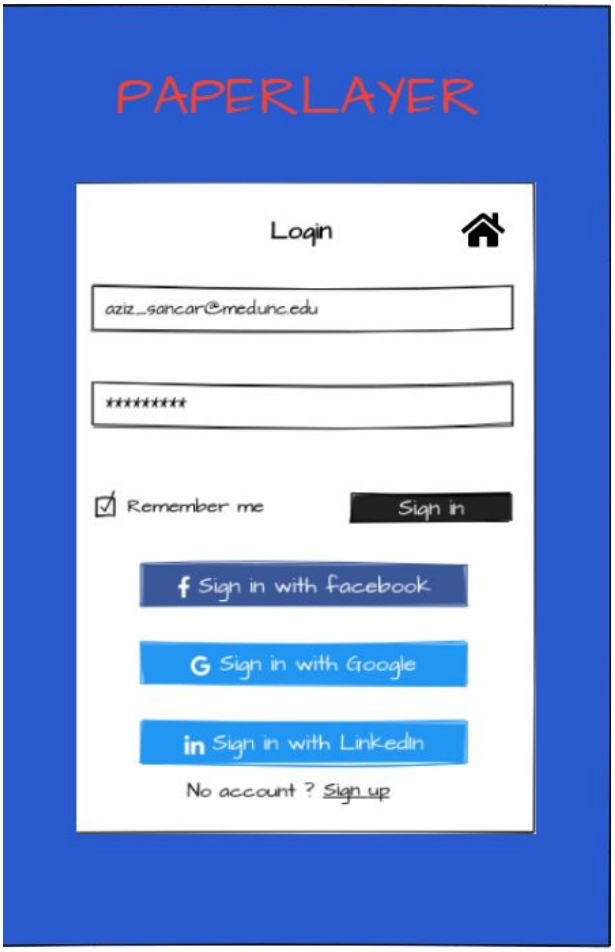
Registered user will create a project post and look for possible collaborators.

Flow

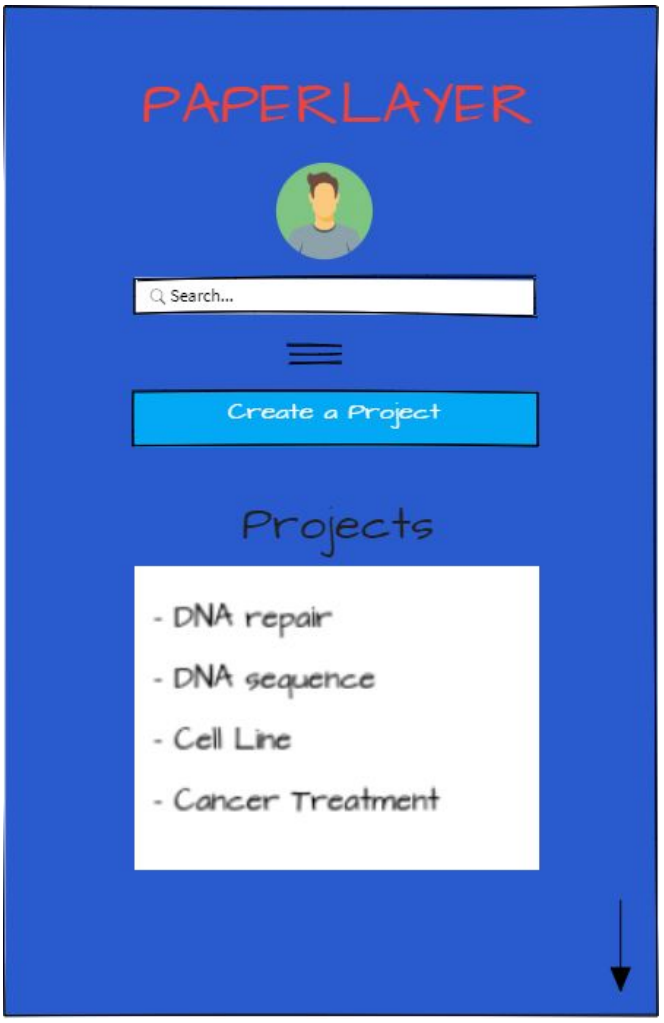
- User clicks to the log in button.



- User enters credentials (email and password), then they are redirected to the main page.


PAPERLAYER
Login
aziz_sancar@medunc.edu
****
Remember me
Sign in
Sign in with facebook
Sign in with Google
Sign in with LinkedIn
No account ? Sign up

- Main page

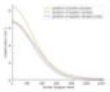

PAPERLAYER
Search...
Create a Project
Projects
- DNA repair
- DNA sequence
- Cell Line
- Cancer Treatment

Feeds

Early dynamics of transmission and control of COVID-19: a mathematical modelling study

As of Feb 13, 2020, an outbreak of coronavirus disease 2019 (COVID-19) has resulted in 46997 confirmed cases.1 The outbreak was first identified in Wuhan ...

Equalization Loss for Long-Tailed Object Recognition



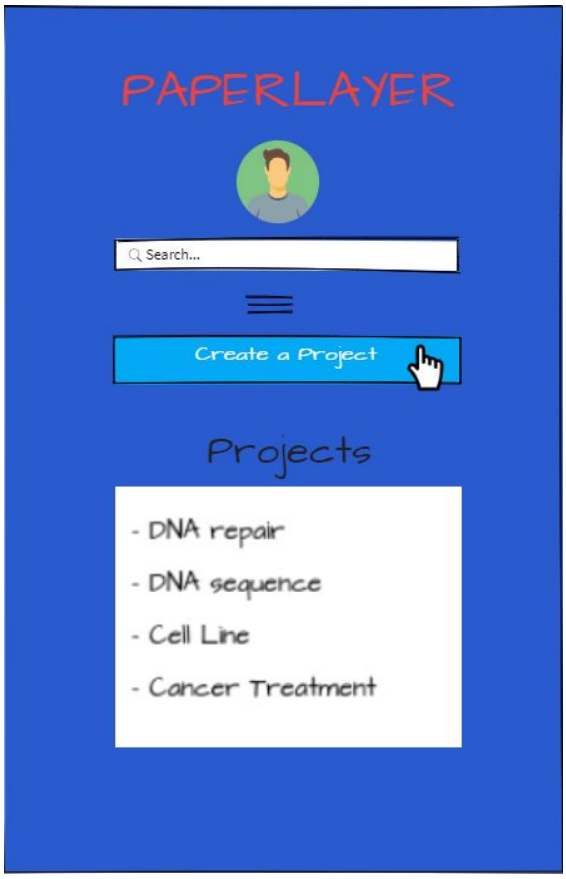
Object recognition techniques using convolutional neural networks (CNN) have achieved great success. However, state-of-the-art object detection methods still...

A Deep Learning Model for Detection of PCa in Cores withNoisy Labels

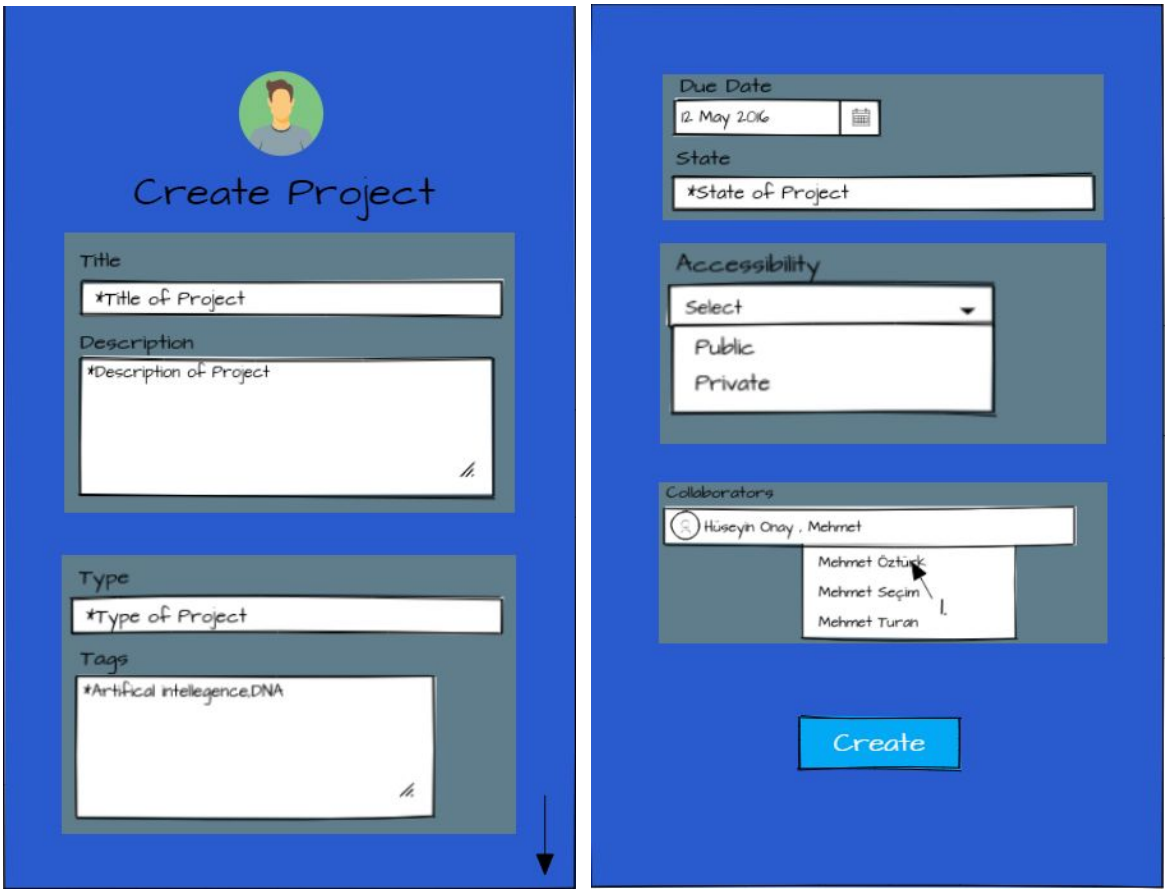
The problem of inaccurate labeling for medical data is inevitable andneeds to be addressed in order to build a high performing CADx model. Building such models usingbiopsy data (often the case in prostate...

Upcoming Events

- User clicks on 'Create a Project' to create a new project from the menu on the main page.



- On the project page, after the user fills in the blanks to specify the requirements, he/she can create a new project.

