CmpE 352

Milestone #1

Report

Group 9

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1. Executive Summary

1.1. Introduction

With the pandemic, the desire to visit museum, art galleries was shaped differently from previous. People want to visit these places without any risks posed by the pandemic. Virtual museums, and art galleries can be seen as a result of this desire. In this Project, our primary goal is to create a platform where people visit museums, art galleries, share their art items, and comment or investigate the art items of other users by using the features of the platform which provides a place that people can work collaboratively/single.

This Project supplies the users to search semantically which means that it provides/recommends any semantically related context based on the provided semantic tags.

Moreover, people can sell their art items by using this platform. Users can see the popularity of other users by looking at the interaction with the platform. This interaction will be measured by the number of comments/shares on the platform. The popularity of users will be also measured by the number of followers or copyrighted items. Thanks to this popularity, people can sell their items, or buy other items via the bidding system of the platform.

In addition to them, users can create a physical event in which they can show their art items by using the features of the platform. People who want to participate in this event can share their location by using geotagging. In other times, the platform can recommend other events by using their interests and their geographic history.

Besides all of them, this platform will have both web application and mobile application to serve as much as possible for all people who are interested in art.

1.2. Project Status

5 steps are followed to bring the Project to its current status. These steps are setting up infrastructure, determining requirements, creating scenarios and mockups, software design with UML, and preparing Project plan and responsibility assignment matrix. In each step, the group members worked together and developed the Project.

First step of the Project was setting up infrastructure. In this step, each team member organized their personal wiki pages on GitHub. Communication plan was prepared for all Project periods. GitHub issues are specialized. Different GitHub repositories were researched and documented so that good features of these repositories can be used in our Project repository. Briefly, we got to know each other, and worked on our Project's GitHub repository.

In the second step we determined requirements. In the requirements step, the features of the software were determined. User types and their capabilities were documented.Determining the requirements is one of the crucial parts of the software engineering because implementation and design of the project depend on the requirements.In this step,many requirements were found but we cannot say that these requirements are not unchangeable. In the next steps,there are changes and additions to the requirements according to the status of Project. While working on the project,requirements are updated.

Third step was creating scenarios and mockups. Four different scenarios and mockups were decided. These were Sharing an Art, Following a User, Commenting on Artwork, and Starting a Bid on a Work of Art. When creating these scenarios and mockups, requirements were seen as a source, and the design of the project was visualized. In the part of Sharing an Art, registered users share their art items by clicking the upload button. In the Following a User part, registered users can go to other accounts, and they can click the follow button. In the part of Commenting on Artwork, registered users can press the comment button on the page, write something,

and press the send button. In the part of Starting a Bid on a Work of Art, registered users click on the bid tab to navigate to the bidding tab.

Fourth step was software design with UML. Three different diagrams were prepared for this step. These were use case diagrams, class diagrams and sequence diagrams.

Implementation of the project was visualized by using these three diagrams to conceptualize the concept and the structure of the project better. Use case diagram shows the interactions of the actors and the system. Class diagram explains the object-oriented model. The classes and the relations between them were shown in class diagrams. Sequence diagram explains interactions sequentially. The operations between objects were shown in sequence diagrams.

Last step was preparing a project plan and a responsibility assignment matrix (RAM). In the project plan, ProjectLibre was used, and the crucial point was to learn how to prepare a plan by using a project management software. The tasks that were used in the project plan were used to create RAM. This matrix shows the responsibility of each member throughout the project.

After all these steps, the project took the form of its current state. Each member of the group contributed each step collaboratively and individually, and the foundations of the project were established.

1.3. Moving Forward

From the beginning of the Project to now, we have worked on the core structure of the project. We have created a guideline to help us throughout the implementation phase. We have worked on our project with joy and curiosity. We will keep our curiosity and move on with the next phase of our project. Our next step will be the implementation of the project. So, we have decided to start with determining the teams: Android, Frontend and Backend. We will then decide on the software tools we will use as a team. Before we start implementing, we will review the Requirements and decide on how to implement them. Each week, we will hold Backend, Frontend,

Android and general team meetings. We will be continuously implementing and testing our codes as much as possible. We have learned that planning is the essential part of creating a product as a team. So, we will keep planning ahead and learning from the mistakes we make along the process. Each lecture and meeting will help us minimize our mistakes and learn more. We are eager to learn and excited to move on with the next part of our project.

2. List and Status of Deliverables

Deliverable Name	Delivery Status	Due Date	Delivery Date
Communication Plan	Delivered	08/03/2022	08/03/2022
Meeting Notes	In Progress	-	-
Requirements	Delivered	15/03/2022	15/03/2022
Scenarios and Mockups	Delivered	23/03/2022	23/03/2022
UML Diagrams	Delivered	15/04/2022	15/04/2022
Project Plan	Delivered	15/04/2022	15/04/2022
RAM Document	Delivered	15/04/2022	15/04/2022
Milestone 1 Report	Delivered	15/04/2022	15/04/2022

3. Evaluation of Deliverables

3.1 Communication Plan

The original communication plan, which included Zoom as the meeting platform, was created on our first meeting on Zoom and written by Kutay. We have revised it a few times, changed the meeting platform to Discord and changed the meeting hours, but the communication plan is still used and up to date.

3.2 Meeting Notes

One of the group members takes notes at each meeting to document what the meeting topics and what tasks are assigned to group members. All meeting notes can be viewed in our wiki page.

3.3 Requirements

First of all, we discussed which requirements should be included in our project at the group meeting and we wrote the contents by dividing these requirements among the group members. We made changes and additions to the requirements after the customer meeting according to TA's feedback. We also modified it many times afterwards.

3.4 Scenarios and Mockups

After the scenarios and mockup homework is assigned, we started to do research on scenarios prepared by previous Cmpe 352 students. Then we held a meeting and decided to do four scenario & mockup. Their name are as follows:

- Following a user
- Sharing an art item
- Starting a bid on a work of art
- Commenting on an art item.

After that, we allocated these four assignments to us. Each group had two or three people. Each member contributed both scenario and mockup parts. After finishing all scenarios. We uploaded them to Github.

3.5 UML Diagrams

In our initial meeting after the homework was given, we decided to first research about different UML diagrams and previous years' implementations of them. After that, we held a second meeting and discussed how we were going to implement these diagrams.

1. For the class diagrams, we decided on the classes our project should have, their fields and methods and how they should be connected to one another.
2. For the sequence diagrams, we decided on how to implement the different cases according to our class diagram.
3. For the use case diagrams, we talked about different use cases and how to implement them according to our class diagram.

Then, we assigned at least one class diagram, sequence diagram and use case diagram to each team member and started working on the diagrams separately with more detail. In our following meetings, we reviewed, changed and combined our diagrams until we reached the final result. Through this process, we consulted with our TA, asked questions and made adjustments accordingly.

3.6 Project Plan

Project planning is a crucial part for estimating duration of the tasks and total project. Therefore, we created a project plan consisting of both CMPE 352/451 since our project will terminate in Cmpe 451. Obviously, time estimations and assignees can change in extraordinary circumstances.

3.7 RAM Document

To prepare the RAM document, we first determined the tasks we'd done and had to do. We then assigned those tasks to people who'd done them or wanted to do them.

4. Evaluation of Tools and Processes

4.1. Evaluation of Tools

4.1.1. Github

Github is our most essential platform. It is so important because every member in our group uploads the work done by themselves to Github. The job done includes but is not limited to meeting notes, requirements, scenarios, mock-ups, sequences and use-case diagrams. It helps us to track the work of others and our project. It also makes reviewing the job done by other members super easy. Besides those qualifications, the issue system available on Github also dramatically helps us in our project. Thanks to the issue system, any work currently being worked on or completed can be viewed, commented on, and reviewed with ease. The tags also help to identify the tasks. It is easy to filter issues by tags to find the specific problems. Since there are many tools to help us with the progress of our Project, Github is a great tool and working place that benefits us greatly.

4.1.2. Discord

Discord is our go-to app for team meetings. Since we are reaching the post-Covid era, it is still not easy to gather up physically as a group of 10 people. Discord makes it possible to meet as if we are sitting in a room together. It is even better because we can use the screen-sharing option to share our screens with other team members so everyone can work on the same thing. Discord also has chat channels to communicate via text and share stuff with our team. It also helps us find sources we have used before because chat messages are not deleted and can be filtered easily. Since there can be more than one voice and text channel, we can also work concurrently. Overall, Discord is a great tool that helps us greatly in communicating.

4.1.3. Lucid.app

Lucid.app is an online sketching tool that we used to create our diagrams for this project. The app also has an educational plan, so we did not have to pay any fee to create well-crafted UML diagrams with plenty of available resources. We have created class, use-case and sequence diagrams using Lucid.app and have not encountered any problems. It was easy to learn how to use the app and save our diagrams. It also allows its users to work on a diagram concurrently, and this feature helped us immensely while creating huge diagrams. The only tricky part of this app was making connections between objects which could be fixed pretty easily. Overall, Lucid.app is an easy-to-use, great app that everyone was happy to use.

4.1.4. Zoom

We have used Zoom for our first two team meetings. It is a well-known app across our team, so it was easy to use at first. Unfortunately, it is pretty hard to archive chat messages, and we need a Premium account to save our meetings. Because of these reasons, even though we were familiar with the app, we decided to use Discord to plan our team meetings.

4.1.5. Whatsapp

Whatsapp is one of our essential communication apps. We decide on team meeting hours and notify others about any immediate updates in our Project. Since it reports to everyone immediately through their smartphones, it is an excellent addition to our communication system. It is not convenient for us for project-related stuff because it can become a dumpster of texts relatively easy. It is hard to find anything from history because there is no way to label or group.

4.1.6. Slack

Slack is a communication platform that is primarily focused on texting. We use Slack to communicate with our professor and TA. It is an easy to learn and easy to use app. It also notifies every team member whenever one of our teachers sends us a message. It is a great app that helps us with communication.

4.1.7. Google Sheets

We have used Google Sheets when working on document-related issues as a group of members. We also have used it for the milestone report. It is a great app because it makes it possible to form a document with input from all of us. Everyone can see every addition immediately and check on others' work. It is easy to use since we all had Google accounts before, and it is a great free app.

4.1.8. ProjectLibre

ProjectLibre is open-source software that we have used for Project planning. It is an excellent tool capable of creating a well-documented Project plan. Even though it is sufficient, working with ProjectLibre is a bit hard. Its UI is not very user friendly, and some of its tools are a bit complicated to use. It also does not let its users work on the Project concurrently, which is a negative feature. However, it is a useful app that helped us immensely when creating the Project plan.

4.2. Evaluation of Processes

4.2.1. Team Meetings

We have used team meetings to better understand topics discussed in class, decide on our short and long-term roadmap, distribute our workload until the next meeting, and check on each other. We have used Discord to gather up and used screen-sharing excessively. We also had a dedicated note-taker for each meeting so every meeting could be documented and can be reviewed later on. Team meetings are our most basic and essential process.

4.2.2. Issues

We have used issues to track our process on the project. Everyone used the issue system to document the job they had done. The issues include the job that needs to be done and the deadline and tags. It was an essential part of the

development of our project because we were able to estimate the state of the tasks efficiently with easy to track issues.

4.2.3. PS Meetings

We had also gathered up as a group in PS hours. We had client meetings whenever our TA was available. At other times, we discussed the state of our project and tasks. These meetings were incredibly beneficial for our project since it is one of the most efficient times to ask our questions to our TA and get feedback from her.