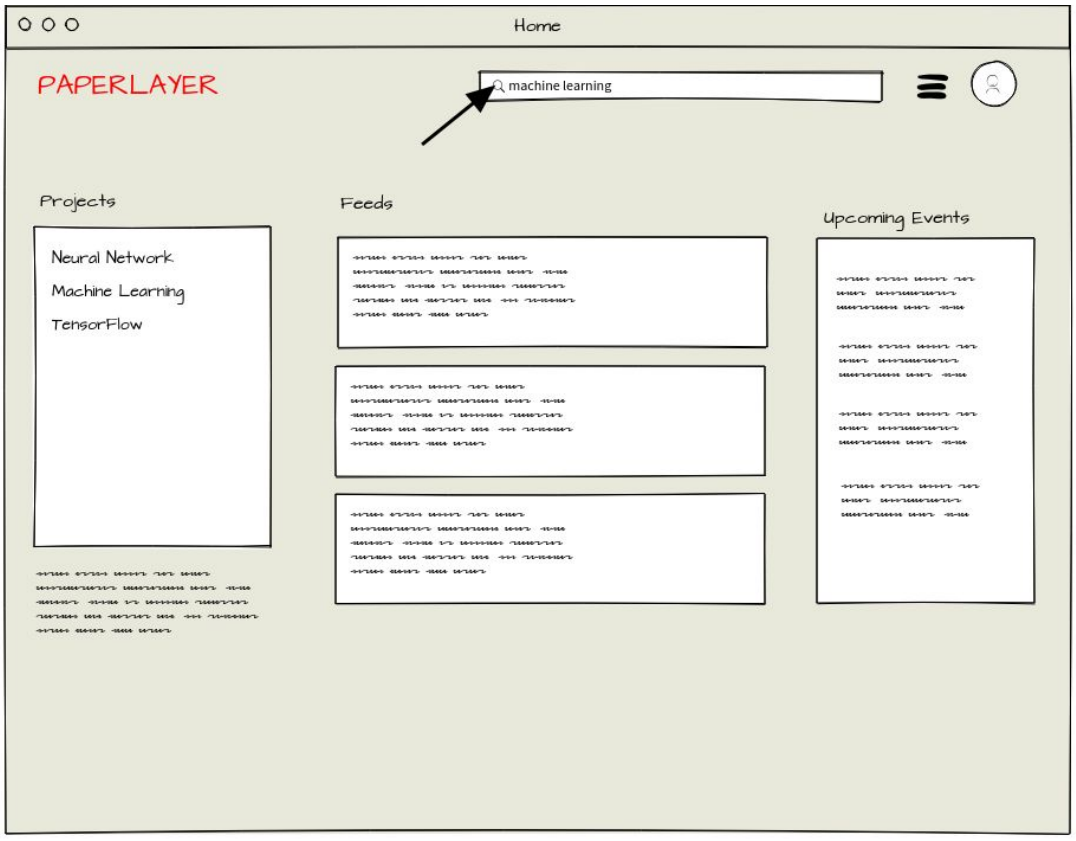


Scenario 2

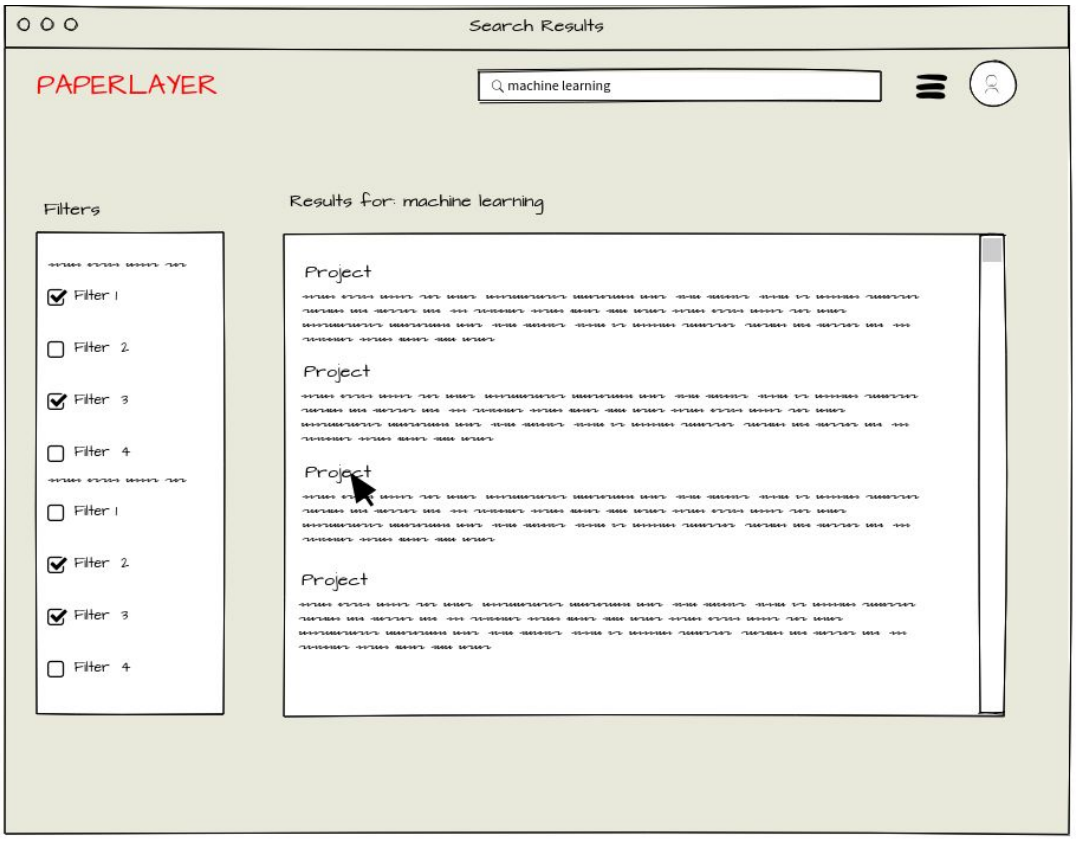
Registered user ,Hakan, will search for a machine learning project and check its details. Later,he applies to collaborate.

Flow

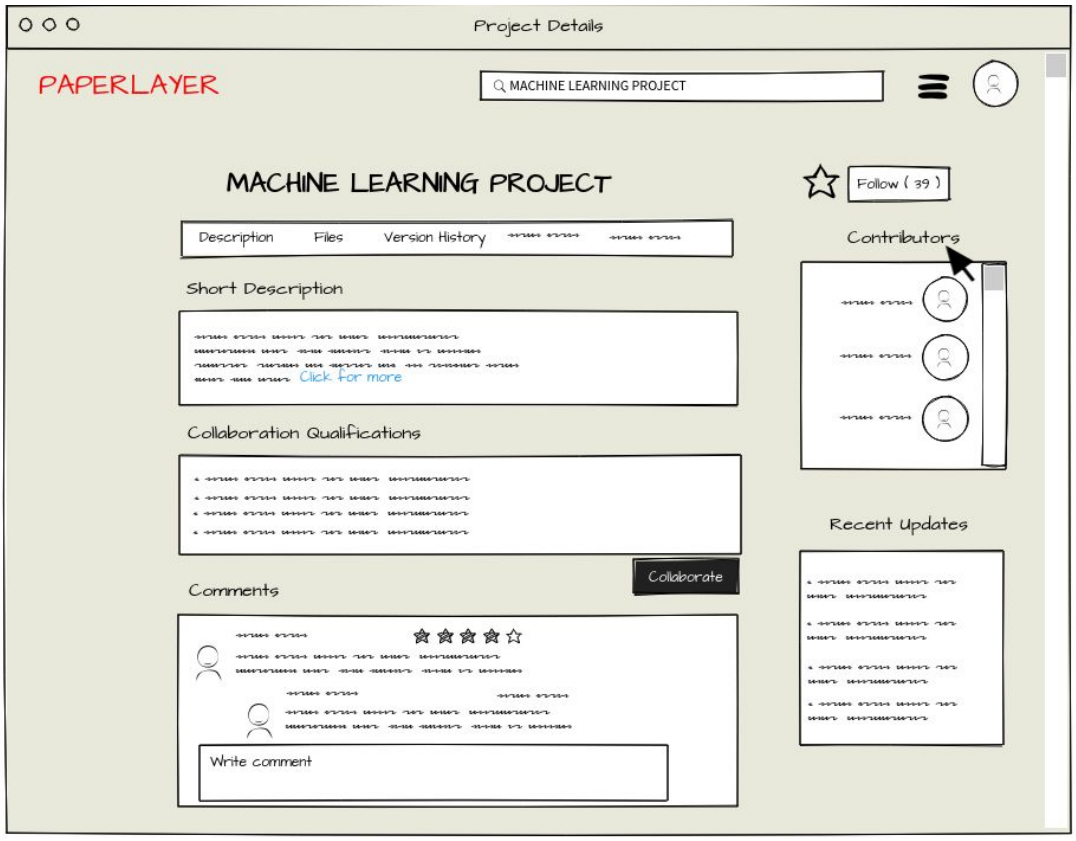
- Hakan searches for a project with keyword "machine learning".



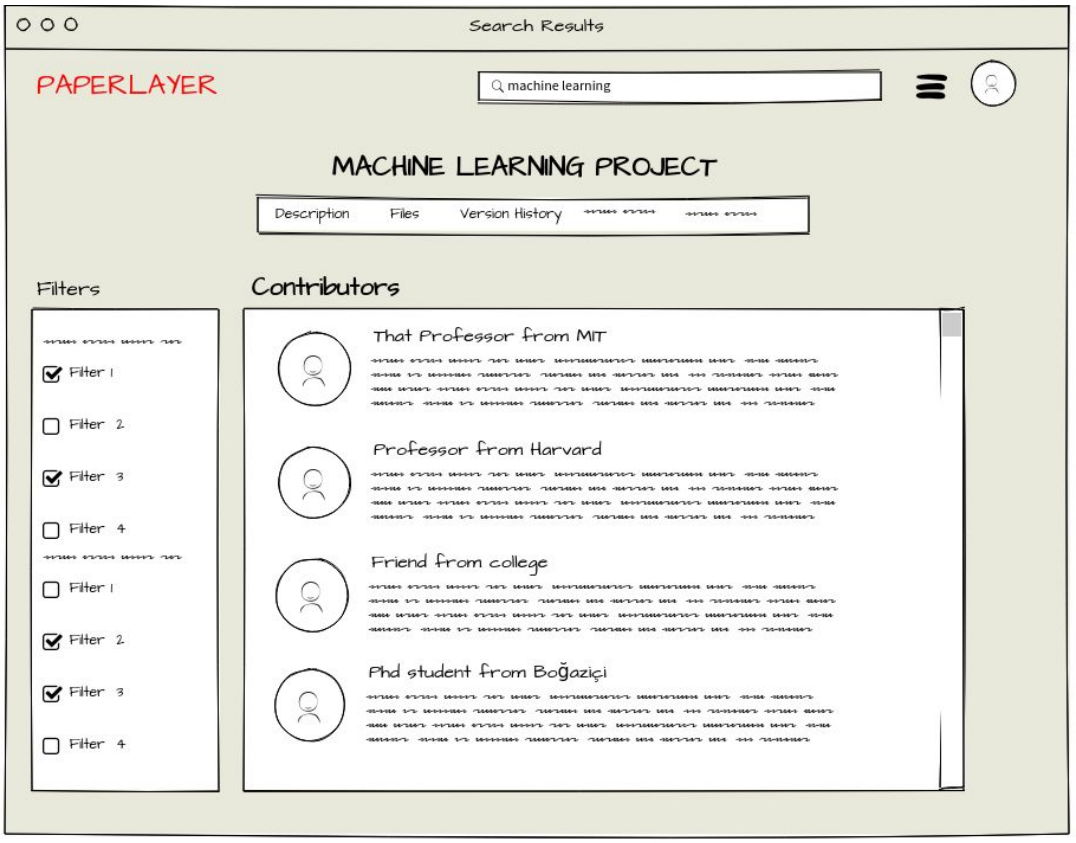
- Hakan goes through projects that are found according to his search and finds an interesting project according to the project's name and a short description.