5. Individual Work

Berke Çalışkan

- Created personal Wiki page
- Researched online for git repositories
- Wrote the description for favorite git repository
- Searched for label ideas and created custom labels for the issue system
- Searched for visualization tools and images to better understand git and made additions to documentation of git
- Wrote the user requirements for requirement analysis page
- Wrote Persona, Goals, Preconditions, Actions and Acceptance List fields and sketch the mock up of “Starting a bid on a work of art” scenario
- Researched on UML sequence diagrams
- Researched on UML class diagrams
- Researched on UML use-case diagrams
- Prepared Class diagram for "PhysicalExhibition"
- Prepared Use-case diagram for "Follow,Block"
- Prepared Sequence diagram for "Follow"
- Prepared "Evaluation of Tools and Processes" part of Milestone 1

Berkkant Koç

- Created personal Wiki page
- Researched online for favorite git repositories
- Filled the wiki home page
- Wrote the non-functional requirements for requirement analysis page
- Revising glossary
- Created “Following a user” scenario
- Created “Following a user” mockups
- Researched on UML sequence diagrams
- Researched on UML class diagrams
- Researched on UML use-case diagrams
- Prepared Class diagram for "Bidding" and “Offer”
- Prepared Use-case diagram for "Recommendation Systems"
- Prepared Sequence diagram for "Recommendation Systems"
- Prepared RAM
- Prepared Project Planning using ProjectLibre
- Created list and status of deliverables
- Contributed to the evaluation of deliverables part
- Combining Milestone Report
- Uploading Plan, RAM, and Milestone to Github

Ömer Faruk Şişman

- Creating personal Wiki page
- Researching favorite github repository
- Researching git as a version control system.
- Researching repositories of previous years and groups.
- Creating a home wiki page.
- Creating meeting notes page.
- Creating a custom sidebar.
- Eliciting user requirements.
- Finding and writing about an example art community platform.
- Creating a template page for the project requirements analysis.
- Creating a template page for the questions to the customer.
- Creating and contributing "sharing art" scenario & mockup page.
- Researching UML use-case, sequence and class diagrams.
- Creating the template wiki page for Use-Case diagrams.
- Creating the template wiki page for Sequence diagrams.
- Creating the Use-Case diagram for "login" to the ACP.
- Creating the Sequence diagram for "login with email" to the ACP.
- Creating the Sequence diagram for "login with Google account" to the ACP.
- Creating the Sequence diagram for "forget password".
- Creating the Class diagram for Like and Comment classes.
- Reviewing Class and Sequence diagrams.
- Creating format and template of Summary of Work Page in Milestone 1.

Furkan Özdemir

- Creating personal Wiki page
- Researching favorite github repository
- Researching git as a version control system.
- Researching repositories of previous years and groups.
- Creating meeting notes 4.1.
- Creating meeting notes 4.2.
- Creating meeting notes 4.3.
- Eliciting system requirements.
- Creating Software Requirements Specification version 0.0.2.
- Finding and writing about an example art community platform.
- Creating a template for Favorite repositories wiki page.
- Creating git research wiki page.
- Creating an art community platform wiki page.
- Creating and reviewing "commenting on an artwork" scenario & mockup page.
- Researching UML use-case, sequence and class diagrams.
- Creating the template wiki page for class diagram.
- Creating a template for class diagrams and showing relationships between classes.
- Creating the class diagrams for “Exhibition”.
- Creating the class diagram for “OnlineExhibition”.
- Creating the use-case diagram for "Exhibition".
- Creating the Sequence diagram for "Online Exhibition".
- Creating the Sequence diagram for "Physical Exhibition".
- Adding deliverables to Milestone 1.
- Reviewing Class and Sequence diagrams.
- Reviewing RAM.

Can Bora Uğur

- Created personal wiki page
- Researched repositories and wrote about a liked repository
- Elicited the non functional requirements
- Created the comment scenario
- Created the part of the class diagram related to recommendations
- Created a use case diagram for sharing, liking and commenting on artwork and replying to comments
- Created a sequence diagram for sharing an art item
- Created a sequence diagram for commenting on an art item
- Created a sequence diagram for replying to a comment
- Created a sequence diagram for liking an art item
- Created part of the RAM
- Helped write section 3 of this report
- Researched subjects related to the project when needed

Kutay Saran

- Created personal Wiki page
- Researching favorite github repository
- Researching git as a version control system
- Researching previous years' repositories
- Adding a favorite repository
- Wrote the description for favorite git repository
- Creating a template page for communication plan
- Taking and documenting Meeting Notes 2
- Elicited the system requirements
- Reviewing user requirements
- Revising glossary
- Created "Following a user" scenario
- Created "Following a user" mockups
- Researched on UML sequence diagrams
- Researched on UML class diagrams
- Researched on UML use-case diagrams
- Prepared Class diagram for "Notification"
- Prepared Use-case diagram for "Search"
- Prepared Sequence diagram for "Search"
- Prepared "Executive Summary" part of Milestone 1

Burak Ferit Aktan

- Created my personal Wiki page.
- Created Readme.md file.
- Created my weekly effort page and filled it each week.
- Researched github repositories, documented my favorite one.
- Researched git as a version control system.
- Researched previous years' repositories.
- Elicited notification and recommendation parts of system requirements.
- Created scenario for "sharing an art"
- Created mock up for "sharing an art"
- Researched UML class, use-case, sequence diagrams.
- Created "Art Item" class for UML Class diagram
- Created "Art Item Database" class for UML Class diagram
- Created "Sign Up(register)" part of UML Use-Case Diagram
- Created "Signup With Google" part of UML Sequence Diagram.
- Created "Signup with Email" part of UML Sequence Diagram.
- Researched Project Libre.
- Contributed project planning.
- Documented "until first milestone" part of project planning by using Project Libre. Added "until first milestone" part of project planning to milestone 1 report.
- Contributed adding mockups to Milestone Report.Contributed to preparation of milestone 1 report.

Sena Özpınar

- Created personal Wiki page
- Documented Meeting-1 notes
- Researched online for git repositories and documented it on the favorite git repositories page.
- Researched and documented my favorite art platform.
- Researched git and made additions to the documentation of git page
- Wrote the user requirements
- Documented user requirements on the requirement analysis page.
- Created "starting a bid on a work of art" scenario, its "Persona", "Goals", "Preconditions", "Action List" and "Acceptance Criteria" fields and its mockup
- Created and documented the wiki page for "starting a bid on a work of art scenario
- Researched UML sequence diagrams
- Researched UML class diagrams
- Researched UML use-case diagrams
- Prepared class diagram for "Search" and "Tag"
- Prepared use case diagram for "Bid"
- Prepared sequence diagram for "Bid"
- Created the final use case diagram
- Contributed to Milestone Report's personal and Evaluation of Deliverables sections.

Hüseyin Türker Erdem

- Created personal Wiki page.
- Shared favorite Github Repository.
- Researched about Slack, Github and LucidChart.
- Updated communication plan.
- Documented Meeting 3.1 notes.
- Documented Meeting 5.1 notes.
- Created Sequence Diagram for notifications.
- Contributed on Non-Functional Requirements
- Contributed on “sharing an art scenario” mockup
- Reviewed class diagram
- Reviewed sequence diagram
- Researched UML class diagrams
- Researched UML sequence diagrams
- Contributed on Milestone Report #1

6.Deliverables

6.1 Communication Plan

Platform	Time	Purpose	Participants
Whatsapp	Anytime	Instant Messaging	All members
Slack	Anytime	General Communication	All members
Discord	Wednesday 21.00, Sunday 21.00	Weekly meetings , Discussing new tasks , Distribution of tasks	All members
Github	Anytime	Progress and issue tracking	All members

6.2 Requirements

Software Requirements Specification (SRS) for

- Art Community Platform Project
- Version: 0.0.3
- Date: 15.04.2022

Prepared by

- All members of Group 9

Reviewed by

- Furkan Özdemir

Prepared for

- CMPE352 Spring'22

Table of Contents for Requirements

6.2.1. Revision History

Name	Date	Reason for change	Version
Software Requirement Specification	13.04.2022	Checking conflicts and completeness	0.0.2
Requirement Analysis	15.03.2022	First version	0.0.1

6.2.2. Introduction

6.2.2.1. Purpose

Due to the corona pandemic, the popularity of art galleries and physical exhibition decreased. Therefore the purpose of this project is to give online opportunities for art galleries and exhibitions.

6.2.2.2. Document Conventions

This document will use the following conventions.

Name	Convention
Software Requirement Specification	SRS
Database	DB

6.2.2.3. Product Scope

In this online art gallery project, users will be able to share, comment, like art items and make exhibitions solo or collaboratively on our platform. The platform will protect the art items by issuing copyrights on demand. The platform will offer a bidding system on these protected art items. Users can also gain levels and popularity by sharing or commenting on art items on this platform. This online art gallery project will track users' activities, and based on these activities, the platform will recommend similar artworks or artists of the users' interests. In addition to the online side of this platform, users will be able to open physical exhibitions, and notify its followers via the platform.

6.2.2.4. References

- Software Requirements Specification Slides of CmpE352 class by Suzan Üsküdarlı
- "IEEE Guide for Software Requirements Specifications," in IEEE Std 830-1984 , vol., no., pp.1-26, 10 Feb. 1984, doi: 10.1109/IEEESTD.1984.119205.

6.2.3. Functional Requirements

6.2.3.1. User Requirements

6.2.3.1.1. Registration

- 6.2.3.1.1.1. Guest users shall be able to sign up to the platform with their name, their email account, a username and password.
- 6.2.3.1.1.2. Guest users shall be able to sign up with their google accounts. or link their account to their google accounts later.
- 6.2.3.1.1.3. Users shall be able to link their platform accounts to their google accounts.
- 6.2.3.1.1.4. Users should be able to delete their platform accounts.
- 6.2.3.1.1.5. Guest users should have access only to registration and login pages.

6.2.3.1.2. Login

- 6.2.3.1.2.1. Users shall be able to log in with their username and their password.
- 6.2.3.1.2.2. Users shall be able to log out.
- 6.2.3.1.2.3. Users shall be able to change their password if they are logged out. In this case, a confirmation mail will go to their email boxes.
- 6.2.3.1.2.4. Users shall be able to change their username and passwords later after logging in.

6.2.3.1.3. Art Items

- 6.2.3.1.3.1. Users shall be able to share art items.
- 6.2.3.1.3.2. Users shall be able to comment on art items.
- 6.2.3.1.3.3. Users shall be able to like art items.
- 6.2.3.1.3.4. Users should be able to download art items.

- 6.2.3.1.3.5. Users shall be able to request and receive a copyright for their art items.
- 6.2.3.1.3.6. Users should be able to have a repository for their favorite art items.

6.2.3.1.4. Profile

- 6.2.3.1.4.1. Users shall be able to have profiles.
- 6.2.3.1.4.2. Users shall be able to see art items that he/she shared in his/her profile.
- 6.2.3.1.4.3. Users shall be able to add profile picture, description and personal information into their profiles.
- 6.2.3.1.4.4. Users shall be able to change profile picture, description and personal information from their profiles.
- 6.2.3.1.4.5. Users shall have levels on their profile based on number of comments and number of shared art items.
- 6.2.3.1.4.6. Users shall have popularity on their profile based on number of followers, number of copyrighted items and number of exhibitions.
- 6.2.3.1.4.7. Users shall be able to get verified account.
- 6.2.3.1.4.8. Users should be able to see whether their account is verified or not, on their profiles.

6.2.3.1.5. User Follow

- 6.2.3.1.5.1. Users shall be able to follow other users.
- 6.2.3.1.5.2. Users shall be able to unfollow other users.
- 6.2.3.1.5.3. Users should be able to block other users.
- 6.2.3.1.5.2. Users shall be able to see the art items of followed users.
- 6.2.3.1.5.3. Users shall be able to see the comments of followed users.
- 6.2.3.1.5.4. Users shall be able to see the liked art items of followed users.

6.2.3.1.6. Exhibitions

- 6.2.3.1.6.1. Users shall be able to start online exhibitions solo or collaboratively.

- 6.2.3.1.6.2. Users shall be able to start physical exhibitions solo or collaboratively.
- 6.2.3.1.6.3. Users shall be able to join collaborative exhibitions of followed users.
- 6.2.3.1.6.4. Users shall be able to add art items to online exhibitions.
- 6.2.3.1.6.5. Users shall be able to end exhibitions.

6.2.3.1.7 Bid

- 6.2.3.1.7.1. Users shall be able to start auction on their art items with a starting price.
- 6.2.3.1.7.2. Users shall be able to end auction.
- 6.2.3.1.7.3. Users shall be able to offer a bid on an art item.
- 6.2.3.1.7.4. Users should be able to withdraw their offers.

6.2.3.1.8. Search

- 6.2.3.1.8.1. Users shall be able to perform semantic search on the website.
- 6.2.3.1.8.2. Users shall be able to pick a category for their search(art item, art exhibit, account or all) and get the results starting from the most relevant.
- 6.2.3.1.8.3. Users should be able to annotate text or images to clarify any point.

6.2.3.1.9 Comments

- 6.2.3.1.9.1 Users shall be able to reply to any comment with a comment.
- 6.2.3.1.9.2 Users should be able to like comments.

6.2.3.2. System Requirements

6.2.3.2.1 Verification

- 6.2.3.2.1.1. Verification system shall verify users' accounts based on their contribution on the platform.

- 6.2.3.2.1.2. The platform shall protect the art items by issuing copyrights on users' demand.
- 6.2.3.2.1.3. When a user wants to start an auction, the verification system shall verify art items as copyrighted artworks.

6.2.3.2.2. Search Engine

- 6.2.3.2.2.1. The platform shall include a search engine to find other users, art items or discussion forums.
- 6.2.3.2.2.2. In discussion forums, text used in titles and the body of the entries shall be searchable semantically.
- 6.2.3.2.2.3. Users shall make semantic search which provides any semantically related context based on the provided semantic tags.
- 6.2.3.2.2.4. The search engine shall match the arts and artists with given tags.

6.2.3.2.3. Recommendation

- 6.2.3.2.3.1. The platform shall include a recommendation system.
- 6.2.3.2.3.2. Art items that have the same tags with users' favorite ones, shall be recommended to users.
- 6.2.3.2.3.3. For any user, followed users' followed users should be recommended to him/her.
- 6.2.3.2.3.4. When a physical event is organized, it should be recommended to all users have an appropriate geotag history.
- 6.2.3.2.3.5. Art items of followed users shall be recommended to the follower.
- 6.2.3.2.3.6. Exhibitions of followed users shall be recommended to the follower.

6.2.3.2.4. Notification

- 6.2.3.2.4.1. When a user is followed by another user, the followed user shall be notified.
- 6.2.3.2.4.2. When the level of a user is changed, the user should be notified.
- 6.2.3.2.4.3. When the account of a user is verified, the user shall be notified.

- 6.2.3.2.4.4. When a user adds a new art to the platform, user's followers should be notified.
- 6.2.3.2.4.5. When a user starts an online exhibition, followers of the user shall be notified.
- 6.2.3.2.4.6. When any user makes a comment about an art, the owner of that art should be notified.
- 6.2.3.2.4.7. Users should be notified when one of their comments is liked.
- 6.2.3.2.4.8. When a physical exhibition is organized, all users with an appropriate geotag history should be notified.

6.2.3.2.5. Payment

- 6.2.3.2.5.1. Payment system shall ask all credit card information before any trade if no credit card information is given or no card has already been saved. The information shall contain a proper card number with 16 characters, expiration date and CVV.
- 6.2.3.2.5.2. Payment system shall support transactions from customers' banking account to the sellers' account.

6.2.3.2.6. Database

- 6.2.3.2.6.1. The platform shall include an user DB to keep users' profile information.
- 6.2.3.2.6.2. The platform shall include an art item DB to keep users' shared art items.
- 6.2.3.2.6.3. The platform shall keep users' payment information.

6.2.4. Non-Functional Requirements

6.2.4.1. Performance & Reliability

- 6.2.4.1.1. Any page should take less than 3 seconds to load, even though the results consist of photos or videos..
- 6.2.4.1.2. The server should have over 99.5% uptime, which means up to 7 minutes of downtime is acceptable in a single day.

- 6.2.4.1.3. The server is expected to be unavailable no longer than 3 minutes (shorter downtime periods with higher frequency is acceptable).
- 6.2.4.1.4. The server should be able to handle 500 concurrent visitors.
- 6.2.4.1.5. A DoS response plan should be created, so the system can differentiate bots from actual users. Increased request frequency of any content should be investigated by DoS response plan, because the reason may be a tendency to the specific contents.

6.2.4.2. Security

- 6.2.4.2.1. Any user input that is designed to attack the site shall be detected and prevented.
- 6.2.4.2.2. Emails should be verified through a verification email to make automated account creation harder.
- 6.2.4.2.3. User data shall be kept safe from possible attacks via encryption algorithms such as AES-256. All of these data should be encrypted in the database.
- 6.2.4.2.4. User passwords shall contain at least one uppercase letter, one lowercase letter, and one number in order to make brute force algorithms harder to succeed.
- 6.2.4.2.5. User passwords shall contain at least eight characters.

6.2.4.3. Portability

- 6.2.4.3.1. The program shall have an API for frontend applications to use.
- 6.2.4.3.2. There shall be a native Android application with the same functionalities as the website.
- 6.2.4.3.3. The mobile application should make design choices that makes mobile browsing easier.
- 6.2.4.3.4. The mobile applications are expected to be released on application stores, any additional requirements of these stores shall be satisfied.

6.2.4.4. Ethical Issues and Legal Constraints

- 6.2.4.4.1. The rules defined by GDPR/KVKK shall be obeyed when dealing with personal data. Personal data includes:
    - 6.2.4.4.1.1 Personal information that the user provides as part of their profile
    - 6.2.4.4.1.2 Billing information that is used during payments
    - 6.2.4.4.1.3 User location data obtained from the user's geotag history
- 6.2.4.4.2. User preferences should be taken into account when displaying user data. Data to consider includes:
    - 6.2.4.4.2.1 Artworks shared by user
    - 6.2.4.4.2.2 Annotations created by user
    - 6.2.4.4.2.3 Comments posted by user
    - 6.2.4.4.2.4 Likes given by user
- 6.2.4.4.3. User data shall be kept private to others.
- 6.2.4.4.4. The platform shall respect copyright and licenses of included artwork.
- 6.2.4.4.5. The platform shall take action when a breach of copyright or license happens.
- 6.2.4.4.6. Unlawful content and hyperlinks to unethical or unlawful sites shall be removed.

6.2.4.5. Implementation

- 6.2.4.5.1. Annotations shall comply with the W3C Web Annotation Data Model.
- 6.2.4.5.2. Annotations shall follow W3C standards.
- 6.2.4.5.3. Technologies that will be used for backend and frontend must be compatible. Designers shall select compatible frameworks for implementation.
- 6.2.4.5.4. Test and production environments are expected to be divided, so that the changes in the test environment does not affect customers.

6.2.5. Appendix to Requirements

6.2.5.1 Appendix A: Glossary

1. **Platform:** Online art gallery.
2. **Users:** People who are already signed up to the platform and have an account.
3. **Guest users:** People who haven't signed up to the platform yet.
4. **Profile:** Information about a person's life, work, interests, etc. on a social networking website.
5. **Follow:** If you follow a particular person on this platform you choose to see everything that person shares on the platform.
6. **Block:** If you block a particular person on this platform you choose not to see anything that person shares on the platform.
7. **Exhibition:** An event at which art items are shown to the public.
8. **Bid:** An offer of money.
9. **Auction:** A public sale of art items, where users make higher and higher bids for each thing, until the art item is sold to the user who will pay most.
10. **Semantic search:** A data searching technique in which a search query aims to not only find keywords, but to determine the intent and contextual meaning of the words a user is using for search.
11. **AES-256:** A widely used encryption algorithm which is very fast, reliable and secure compared to most other encryption algorithms.
12. **Brute force algorithm:** An algorithm to check all possible password possibilities, which is mostly used by hackers. The order of the trials of possible passwords vary a little between implementations. In order to check how long a typical brute force algorithm is to find your password, you can check out the tool in security.org, see that "password" is not actually a good password.
13. **Downtime/Uptime:** Percentage of the time period that the server or the system is not working or working properly, respectively. 10% downtime or 90% uptime means that the service is not working 16.8 hours in a week (168 hours).
14. **DoS:** Abbreviation for Denial of Service. If the number of requests are higher than normal such that the system cannot work properly, some of the requests get

denial of service error, which increases the downtime. One of the most common reasons for DoS errors are DoS attacks by hackers via bots.

15. Encryption: A change from a readable data to a masked data. This masked data must be decrypted to get the original readable data.

6.3 Scenarios and Mockups

6.3.1. Sharing an Art

User

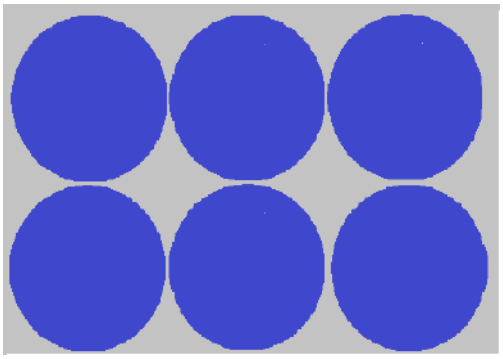
John Farmer

Persona

- Likes painting arts and loves sharing them.

Object

"Blue Circle" art file as a PNG file. 6 circles, painted to blue. Art is designed by using "paint".



Preconditions

- The user has already signed up to the system and logged in.
- The art is ready as a file on the user's device, it's size doesn't exceed 2 MB.

Steps

1. User clicks share new art button on his profile.
2. User fills "art name", "art description", "tags" fields in the appearing form.
3. User loads "the art file" by clicking "upload art file" button and choosing the file from his device.
4. User writes "geometry, paint drawn" to the tags field.
5. User clicks the share button.
6. The user is redirected to his profile page.