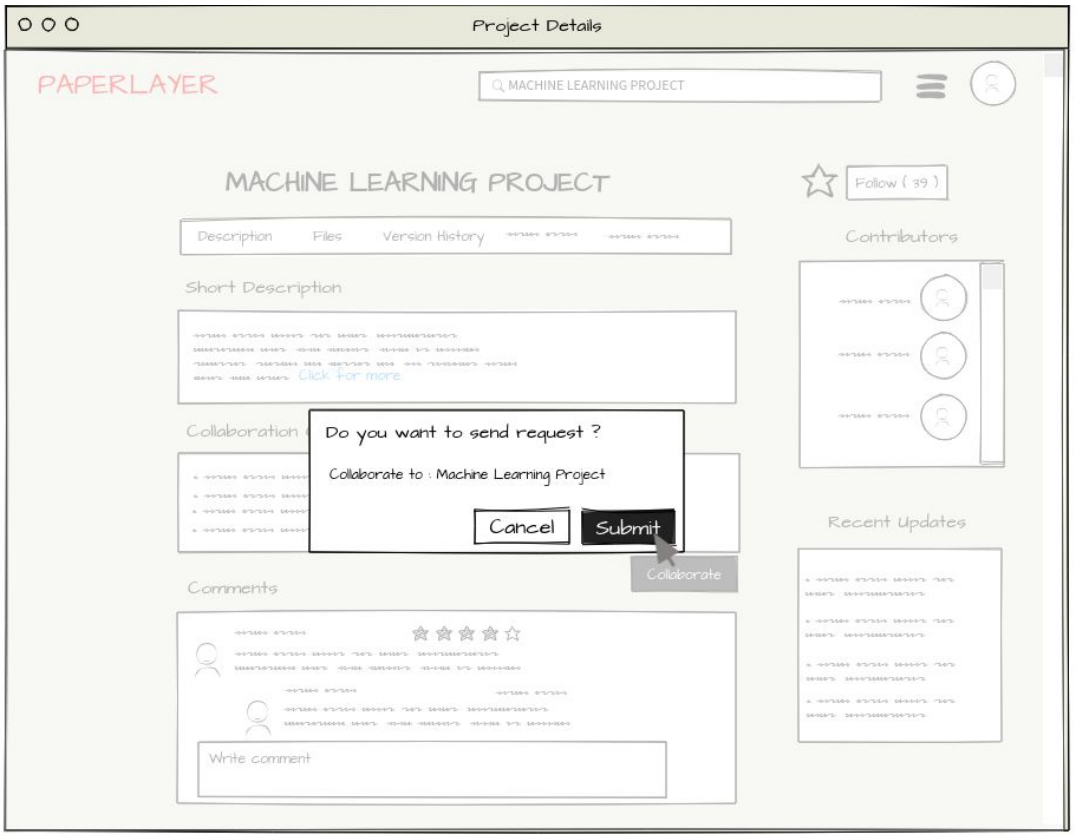
- Hakan goes into the project's details page.Then,he reads the details of the project such as contributor requirements, project goals, due date, workload.



- Hakan looks at the names of authors and sees that one of the authors is an academician at MIT. He thinks that this is a great opportunity for his portfolio.



- Hakan decides to collaborate on the project and sends collaboration request.

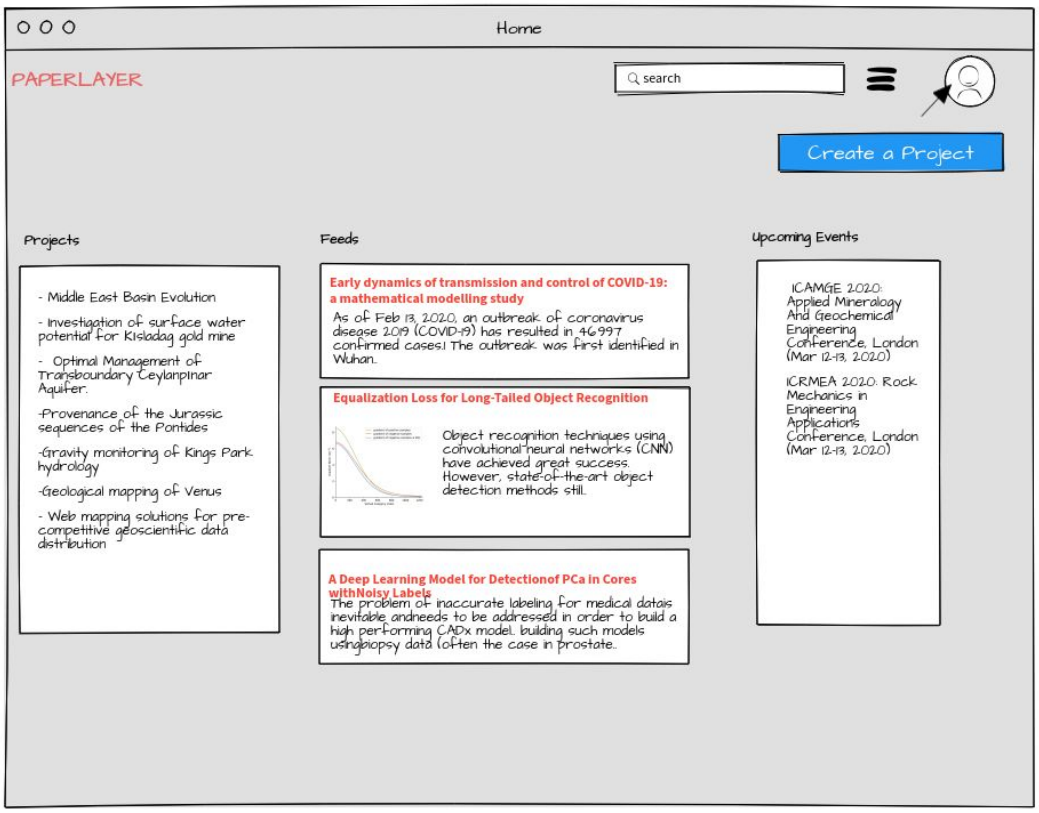


Scenario 3

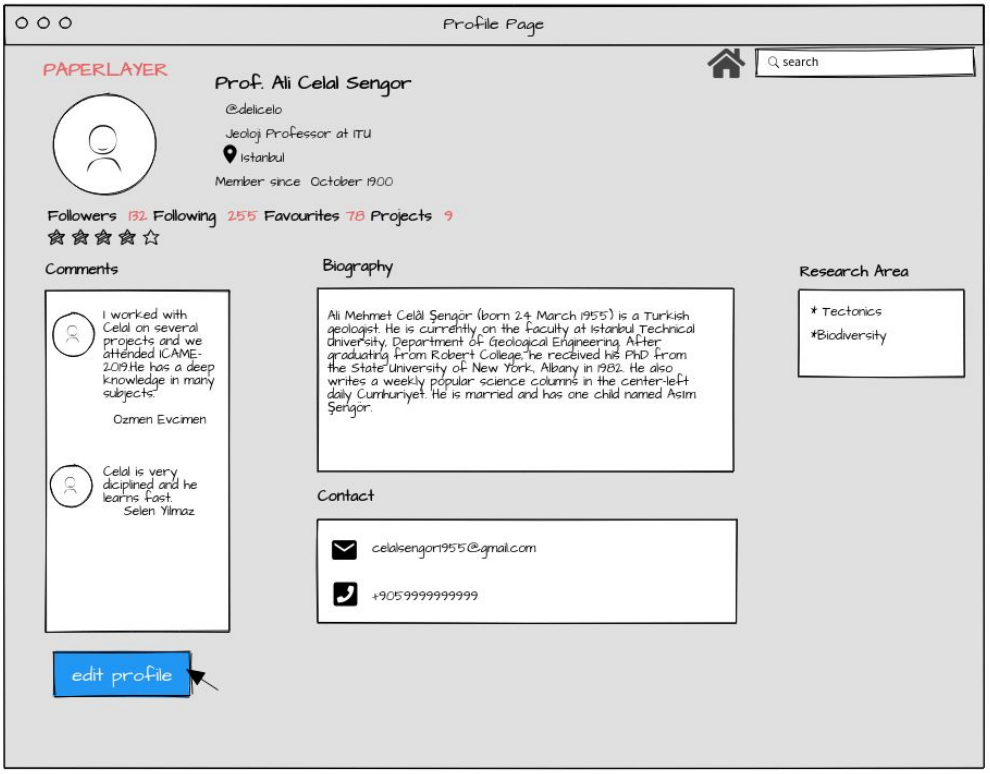
Registered user ,Mehmet, will add a review about another registered user, İlber, which worked on the same project with Mehmet.

Flow

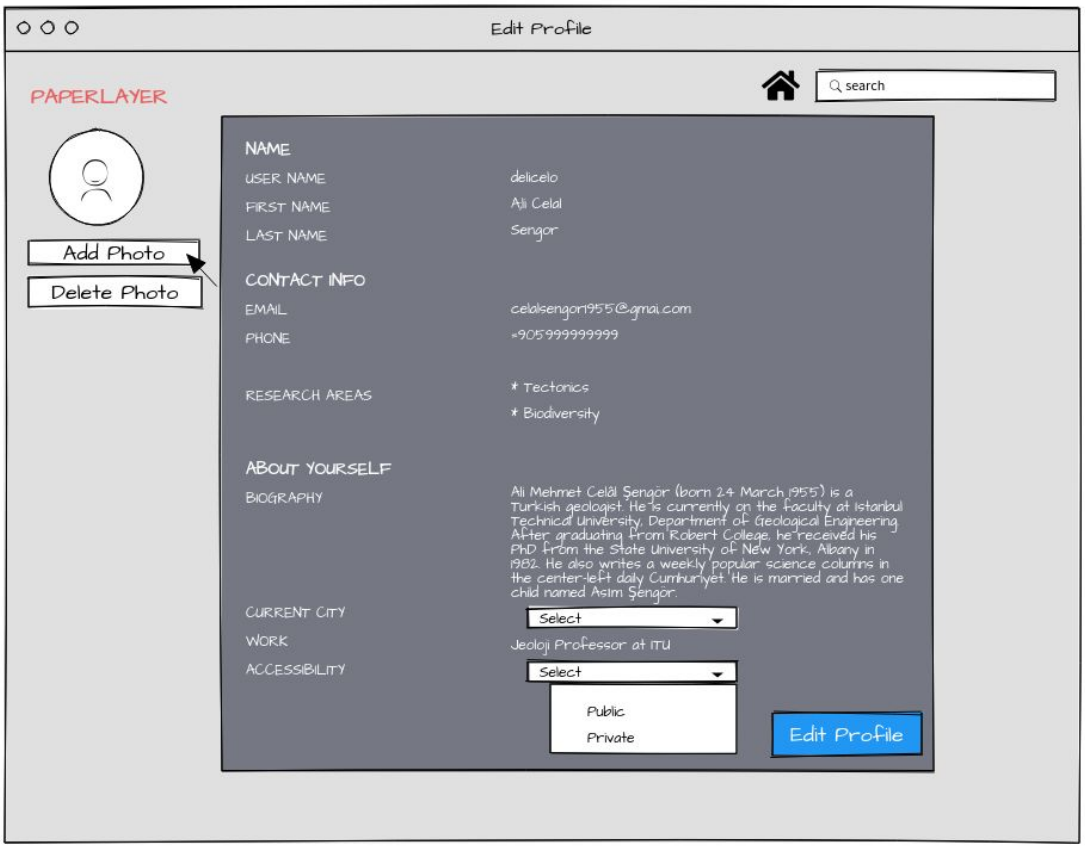
- Mehmet open up the website and clicks on his avatar to go to the home page.



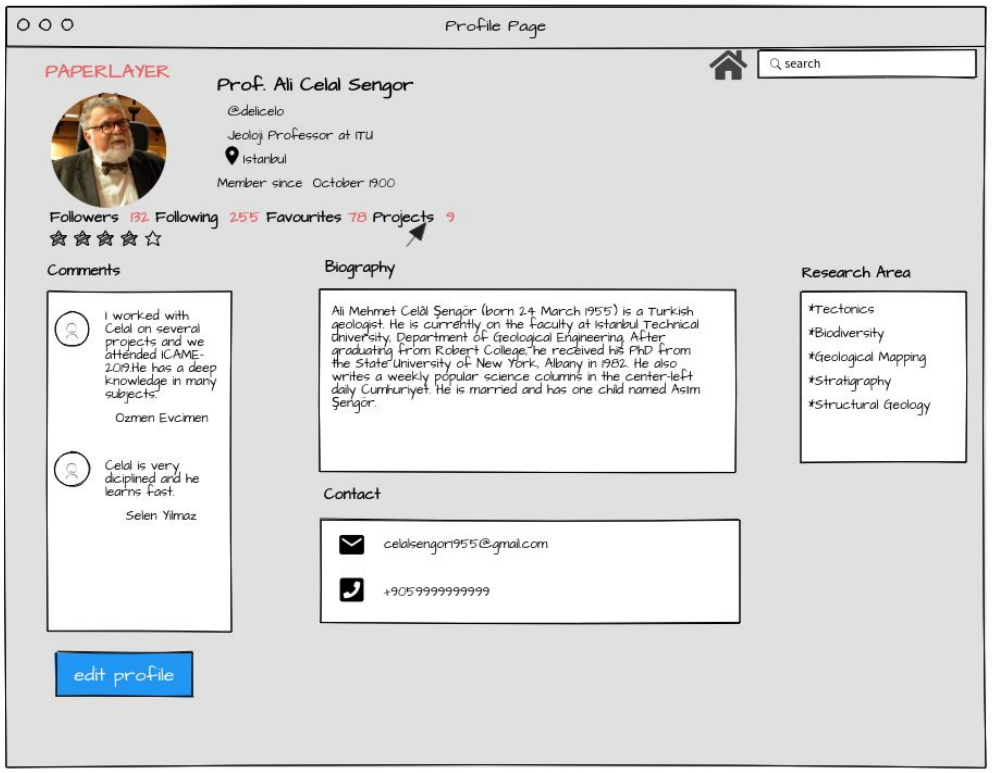
- Mehmet views his profile page and realizes he does not have a profile photo so clicks to edit profile.