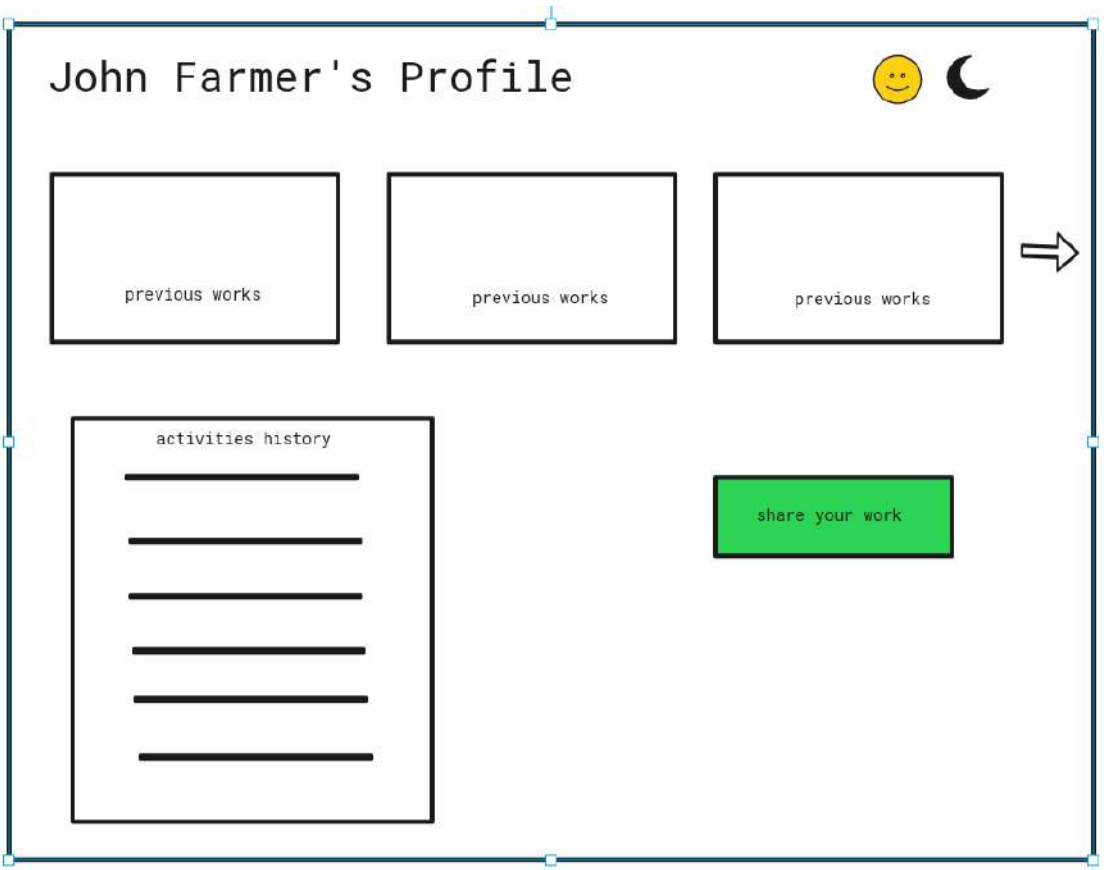
Acceptance criteria

1. A notification telling that "John Farmer" shared a new art with the name "Blue Circle" was reached to all of the followers of his.
2. When followers click that notification they can see the art.
3. When "John Farmer" looks at the "Previous works" part on his profile, he should see the art he shared.
4. When any user sees the art, they should see the name of the user who shared it ("John Farmer" in this case), the art itself, tags, "make a comment" button and "bid" button.

Mockup

This mockup contains 3 parts (user profile containing “share your work” button ; “art sharing form” and “redirecting to profile page”)

user profile containing “share your work” button:



Art Sharing Form

Art name: *

Art description:

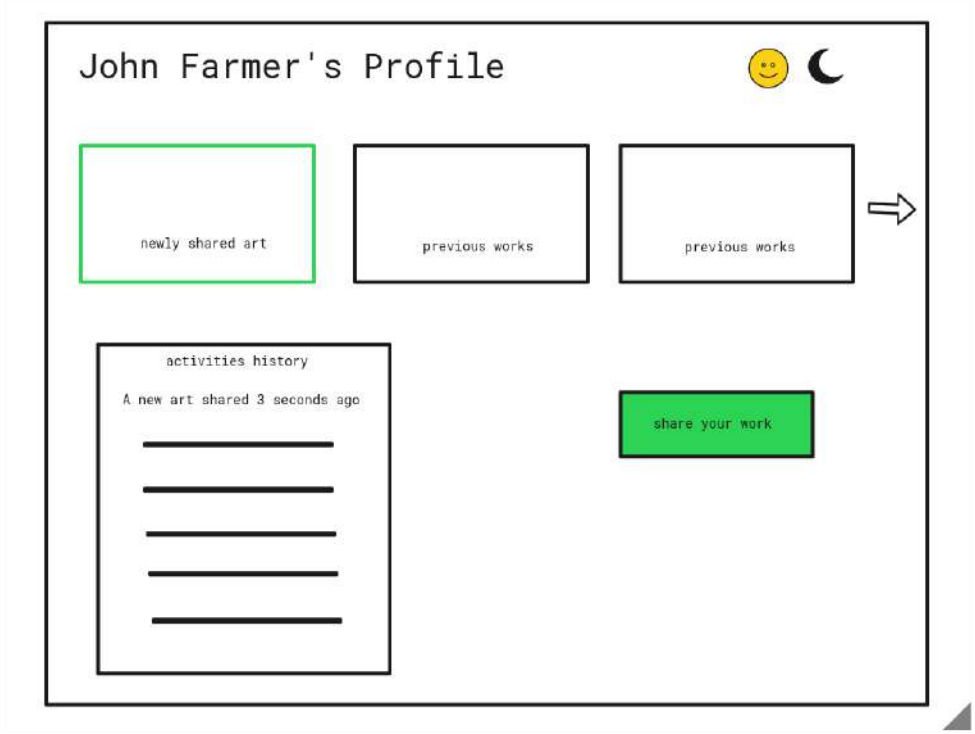
Tags:

Upload art file *

Share

Note: * means required

Redirecting to profile page:



6.3.2. Starting a bid on an Artwork

User

Burhan Altıntop

Persona

- Age: 34
- Job: Manager of Avrupa Yakası magazine
- Characteristics: egoist, greedy, gossipy

Goals

- Burhan Altıntop wants to renovate his arts at his house
- Burhan Altıntop wants to start a bid to sell his paintings with the highest profit

Preconditions

- User shall be verified
- User shall be logged in
- Art work shall be already shared by the user
- Art works copyright shall be owned by the user

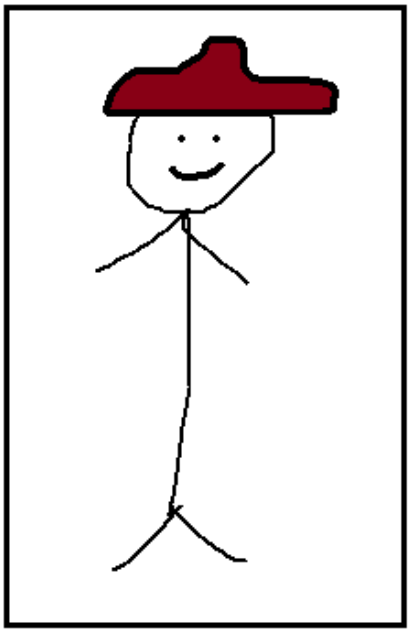
Actions

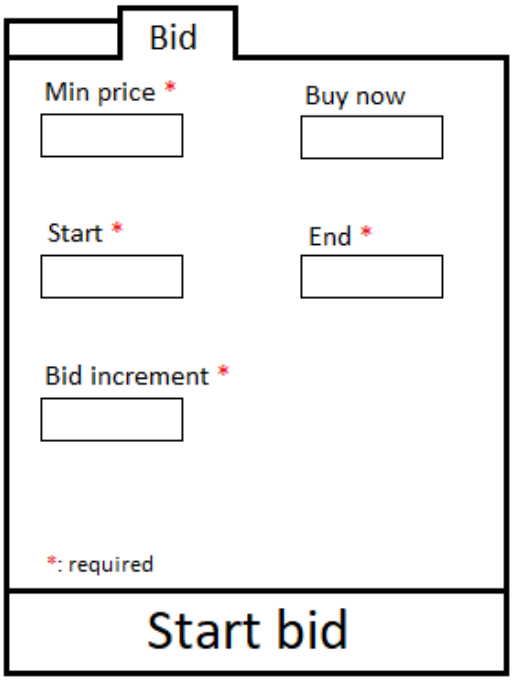
1. Mr. Altıntop logs in to his account
2. Mr. Altıntop navigates to his profile
3. Mr. Altıntop navigates to art items page
4. Mr. Altıntop navigates to the art that he wants to sell
5. Mr. Altıntop clicks on bid tab to navigate to the bidding tab
6. Mr. Altıntop fills the necessary informations which are on mockup 2.1
7. Mr. Altıntop clicks on start bid button

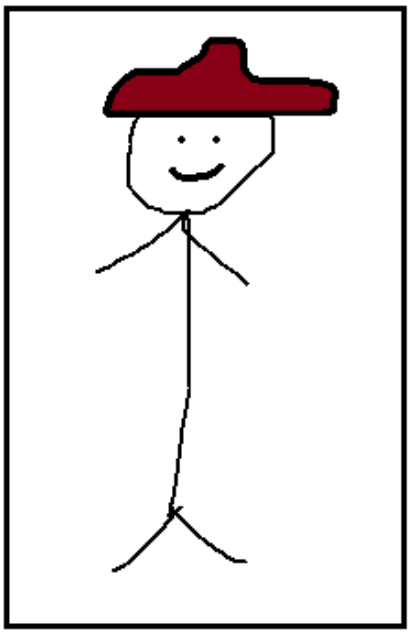
Acceptance Criteria

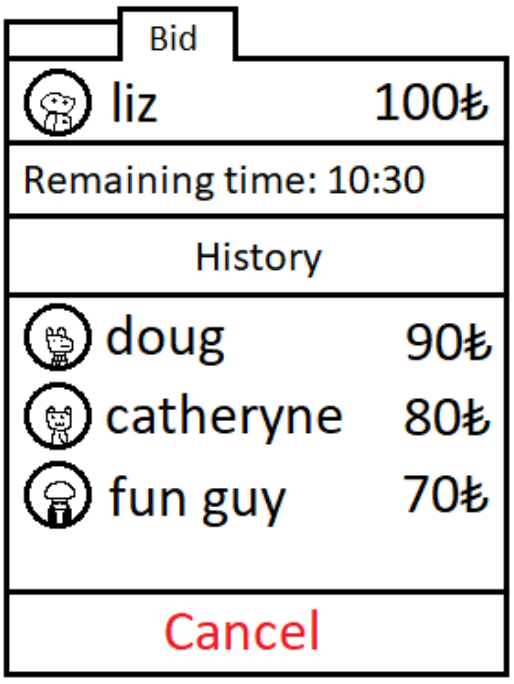
- Others users shall be able to place a bid
- Mr. Altıntop shall be able to cancel the bid
- All users shall be able to see bidding information
- All users shall be able to see bidding history
- Other users shall be able to use buy now option
- Bidding shall end at the end of the remaining time or when a user uses the buy now option

Mockup




Bid
Min price *
Buy now
Start *
End *
Bid increment *
*: required
Start bid




Bid
liz
100₺
Remaining time: 10:30
History
doug
90₺
catheryne
80₺
fun guy
70₺
Cancel

6.3.3. Following a user

Persona

- Celal Şengör
- 66 years old
- Professor of geology at Istanbul Technical University
- History of science enthusiast
- Loves to say ZIRRRRRVA

Story

- Celal is currently working on a paper with his colleagues.
- Paper is about geological movements in the Mediterranean.
- His peers invited him to Antalya for field research.
- One of his colleagues have a daughter, Ayça, interested in painting
- Celal Wants to follow her in the app.

Preconditions

- Ayça is a registered user of the platform.
- Celal is the registered user of the platform.

Goals

- Celal wants to see Ayça's art works on the platform.
- Celal wants to see when Ayça post an art work in his timeline.

Acceptance Criteria

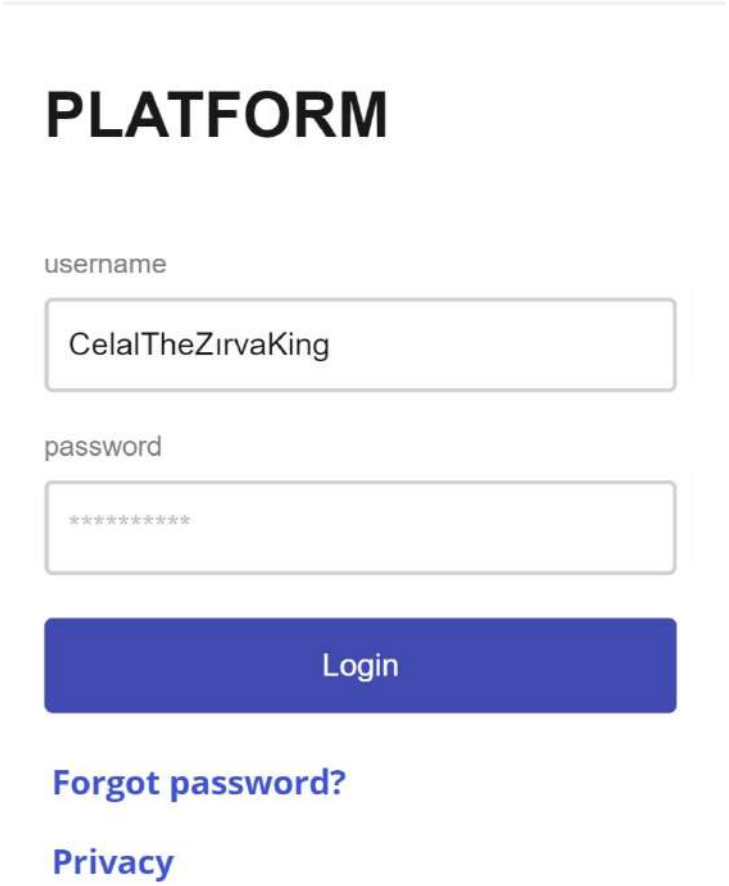
- Ayça shall get notification about Celal followed her.
- Celal shall see Ayça's posts in his timeline.

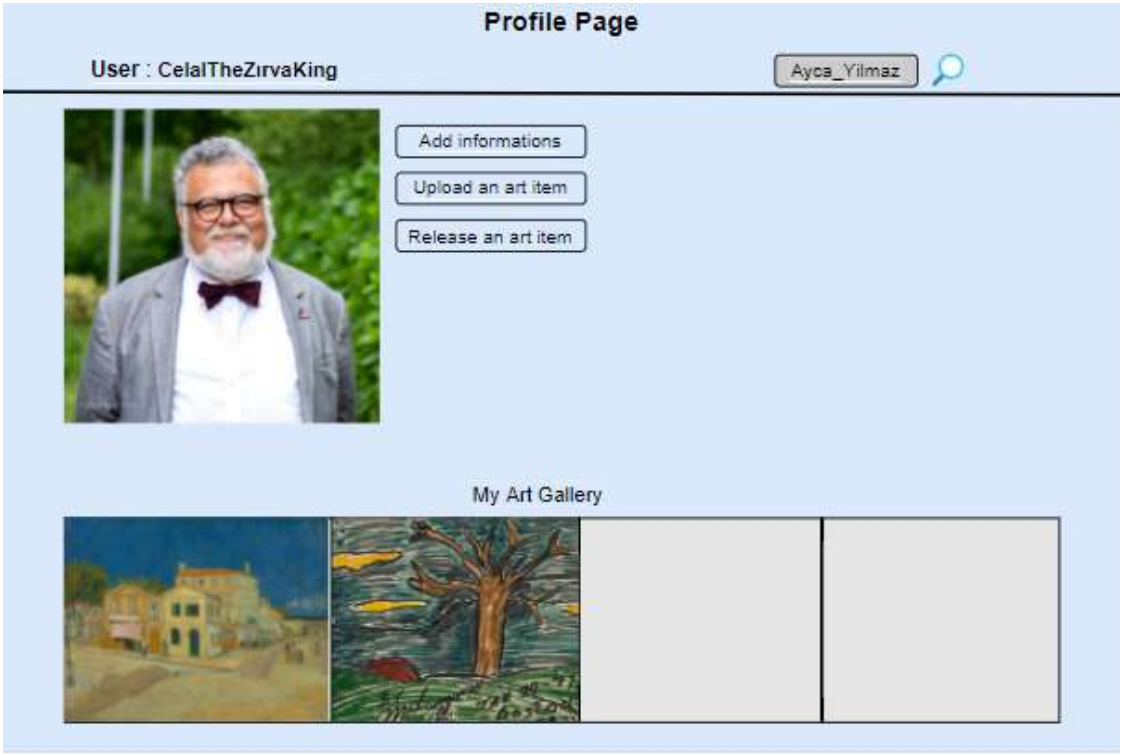
- When Ayşe visits Celal's profile, she shall see "following you" text in the profile.
- Celal shall be able to unfollow Ayça.

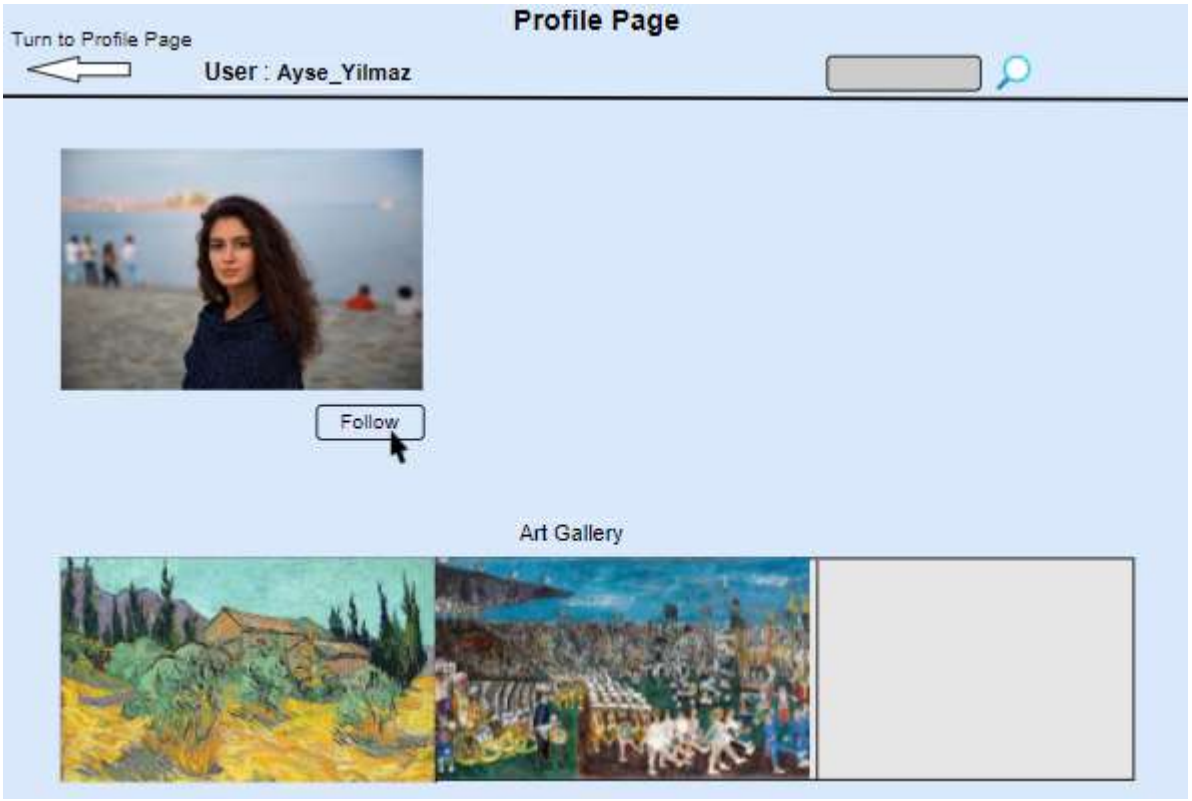
Scenario

1. Celal logs in to the platform.
2. Celal touches the search button and the search page is opened.
3. Celal writes Ayça's username to the search bar.
4. Celal goes to Ayça's profile by pushing her photo.
5. Celal touches the follow button.

Mockup


PLATFORM
username
CelalTheZırvaKing
password
****
Login
Forgot password?
Privacy


Profile Page
User : CelalTheZırvaKing
Ayca_Yilmaz
Add informations
Upload an art item
Release an art item
My Art Gallery


Profile Page
Turn to Profile Page
User : Ayse_Yilmaz
Follow
Art Gallery

6.3.4. Commenting on an Artwork

User

Monette, a newly beginning artist. She's browsing the app for inspiration on what to draw.

Background

She's come across a drawing she really likes and would like to ask its creator about some tools and techniques the other artist used while they were creating the drawing. She will use the comment feature for this.

Preconditions

- Monette is a user and has logged in.
- Monette has permissions to view and comment on the content.

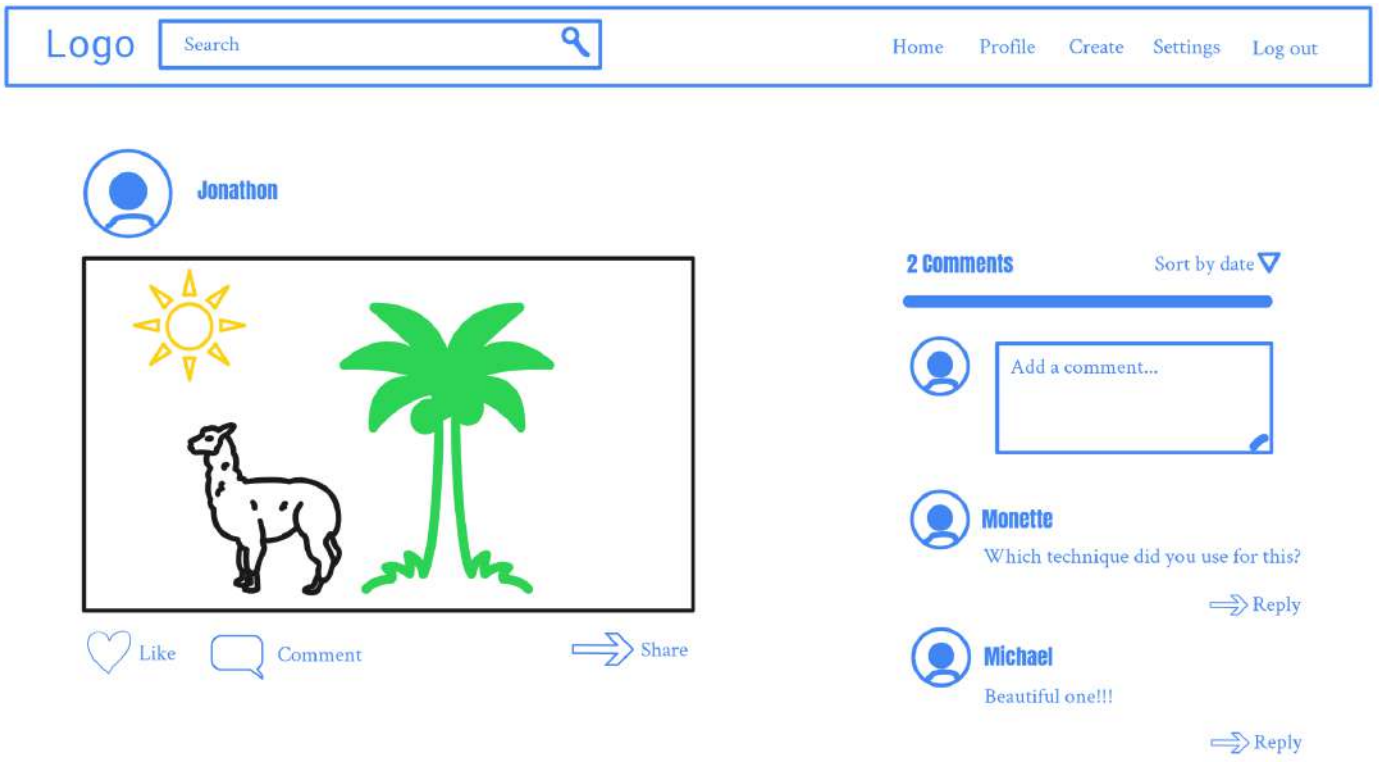
Actions

1. Monette navigates to the artwork.
2. Monette goes to the page of the artwork by clicking on it or a button near it.
3. Monette presses the comment button on the page.
4. Monette types in her questions in the provided comment box.
5. Monette presses the send button or enter.