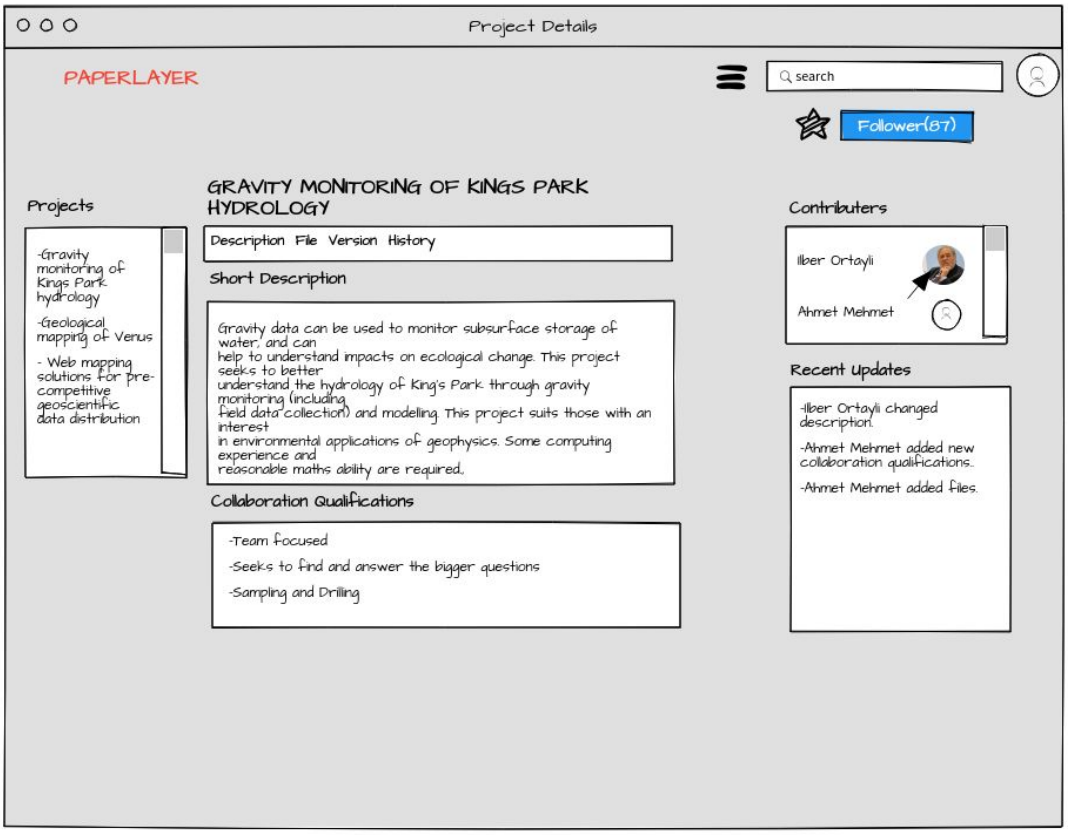
- Mehmet views his profile page and adds profile photo.He also edits his research area to be more specific.



- Mehmet views his own profile then clicks to projects.



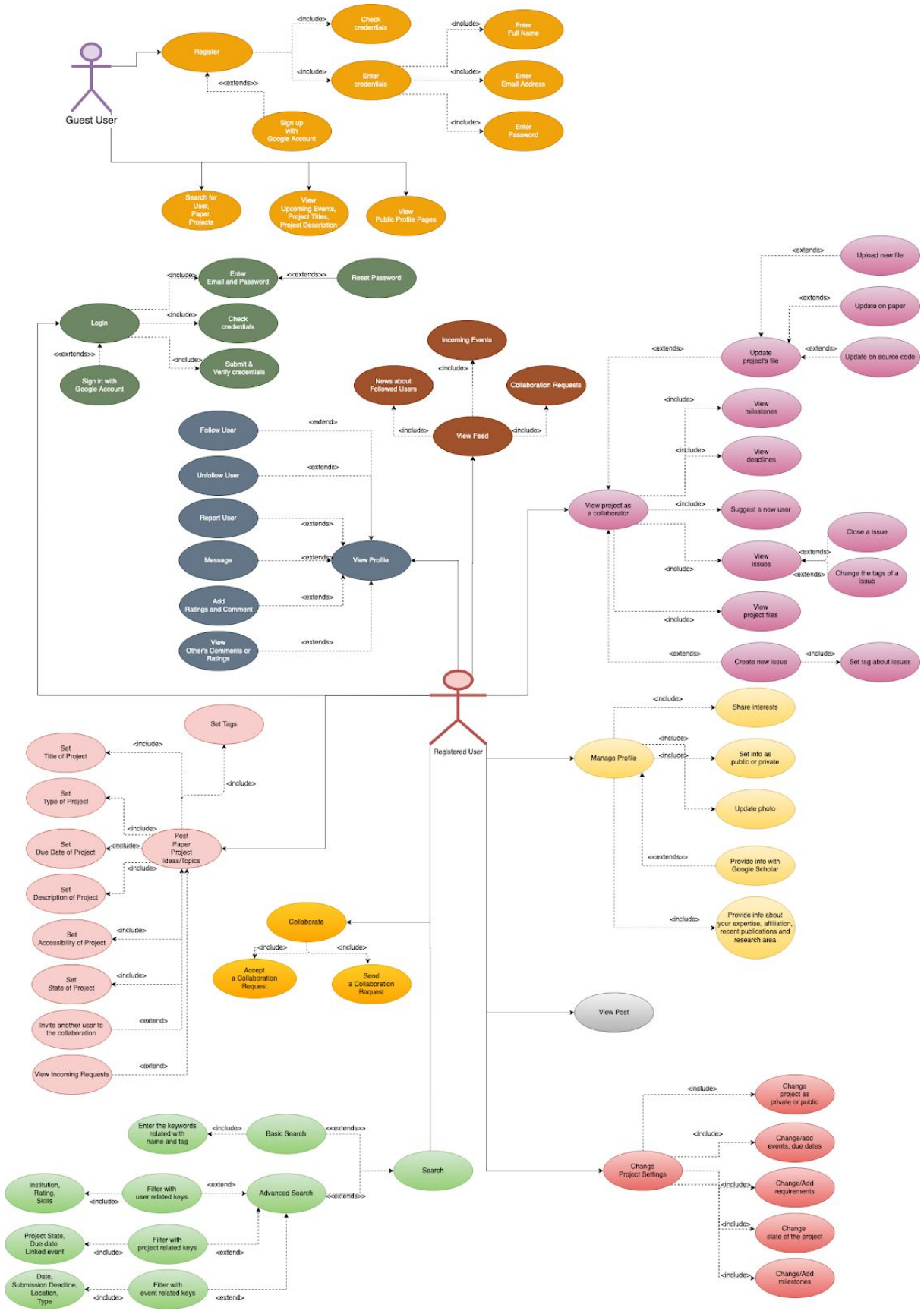
- Mehmet views project details then goes to İlber's profile which he finds under the contributors.



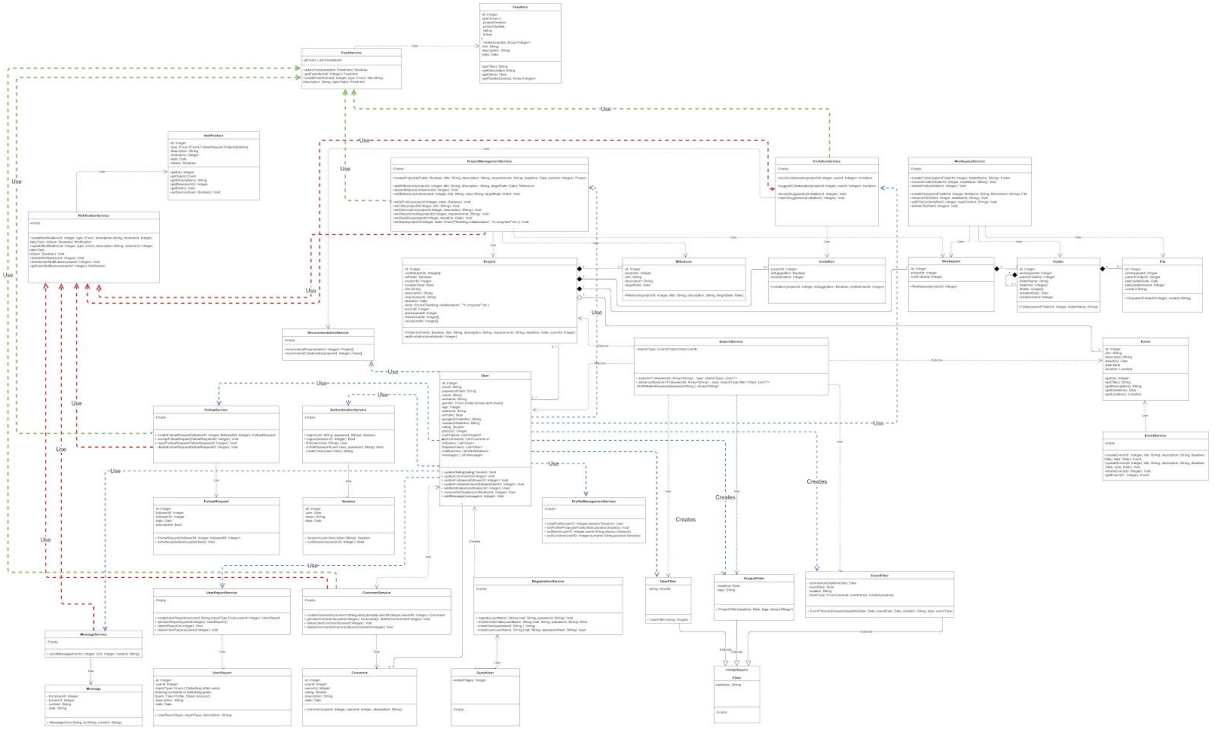
- Mehmet comments about Ilber in his profile.

DIAGRAMS

Use Case Diagrams:
3 team members assigned to create Use case Diagrams. During the process of creating use case diagrams 3 member were communicating and giving opinions and feedbacks to each other frequently. After creating the first version of these diagrams version was reviewed by the other members of the group.After the customer feedback diagrams were updated and reviewed once again. Then we released the final version of Use Case Diagrams.We used draw.io for our diagrams.