Acceptance criteria

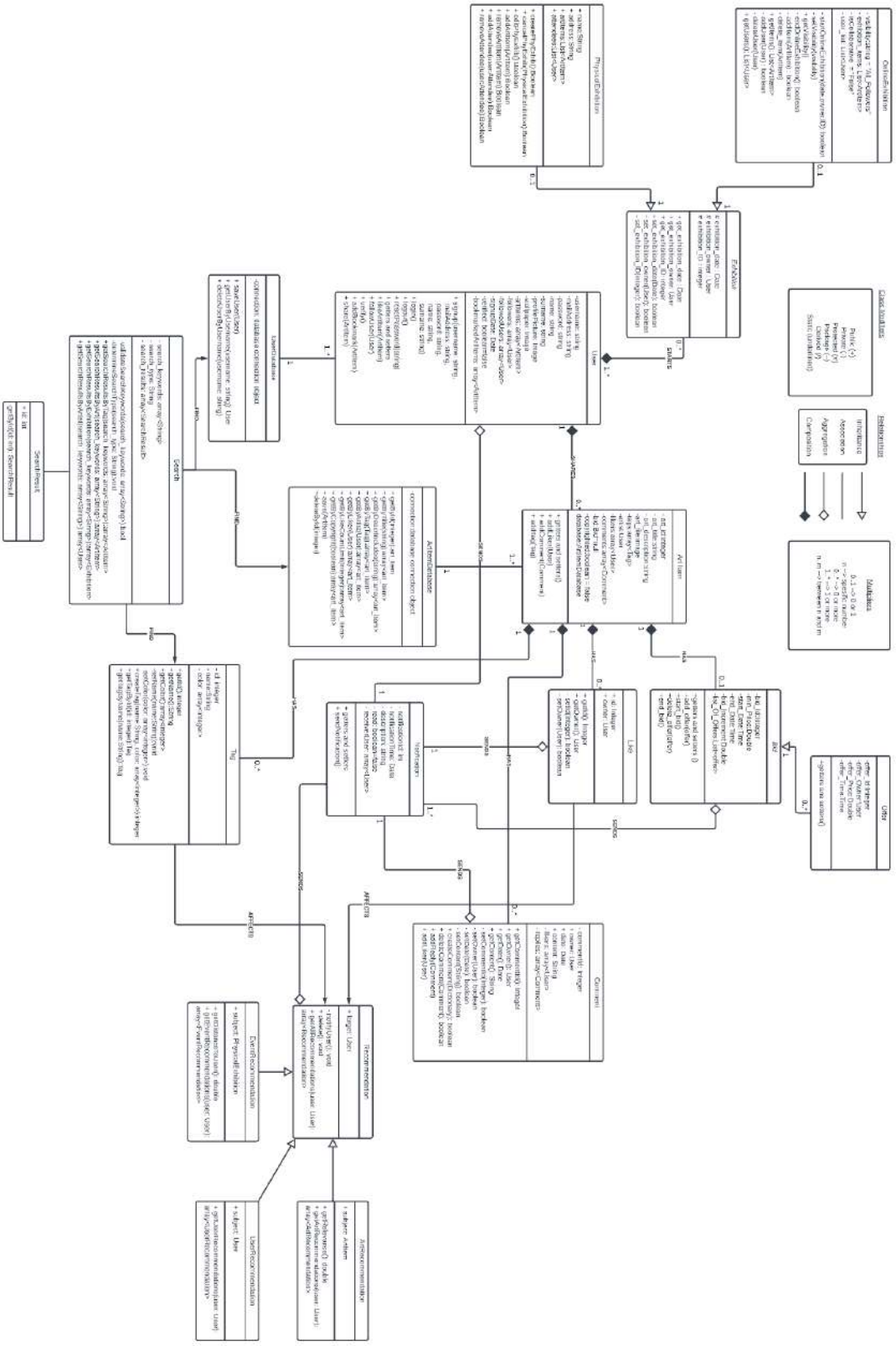
- Monette's comment appears on the page of the artwork along with her username.
- Everyone who can view the artwork can also see Monette's comment.
- Everyone who can view the artwork can also reply to Monette's comment.
- The creator of the artwork is notified of the comment.

Mockup


Logo
Search
Home
Profile
Create
Settings
Log out
Jonathon
Like
Comment
Share
2 Comments
Sort by date
Add a comment...
Monette
Which technique did you use for this?
Reply
Michael
Beautiful one!!!
Reply

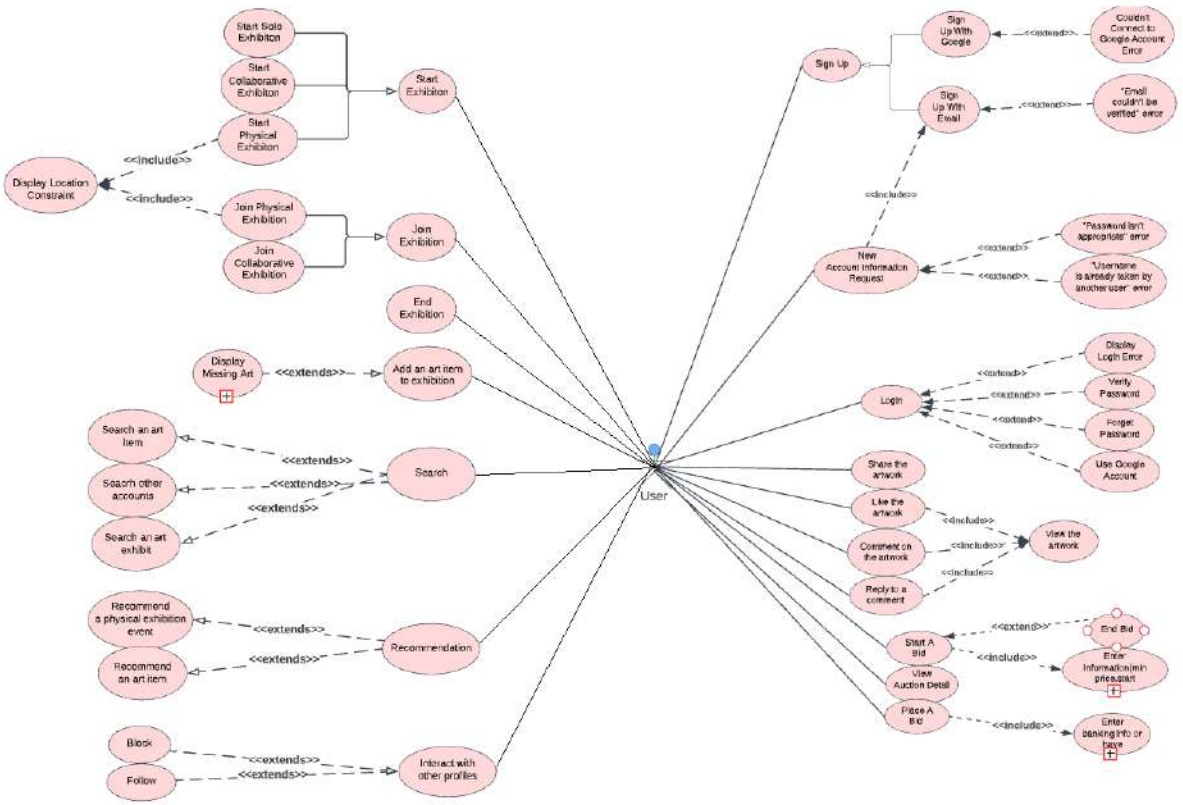
6.4 Software Design Documents in UML

6.4.1 Class Diagram



You can also view this class diagram from LucidChart.

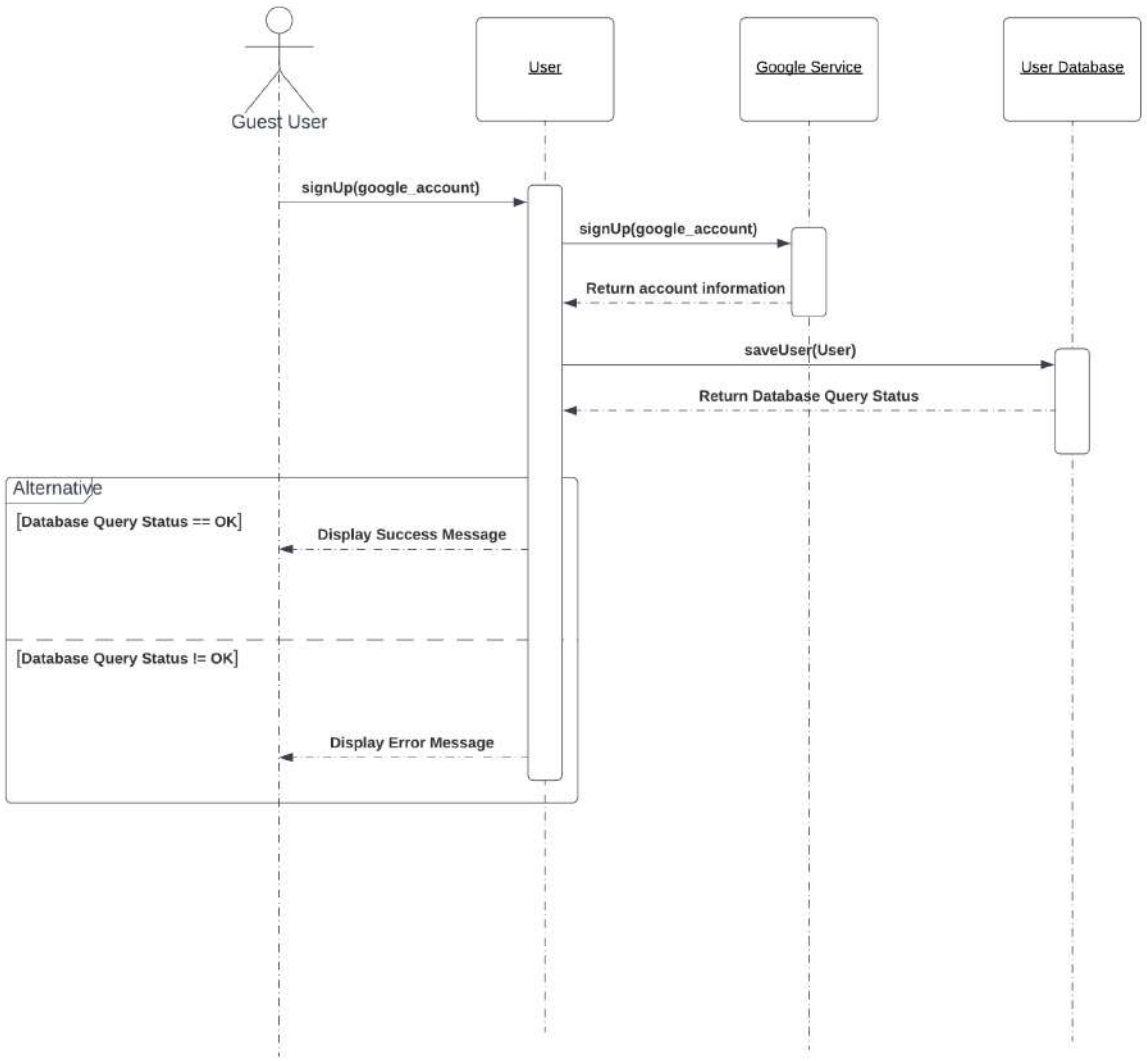
6.4.2. Use-case Diagram



You can have a bigger view of this diagram and different cases individually on our Github page.