Guest User
Register
Check credentials
Enter Full Name
Enter credentials
Enter Email Address
Enter Password
Sign up with Google Account
Search for User, Paper, Projects
View Upcoming Events, Project Titles, Project Description
View Public Profile Pages
Login
Enter Email and Password
Reset Password
Check credentials
Submit & Verify credentials
Sign in with Google Account
Incoming Events
News about Followed Users
Collaboration Requests
View Feed
Follow User
Unfollow User
Report User
Message
Add Ratings and Comment
View Other's Comments or Ratings
View Profile
Upload new file
Update on paper
Update on source code
Update project's file
View milestones
View deadlines
View project as a collaborator
Suggest a new user
Close a issue
View issues
Change the tags of a issue
View project files
Create new issue
Set tag about issues
Registered User
Set Tags
Set Title of Project
Set Type of Project
Set Due Date of Project
Post Paper Project Ideas/Topics
Set Description of Project
Set Accessibility of Project
Set State of Project
Invite another user to the collaboration
View Incoming Requests
Share interests
Manage Profile
Set info as public or private
Update photo
Provide info with Google Scholar
Provide info about your expertise, affiliation, recent publications and research area
Collaborate
Accept a Collaboration Request
Send a Collaboration Request
View Post
Enter the keywords related with name and tag
Basic Search
Search
Institution, Rating, Skills
Filter with user related keys
Advanced Search
Project State, Due date Linked event
Filter with project related keys
Date, Submission Deadline, Location, Type
Filter with event related keys
Change Project Settings
Change project as private or public
Change/add events, due dates
Change/Add requirements
Change state of the project
Change/Add milestones

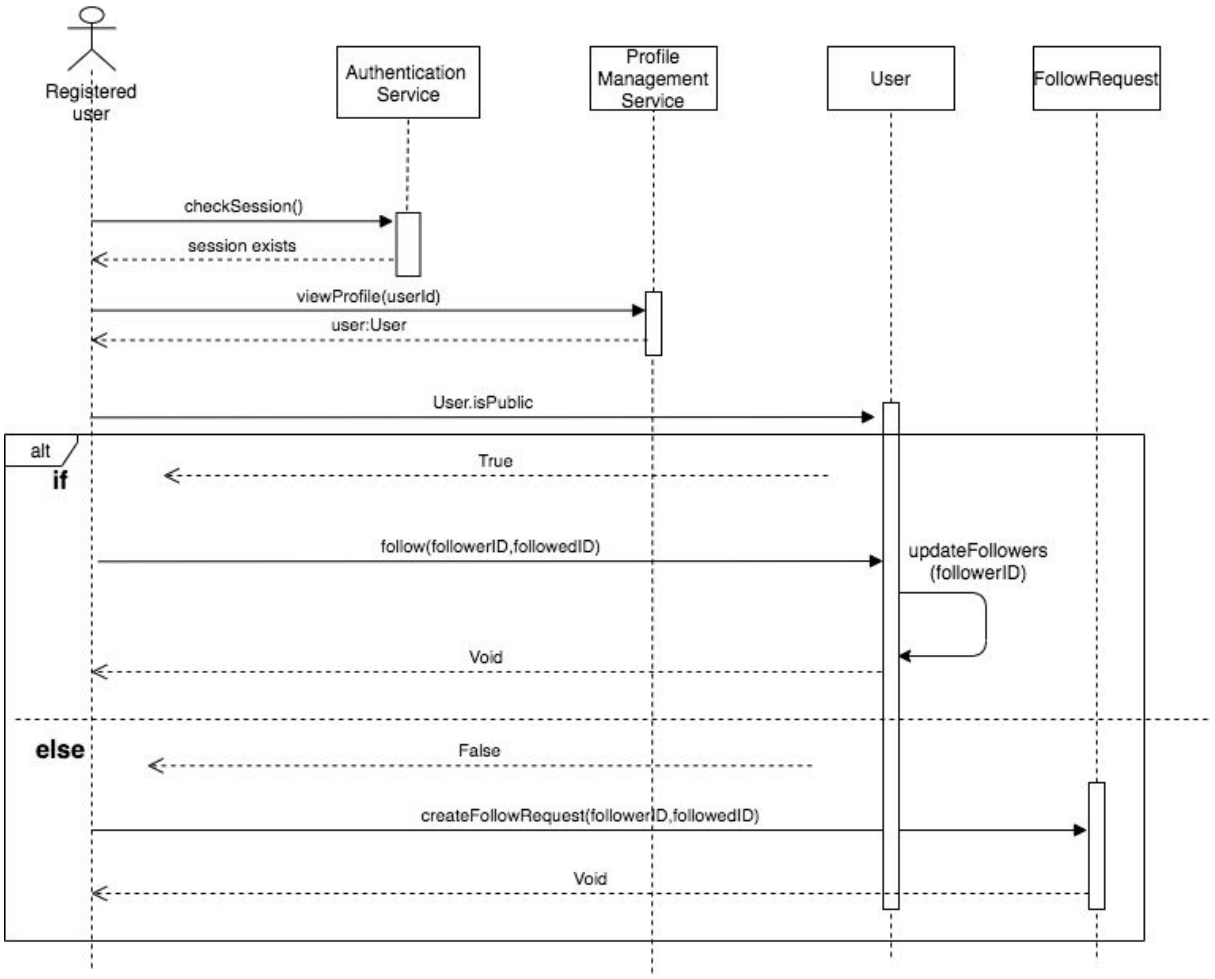
Class Diagram:
Since it is really difficult to divide the task of creating the Class Diagram into subtasks we initiated an online meeting to handle this issue concurrently. To ensure consistency with other parts of our work we took Requirements and Use Case Diagrams as base and built our class diagram accordingly. Before creating the first version diagram were reviewed to avoid typos and other mistakes. After taking the feedback of the customer we made the necessary updates on not only the Class Diagram but also Use Case and Sequence Diagrams.We used draw.io for our diagram.



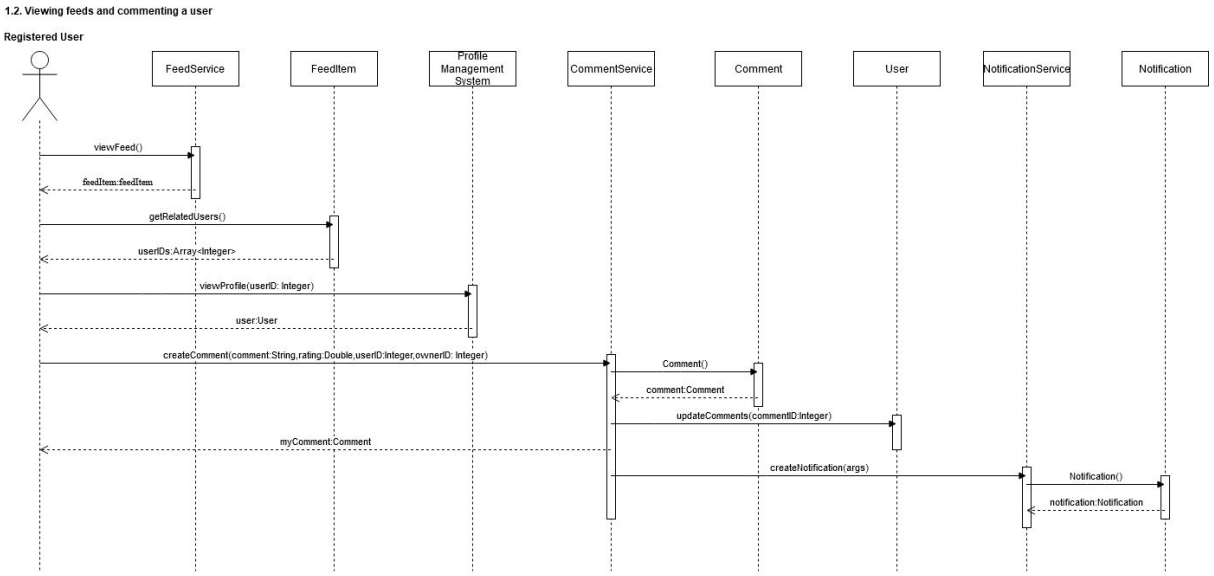
Sequence Diagrams:
We distributed one sequence diagram for each team member. We made sure each diagram is reviewed by at least 2 members in our team and approved by another member. After the feedback we made the required changes to our sequence diagrams improving the consistency in our diagrams.We used draw.io for our diagrams.

Follow User

1.1.Follow User



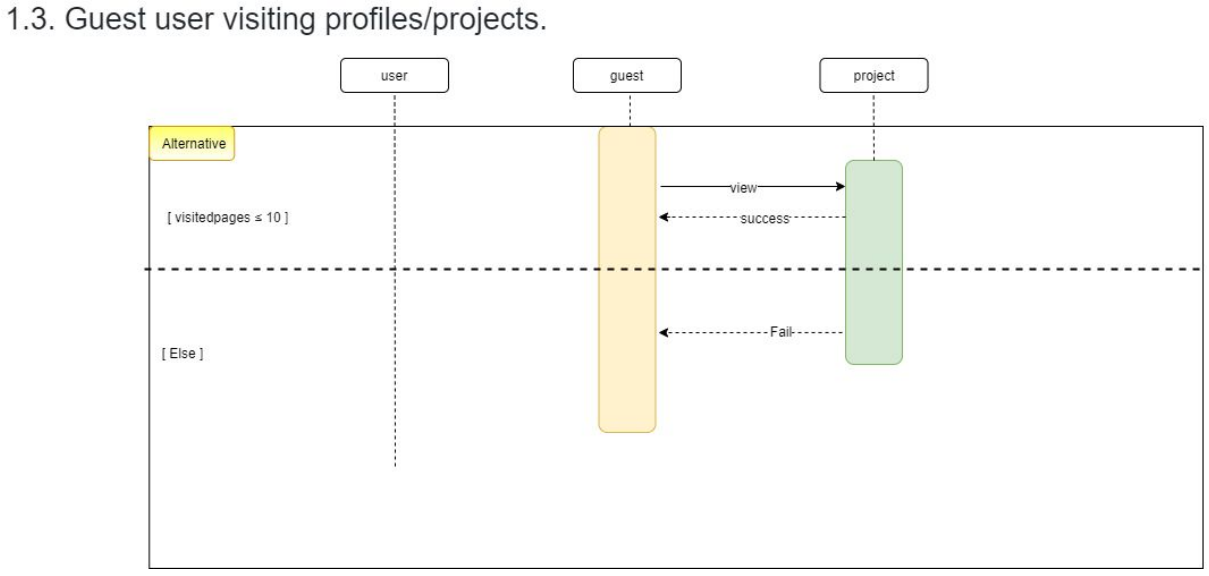
Viewing feeds and commenting user



getRelatedUser function returns user list about given feed item. Such as if a person sees a feed about a project getRelatedUser function returns users that work on that project.

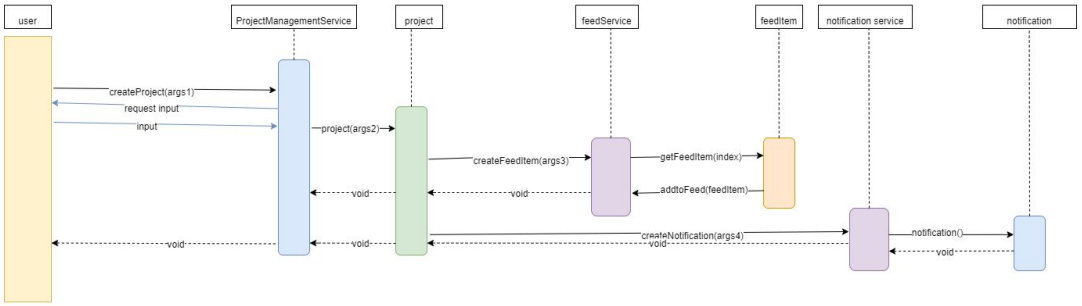
commentService don't need to be wait return from notificationService. It creates comment ,returns created comment to user and sends a notification to commented user.

Guest user visiting profiles/projects



Project Creation

1.5. Project Creation



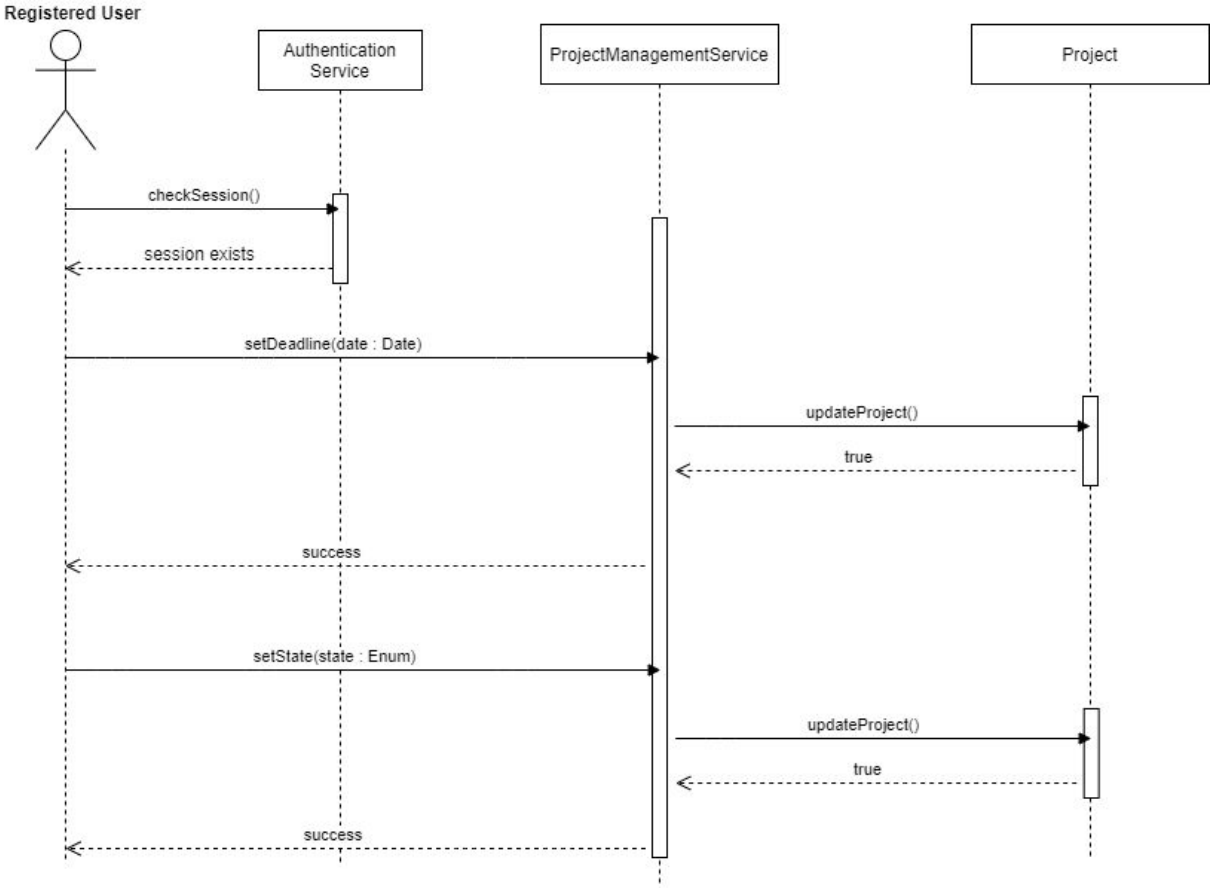
arg1 isPublic: Boolean, title: String, description: String, requirements: String, deadline: Date, eventId: Integer

arg2 : id: Integer, contributorIds: Integer[], isPublic: Boolean, creatorId: Integer, creationDate: Date, title:String, description: String, requirements: String, deadline: Date, state: Enum{"Seeking collaborators", "In progress" etc.}, eventId: Integer, workspaceId: Integer, milestoneIds: Integer[], invitationIds: Integer[]

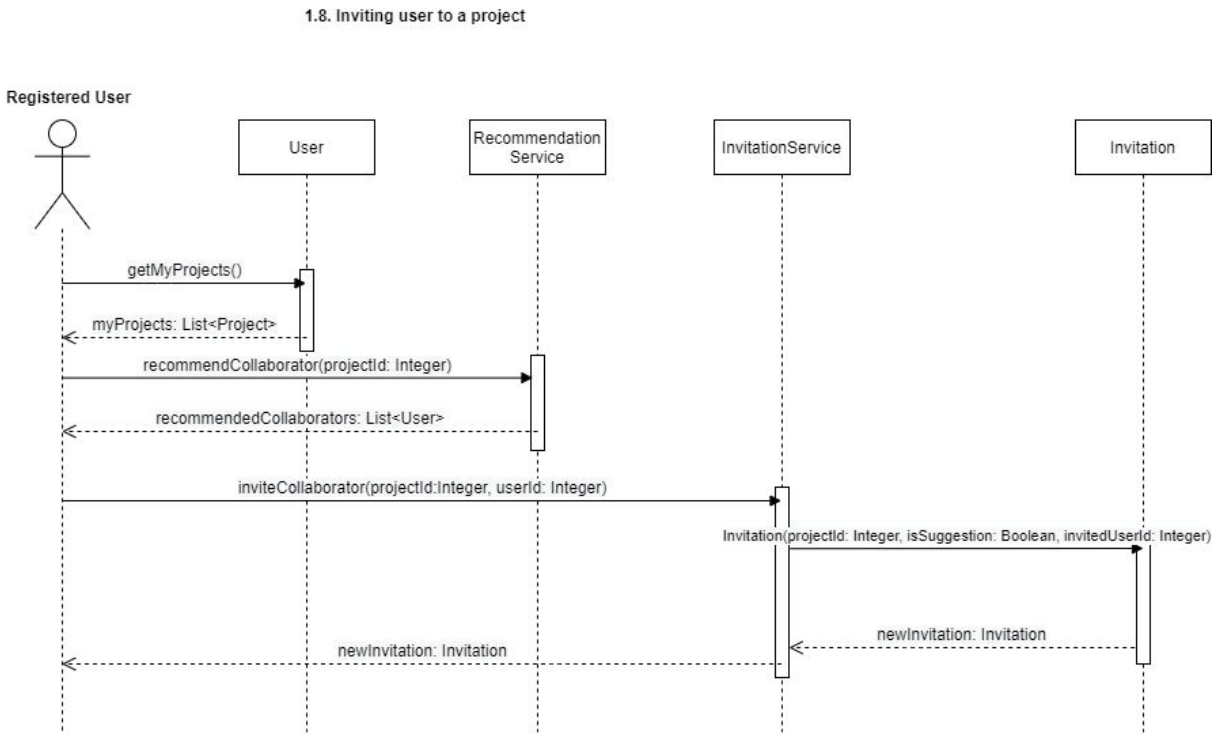
arg3: id: Integer, type: Enum, title:String, description: String, date:Date

arg4 : id: Integer, type: Enum, description:String, receiverId: Integer, date:Date, isSeen: Boolean