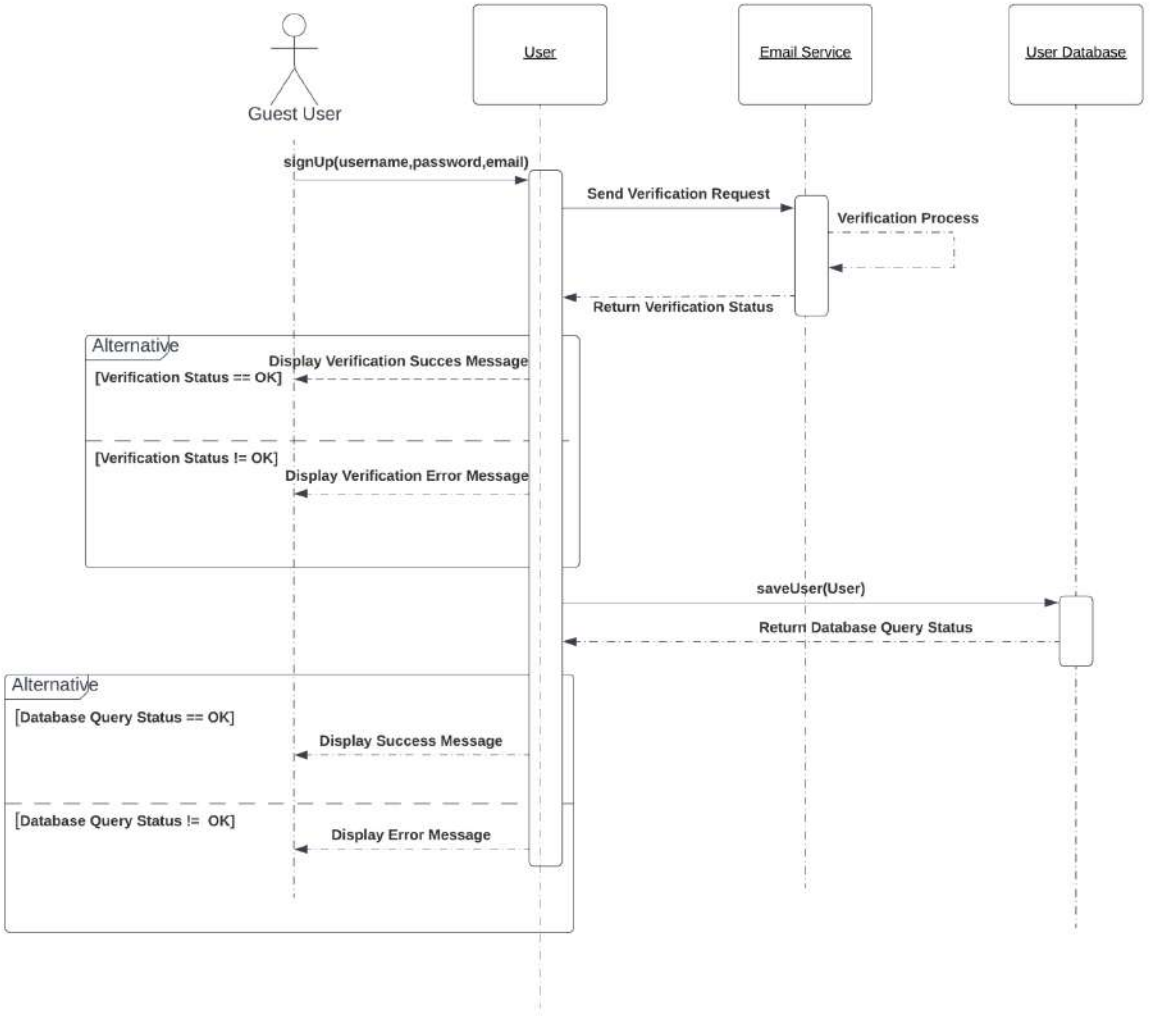
6.4.3. Sequence Diagrams

6.4.3.1 Sign up with Google



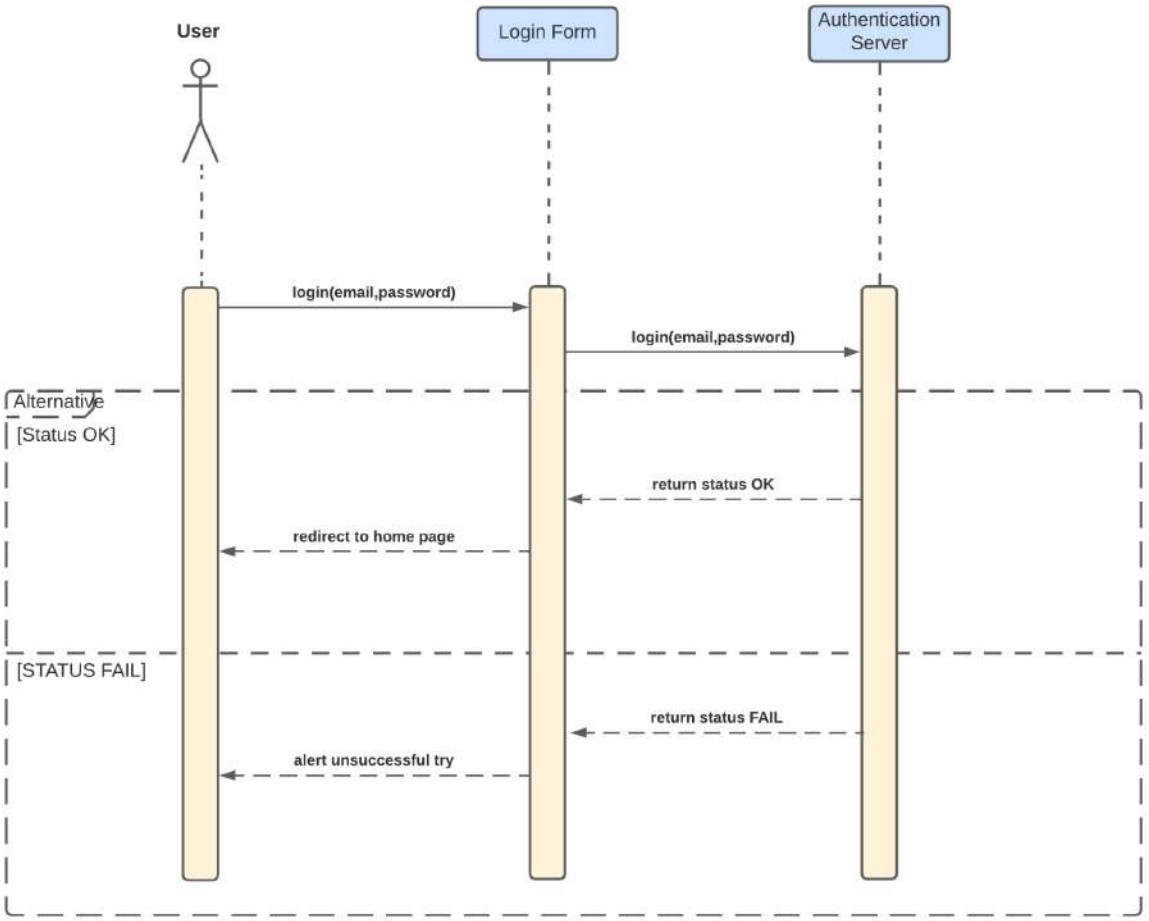
prepared by Burak Ferit Aktan

6.4.3.2. Sign up with email



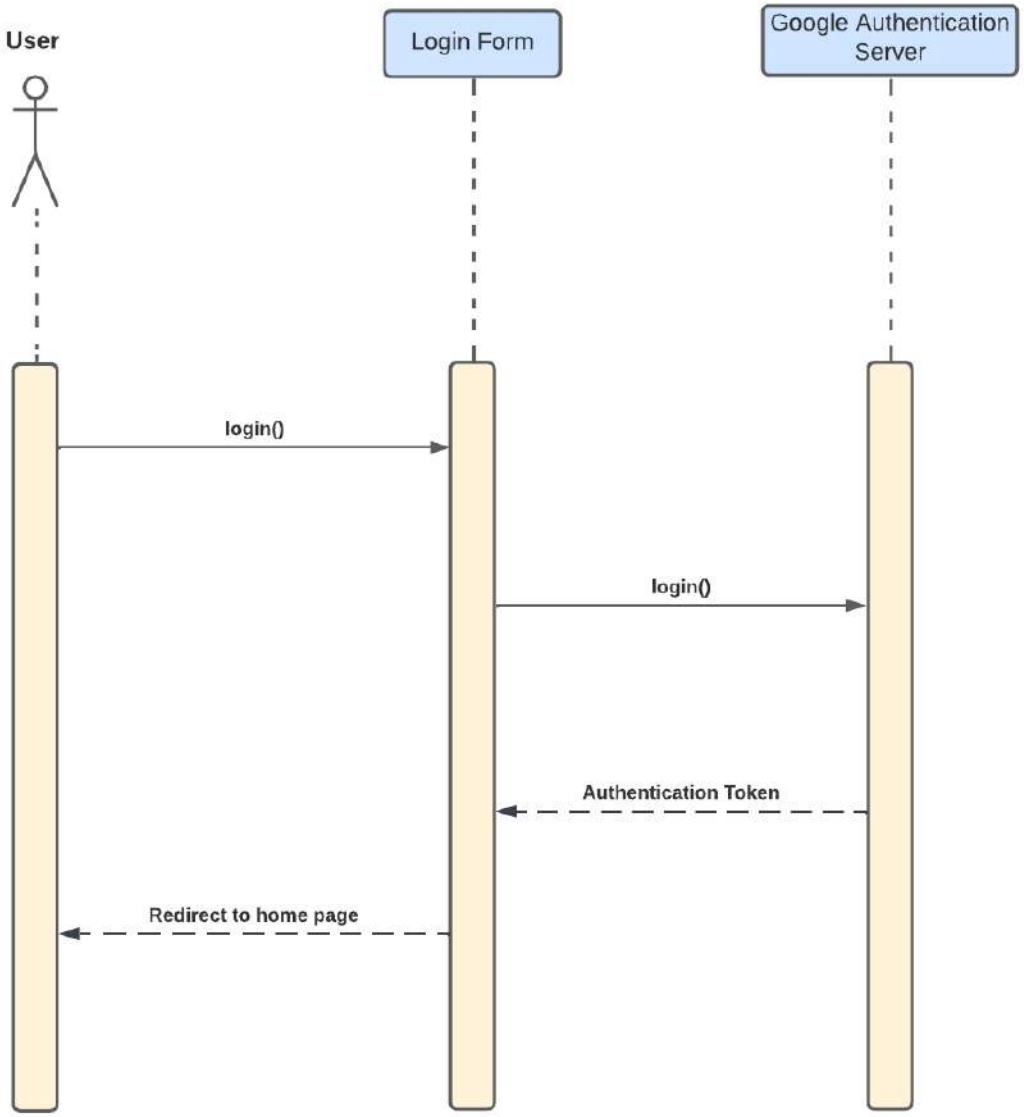
prepared by Burak Ferit Aktan

6.4.3.3 Login with email