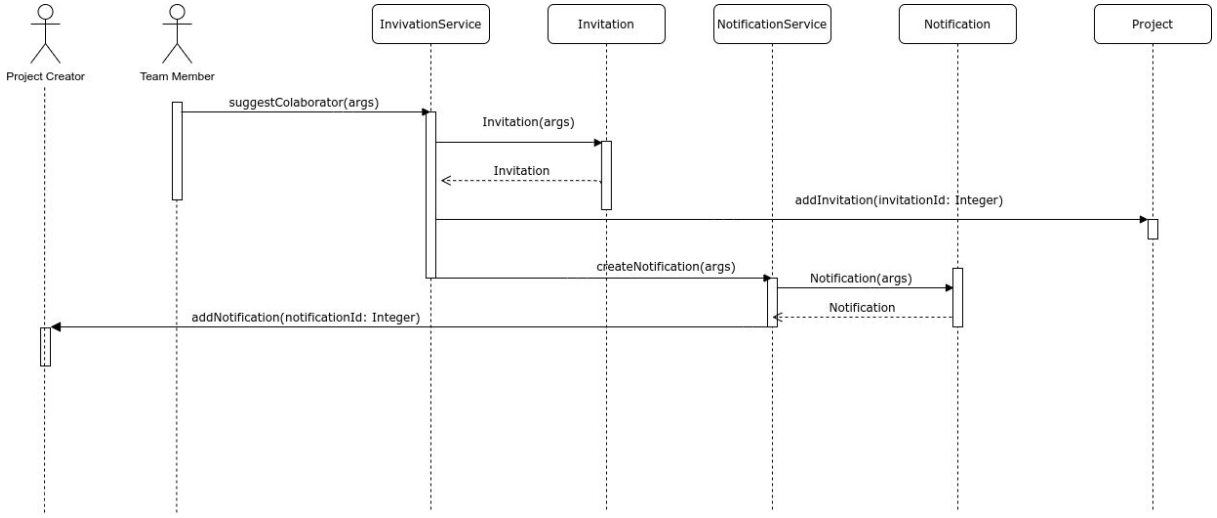
Update on project details



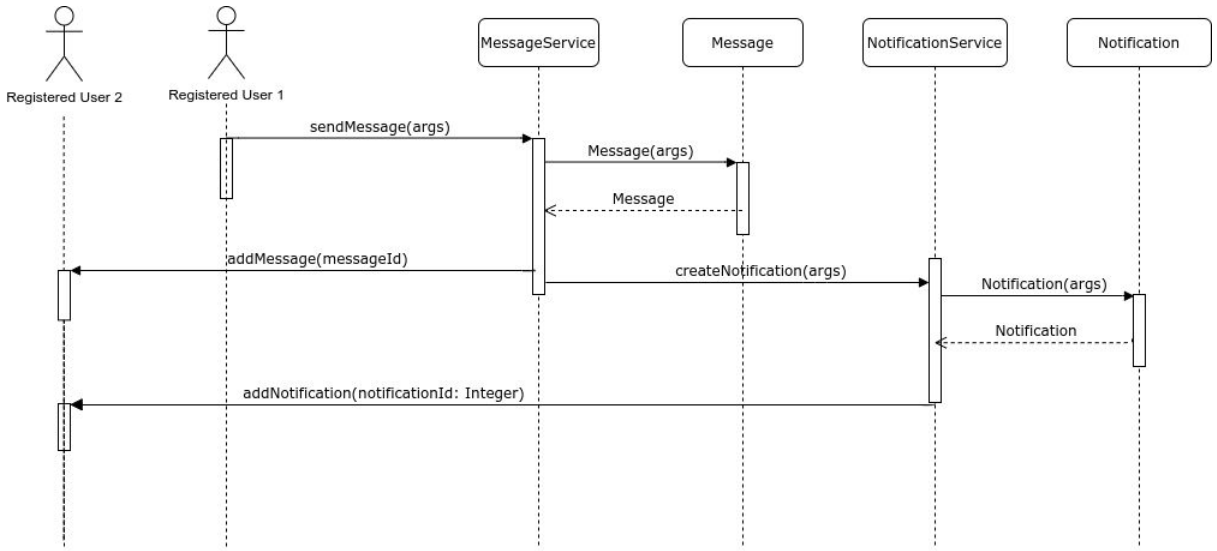
Inviting user to a project



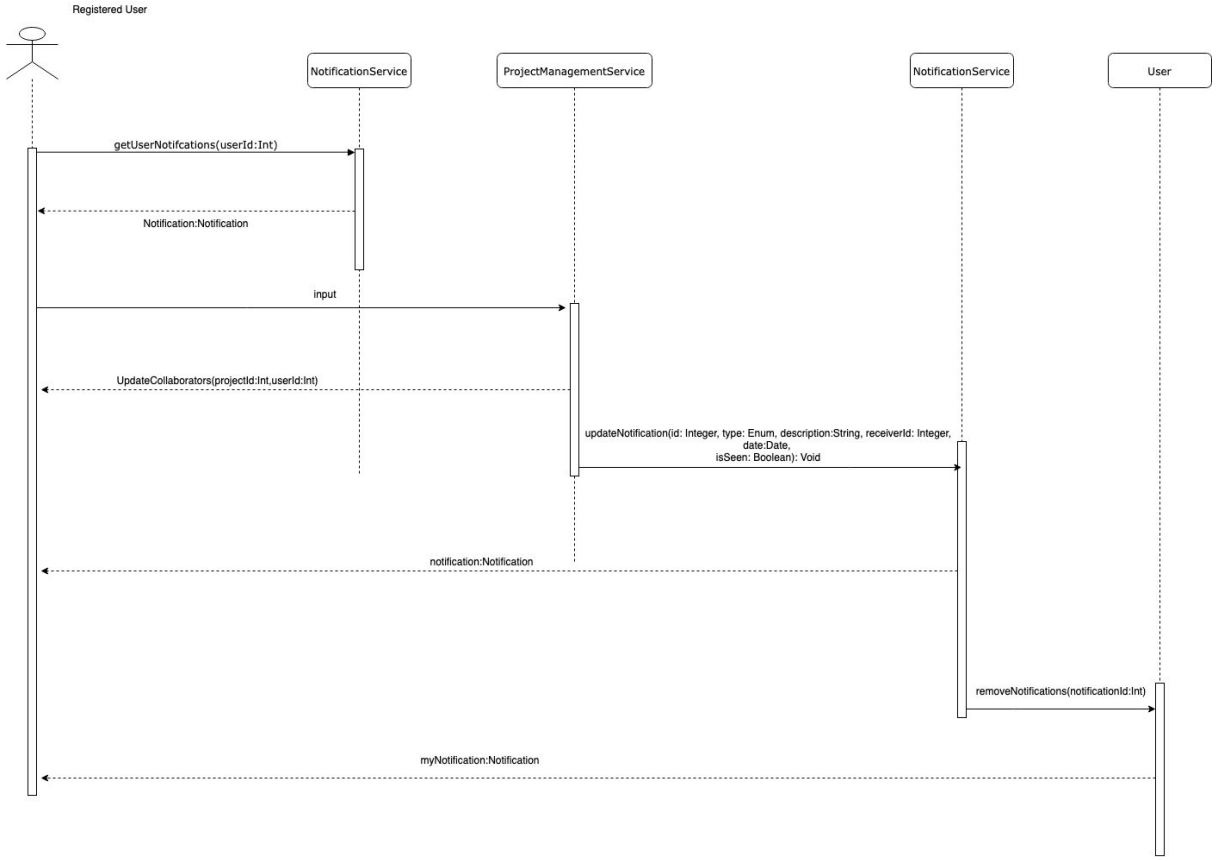
Suggesting a user to a project collaboration



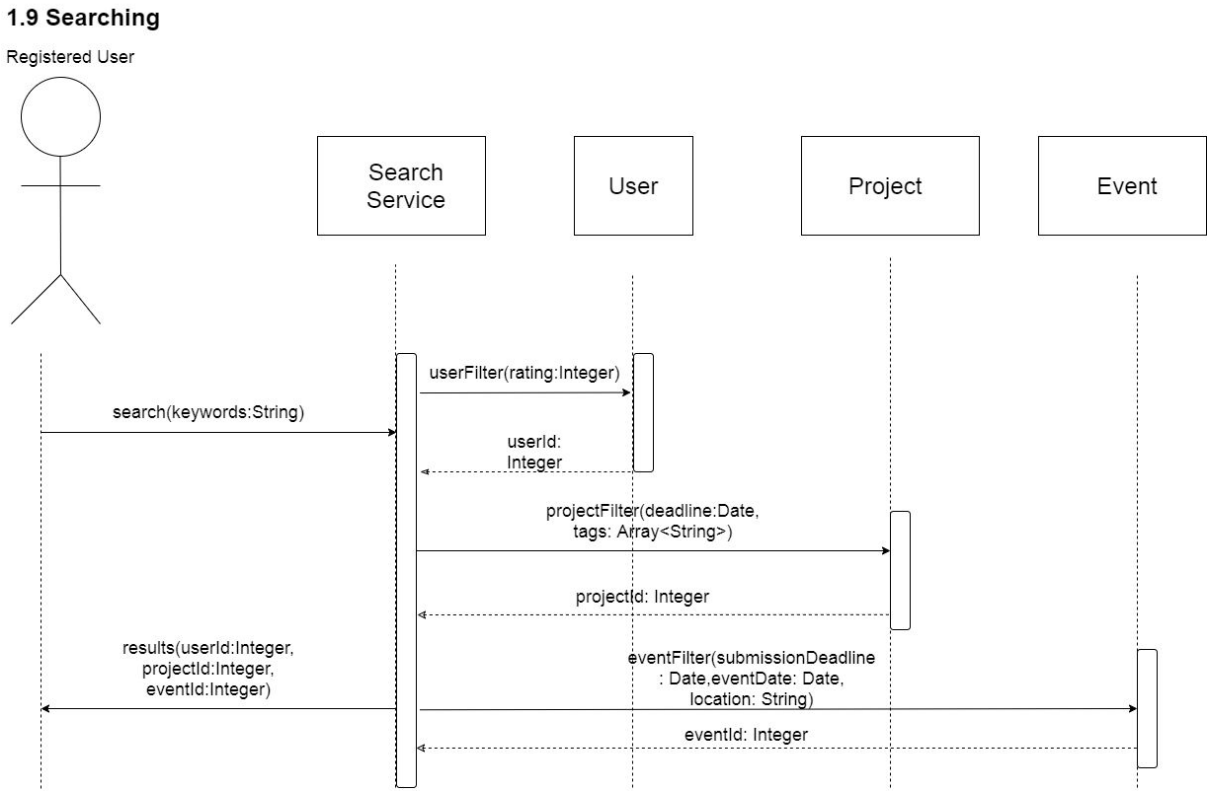
Sending a message to a user



Viewing notifications and accepting/rejecting collaboration request



Searching users,projects and events



PROJECT PLAN AND RAM

Project Plan:
While creating the project plan we created splitted into 2 teams, one for 352 and the other for 451. Our CmpE 352 team gathered the tasks done and future tasks to create our project plan for this term.On the other hand Our Cmpe 451 team created a high level design for the next term of our project. Since our work for the next term has ambiguity we made our 451 plan acknowledging there will be plenty of changes in this plan. Then according to the feedback from customer we added necessary prerequisite relations and made corrections in our plan. When reviewing our project plans we swapped our teams so that every person has a saying on the plans also making it easier to fix our mistakes.We used projectlibre for our project plans.

CMPE 352

Source file

CMPE 451

Source file

		Name	Duration	Start	Finish	Resource Names	Predecessors
1		**Backend**	**62 days**	**10/5/20 8:00 AM**	**12/29/20 5:00 PM**	**Hande Karabul,Bar Ba...**	
2		Register Endpoint	7 days	10/5/20 8:00 AM	10/13/20 5:00 PM		
3		Login Endpoint	7 days	10/5/20 8:00 AM	10/13/20 5:00 PM		
4		Login Endpointwith Geo...	7 days	10/5/20 8:00 AM	10/13/20 5:00 PM		
5		Register Endpoint	7 days	10/5/20 8:00 AM	10/13/20 5:00 PM		
6		Logout Endpoint	7 days	10/5/20 8:00 AM	10/13/20 5:00 PM		
7		Password Retrieval Endp...	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
8		Profile Page Linking Syst...	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
9		Profile Privacy Endpoint	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
10		User Report Endpoint	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
11		**Follow/Unfollow endp...**	**7 days**	**10/14/20 8:00 AM**	**10/22/20 5:00 PM**		
12		Send request endpoint	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
13		Project CreateDeleteE...	7 days	10/23/20 8:00 AM	11/2/20 5:00 PM		
14		Project Privacy Endpoint	7 days	11/3/20 5:00 PM	11/12/20 5:00 PM		
15		Project ViewAddEventE...	7 days	11/3/20 5:00 PM	11/12/20 5:00 PM		
16		Project ViewAddDeadli...	7 days	11/3/20 5:00 PM	11/12/20 5:00 PM		
17		Specify Project Req. End...	7 days	11/3/20 5:00 PM	11/12/20 5:00 PM		
18		Project MembershipEnd...	7 days	11/13/20 5:00 PM	11/24/20 5:00 PM		
19		Recommendation Endpoint	7 days	11/13/20 5:00 PM	11/24/20 5:00 PM		
20		Suggest Collaborator En...	7 days	11/13/20 5:00 PM	11/24/20 5:00 PM		
21		Profile Rating/Comment ...	7 days	11/13/20 5:00 PM	11/24/20 5:00 PM		
22		Projects View Workspace ...	7 days	11/25/20 5:00 PM	12/4/20 5:00 PM		
23		Text Editor System	7 days	11/25/20 5:00 PM	12/4/20 5:00 PM		
24		File Upload System	7 days	11/25/20 5:00 PM	12/4/20 5:00 PM		
25		Search projects/users E...	7 days	12/5/20 8:00 AM	12/15/20 5:00 PM		
26		Set search filters/sorting...	7 days	12/5/20 8:00 AM	12/15/20 5:00 PM		
27		Semantic Search System	7 days	12/5/20 8:00 AM	12/15/20 5:00 PM		
28		Notification System	7 days	12/16/20 8:00 AM	12/24/20 5:00 PM		
29		Dockerizing & Deploying...	3 days	12/25/20 8:00 AM	12/29/20 5:00 PM		
30		**Web**	**62 days?**	**10/5/20 8:00 AM**	**12/29/20 5:00 PM**	**Mehir Efe Kaya,Fatih Alg...**	
31		Register Page	7 days	10/5/20 8:00 AM	10/13/20 5:00 PM		
32		Login Page	7 days	10/5/20 8:00 AM	10/13/20 5:00 PM		
33		Profile Page	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
34		Edit Profile Page	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
35		Report Mechanism	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
36		Follow Mechanism	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
37		Events Page	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
38		**"Create Project" Page**	**7 days**	**10/23/20 8:00 AM**	**11/2/20 5:00 PM**		
39		Set The State	7 days	10/23/20 8:00 AM	11/2/20 5:00 PM		
40		Set Requirements	7 days	10/23/20 8:00 AM	11/2/20 5:00 PM		
41		Set Privacy	7 days	10/23/20 8:00 AM	11/2/20 5:00 PM		
42		Set Deadline	7 days	10/23/20 8:00 AM	11/2/20 5:00 PM		
43		View/Add Events	7 days?	11/3/20 5:00 PM	11/12/20 5:00 PM		
44		View/Add Deadline	7 days?	11/3/20 5:00 PM	11/12/20 5:00 PM		
45		View/Change Requireme...	7 days?	11/3/20 5:00 PM	11/12/20 5:00 PM		
46		Invite Collaborator	7 days?	11/13/20 5:00 PM	11/24/20 5:00 PM		
47		Suggest Collaborator	7 days?	11/13/20 5:00 PM	11/24/20 5:00 PM		
48		Comment Mechanism	7 days	11/13/20 5:00 PM	11/24/20 5:00 PM		
49		View Workspace	7 days?	11/25/20 5:00 PM	12/4/20 5:00 PM		
50		Text Editor	7 days?	11/25/20 5:00 PM	12/4/20 5:00 PM		
51		File Upload	7 days?	11/25/20 5:00 PM	12/4/20 5:00 PM		
52		**Search mechanism**	**7 days?**	**12/5/20 8:00 AM**	**12/15/20 5:00 PM**		
53		Search Bar	7 days?	12/5/20 8:00 AM	12/15/20 5:00 PM		
54		Results Page	7 days?	12/5/20 8:00 AM	12/15/20 5:00 PM		
55		Filter/Sort Section	7 days?	12/5/20 8:00 AM	12/15/20 5:00 PM		
56		Notifications Page	7 days?	12/16/20 8:00 AM	12/24/20 5:00 PM		
57		Home Page	7 days?	12/16/20 8:00 AM	12/24/20 5:00 PM		
58		Feeds Page	7 days?	12/16/20 8:00 AM	12/24/20 5:00 PM		
59		Dockerizing & Deploying...	3 days	12/25/20 8:00 AM	12/29/20 5:00 PM		
60		**Mobile**	**62 days?**	**10/5/20 8:00 AM**	**12/29/20 5:00 PM**	**Ramazan Koç,Furkan Ca...**	
61		Register Page	7 days	10/5/20 8:00 AM	10/13/20 5:00 PM		
62		Login Page	7 days	10/5/20 8:00 AM	10/13/20 5:00 PM		
63		Profile Page	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
64		Edit Profile Page	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
65		Report Mechanism	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
66		Follow Mechanism	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
67		Events Page	7 days	10/14/20 8:00 AM	10/22/20 5:00 PM		
68		**"Create Project" Page**	**7 days**	**10/23/20 8:00 AM**	**11/2/20 5:00 PM**		
69		Set The State	7 days	10/23/20 8:00 AM	11/2/20 5:00 PM		
70		Set Requirements	7 days	10/23/20 8:00 AM	11/2/20 5:00 PM		
71		Set Privacy	7 days	10/23/20 8:00 AM	11/2/20 5:00 PM		
72		Set Deadline	7 days	10/23/20 8:00 AM	11/2/20 5:00 PM		
73		View/Add Events	7 days?	11/3/20 5:00 PM	11/12/20 5:00 PM		
74		View/Add Deadline	7 days?	11/3/20 5:00 PM	11/12/20 5:00 PM		
75		View/Change Requireme...	7 days?	11/3/20 5:00 PM	11/12/20 5:00 PM		
76		Invite Collaborator	7 days?	11/13/20 5:00 PM	11/24/20 5:00 PM		
77		Suggest Collaborator	7 days?	11/13/20 5:00 PM	11/24/20 5:00 PM		
78		Comment Mechanism	7 days	11/13/20 5:00 PM	11/24/20 5:00 PM		
79		View Workspace	7 days?	11/25/20 5:00 PM	12/4/20 5:00 PM		
80		Text Editor	7 days?	11/25/20 5:00 PM	12/4/20 5:00 PM		
81		File Upload	7 days?	11/25/20 5:00 PM	12/4/20 5:00 PM		
82		**Search mechanism**	**7 days?**	**12/5/20 8:00 AM**	**12/15/20 5:00 PM**		
83		Search Bar	7 days?	12/5/20 8:00 AM	12/15/20 5:00 PM		
84		Results Page	7 days?	12/5/20 8:00 AM	12/15/20 5:00 PM		
85		Filter/Sort Section	7 days?	12/5/20 8:00 AM	12/15/20 5:00 PM		
86		Notifications Page	7 days?	12/16/20 8:00 AM	12/24/20 5:00 PM		
87		Home Page	7 days?	12/16/20 8:00 AM	12/24/20 5:00 PM		
88		Feeds Page	7 days?	12/16/20 8:00 AM	12/24/20 5:00 PM		

		Name	Duration	Start	Finish	Resource Names	Predecessors
89		Creating release apk & P...	3 days	12/25/20 8:00 AM	12/29/20 5:00 PM		

RAM:
We created our Responsibility Assignment Matrix using google docs.
We discussed the RAM in our meeting and assigned a team to create the table.
After approval every contributor filled their parts in the matrix.

L - Lead C - Contributor N - None A-Approval R-Review	Mahir Efe KAYA	Yahya	Ramazan	Ali Furkan Budak	Yusuf Bayam	Hande	Fatih Akgöz	Mustafa Küçük	Barış Başmak	Furkan Cansever
Project Repository										
Creating Personel Wikipages	C	C	C	C	C	C	C	C	C	C
Creating Wiki Homepage	L	C	N	C	C	C	C	R	N	C
Customizing README.md	R	C	N	N	L	N	N	N	N	N
Taking meeting notes	C	C	N	N	R	N	N	N	N	N
Creating Discord Channel	A	L	A	N	N	A	N	N	N	N
Creating Slack Channel	A	N	A	L	N	A	N	N	N	N
Creating a Communication plan	C	L	R	N	A	R	N	N	N	N
Creating Labels	R	R	A	R	C	R	R	R	N	L
Opening a doodle to decide the meeting time	A	N	N	N	N	N	N	N	L	N
Creating Trello	A	N	L	N	N	N	N	N	N	N
Requirements										
Determining the main points from the project description	C	C	C	C	C	C	C	C	C	C
Preparing a basic functional requirements section	A	C	C	C	N	C	R	N	N	C
Preparing the functional requirements section	C	C	C	C	C	C	R	N	N	N
Preparing the nonfunctional section	R	N	R	N	R	R	N	L	N	R
Prepare the Security Requirements	A	N	N	N	N	N	N	C	N	N
Prepare the Performance Requirements	N	N	N	N	N	N	N	L	N	N
Prepare the glossary	L	C	R	R	R	R	N	N	N	C
Prepare the protocols and Ethical Requirements	A	N	N	N	N	N	N	C	N	N
Customer Meeting										
Creating questions for the meeting	C	L	C	C	C	C	C	C	N	N
Arrange the customer meeting	N	L	N	C	N	C	N	N	N	R
Attending customer meeting	N	C	N	C	N	C	N	N	N	C
Asking questions to the customer	N	C	N	C	N	C	N	N	N	C
Taking meeting notes	N	C	N	R	R	R	N	N	N	N
Documenting meeting notes	A	L	N	R	N	R	N	N	N	N
Scenarios And Mockups										
Scenario 1	R	N	N	N	N	N	C	C	N	C
Scenario 2	C	C	C	N	N	N	N	R	N	A
Scenario 3	R	N	N	C	C	C	N	N	N	N
Mockup for Scenario 1	A	N	A	N	N	N	C	C	N	C
Mockup for Scenario 2	C	C	C	N	N	N	N	N	N	R
Mockup for Scenario 3	A	N	A	C	C	C	N	N	N	N
Mobile Mockup for Scenario 1	R	N	N	N	N	N	N	N	L	N
Design - UML Diagrams										
Online editor decision for drawing diagrams.	A	N	N	N	N	N	N	N	N	C
Create Use-Case Diagram	L	N	N	N	N	N	C	N	N	C
Create Class Diagram	R	C	C	C	C	C	N	N	N	N
Create Sequence Diagram	C	C	C	C	C	C	C	C	N	C
Update Use-Case Diagram	L	N	N	N	C	N	R	N	N	A
Update Class Diagram	R	C	C	C	C	C	C	N	N	N
Update Sequence Diagram	C	C	C	C	N	C	C	N	N	C
Final decision for project name.	A	C	C	C	C	C	C	C	L	C
Project Plan										
Collection of all the meeting notes	R	C	N	N	C	N	N	N	L	N
Collection of all the done things from the personal records	C	C	C	C	C	C	C	C	C	C
Deriving future tasks for the project plan 352	R	N	C	N	C	R	N	N	L	N
Deriving future tasks for the project plan 451	C	N	N	R	N	C	C	N	N	N
Gathering some details that our plan's lacking.	A	C	N	N	C	N	N	N	L	N
Adding more details and designing the project plan	A	R	R	C	C	R	N	N	N	C
RAM	L	N	C	N	N	N	N	A	C	C
Review and Finalization										
Review mockups	C	N	C	N	C	C	N	R	N	C
Review Requirements	C	N	C	C	C	C	C	C	C	C
Reviewing Class Diagram	R	N	L	C	C	C	N	N	C	N
Reviewing User Diagram	L	N	R	N	N	R	N	N	N	C
Reviewing Sequence Diagram	C	N	C	C	C	C	C	C	N	C

CONTRIBUTIONS

Barış Başmak:

- I Created the mobile mockup for scenario 1
- Worked on reviewing the class and sequence diagrams
- I worked on the first part of planning, entered the past activities in Project Libre and planned the rest of CmpE 352.
- Contributed on creating the RAM.
- Contributed on creating the milestone.

Yusuf Bayam:

- I created and edited ReadMe.
- Updated and reviewed communication plan.
- Contributed and reviewed system requirements.
- Created scenario 3 user story with other teammates.
- Created mockup for scenario 3 with other teammates.
- Created ‘Project’ related classes in class diagram with other teammates.
- Created and completed one sequence diagram.
- Completed the second part of Cmpe352 project plan using Project Libre.

Ramazan Koç:

- I created Trello channel.
- I reviewed communication plan.
- Contributed in preparing basic functional requirements and functional requirements.
- I reviewed glossary and non-functional section of requirements.
- Contributed in preparing customer meeting questions.
- I created scenario 2 with other teammates.
- Contributed mockup for scenario 2 with other teammates.
- I reviewed other mockups.
- I created class diagram with other teammates.
- I created sequence diagram 1.2.
- Contributed in preparing future tasks for cmpe352 project plan.
- Contributed in creating RAM.

Furkan Cansever:

- I created and edited labels.
- I edited README page
- Contributed and reviewed user requirements.
- I created scenario 1 with other teammates.
- I created mockup for scenario 1 with teammates.
- I created and reviewed use-case diagram with other teammates.
- I created sequence diagram 1.10.
- Contributed in preparing tasks for cmpe352 project plan.
- Contributed in creating RAM.

Ali Furkan Budak:

- Created the Slack workspace
- Created and filled Sign Up, Sign In, Academic Collaboration, Project Management and Profile titles under User Requirements.
- Created Scenario 3 together with Hande and Yusuf
- Created Project Details and Home page for mockup 3
- Reviewed User Requirements
- Created and completed Milestone, InvitationService, Workspace, WorkspaceService, Folder, RecommendationService classes in class diagram.
- Added methods and properties to Project and ProjetManagementService classes
- Reviewed File and Invitation classes
- Created and reviewed Sequence Diagram 1.8 (Inviting User to an Existing Project)
- Created Project Plan for 451 using ProjectLibre

Mahir Efe KAYA:

- I created and designed homepage.
- Created, filled glossary, project creation and updated many other parts accordingly to the feedback
- Created Scenario 2 together with Ramazan and Yahya
- Created Mockup 2 with Yahya
- Reviewed and updated requirements accordingly to the feedback
- Created user diagram with Fatih and Furkan
- Created the sequence diagrams of “Guest user visiting project page” and “Project Creation”
- Derived 451 tasks from Requirements
- Created RAM with Barış Başmak, Furkan Cansever and Ramazan
- So far, I, Yahya and Yusuf BAYAM have taken the meeting notes.

Fatih AKGÖZ:

- Contributed wiki homepage.
- Contributed functional requirements.
- Reviewed user requirements.
- Contributed scenario 1 and mockup 1.
- Created use case diagram with Mahir and Furkan.
- Reviewed class diagram.
- Reviewed sequence diagrams.
- Contributed on creating the RAM.
- Created the milestone with Barış and Mustafa.

Hande KARABUL

- Contributed wiki homepage
- Contributed and reviewed functional requirements
- Created Scenario 3 together with Ali Furkan and Yusuf
- Created Mockup 3 together with Ali Furkan and Yusuf

- Created and completed FeedService, FeedItem, NotificationService, Notification, EventService, Event in class diagram.
- Created and reviewed Sequence Diagram 1.1 (Follow User)
- Contributed in preparing tasks for cmpe451 project plan.
- Contributed in creating RAM.

Yahya Bedirhan PAK

- Contributed to readme.md
- Contributed taking weekly meeting notes
- Created discord channel
- Created User story and mockup for scenario 2 with Mahir and Ramazan
- Contributed to customer meeting and took notes
- Uploaded customer meeting to wiki
- Created system requirements with Yusuf
- Reviewed and gave feedback to user requirements
- Contributed to class diagram
- Created two sequence diagrams
- Contributed to 451 project plan

Mustafa KÜÇÜK:

- Contributed wiki homepage.
- Created non-functional requirements.
- Reviewed user requirements.
- Contributed scenario 1 and mockup 1.
- Reviewed class diagram.
- Created and reviewed sequence diagram 1.6 (Searching).
- Created the milestone with Barış and Fatih.