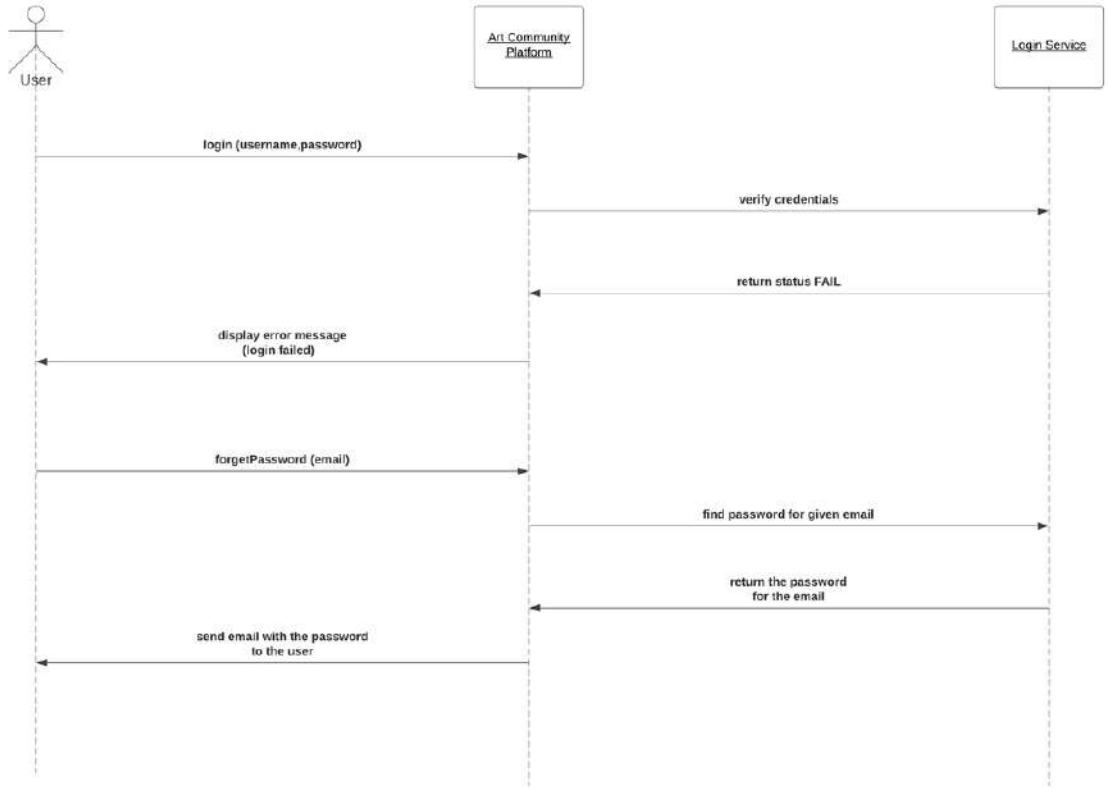
prepared by Ömer Faruk Şişman

6.4.3.4. Login with Google



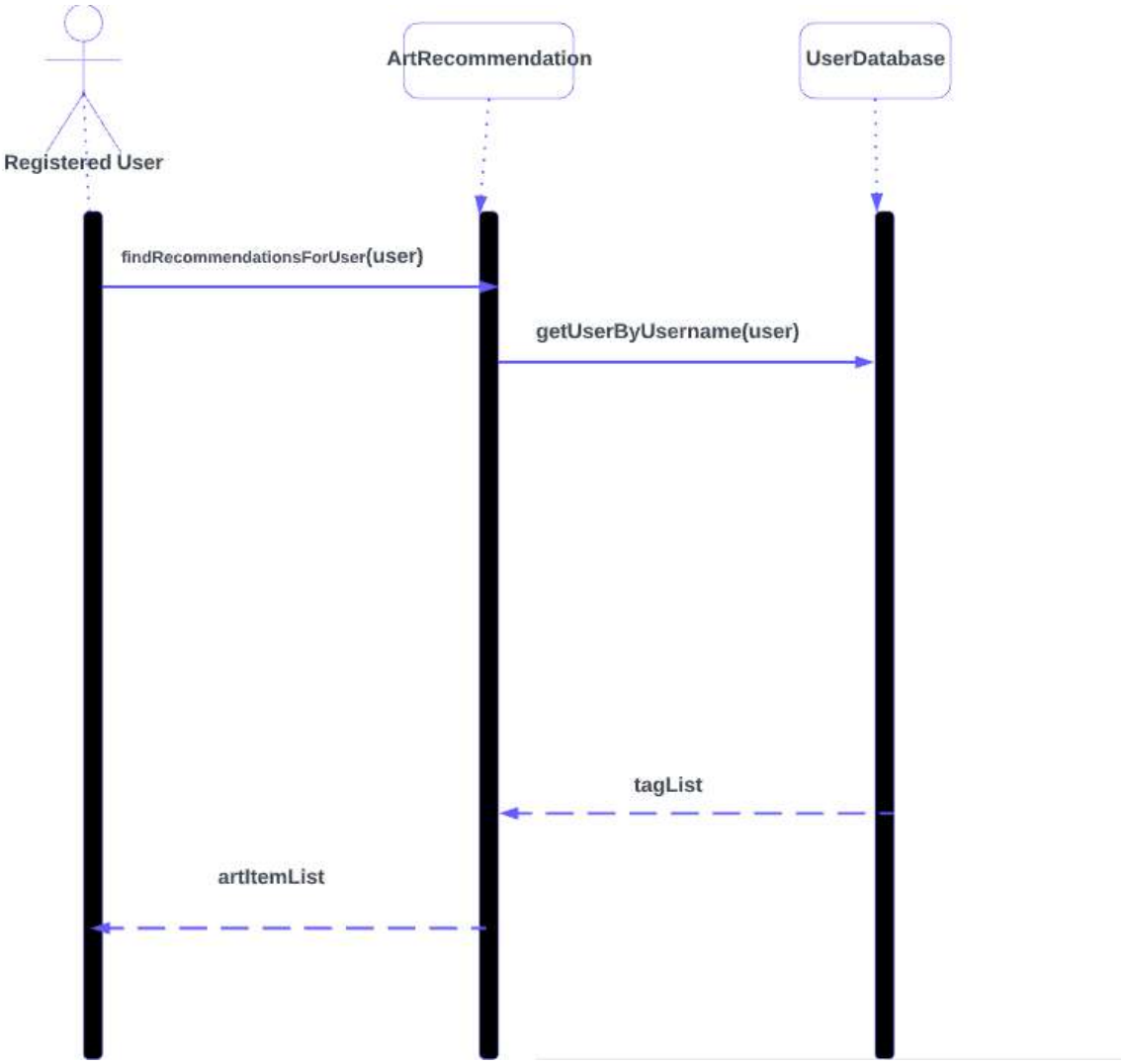
prepared by Ömer Faruk Şişman

6.4.3.5. Forget Password



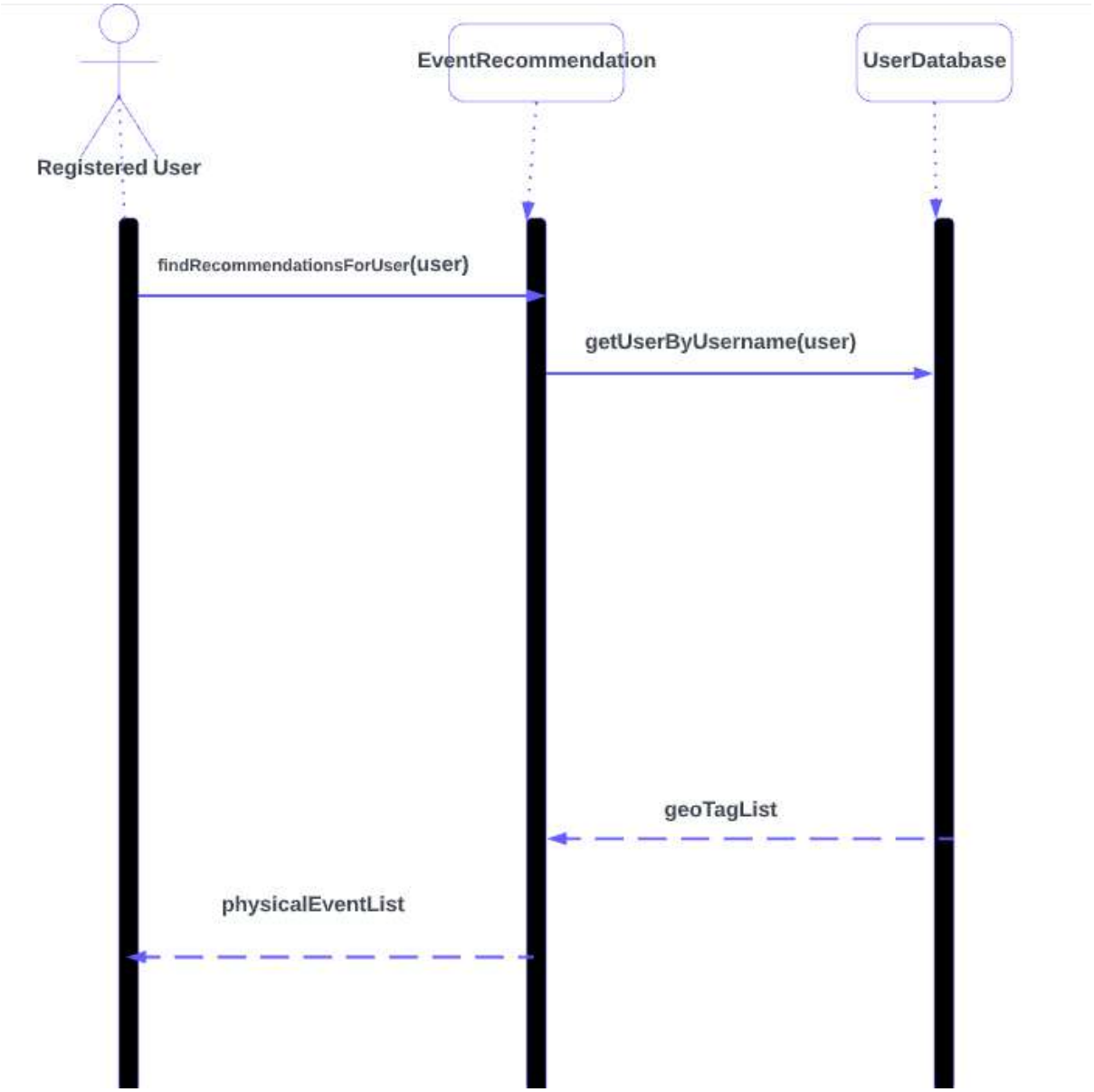
prepared by Ömer Faruk Şişman

6.4.3.6. Art Item Recommendation



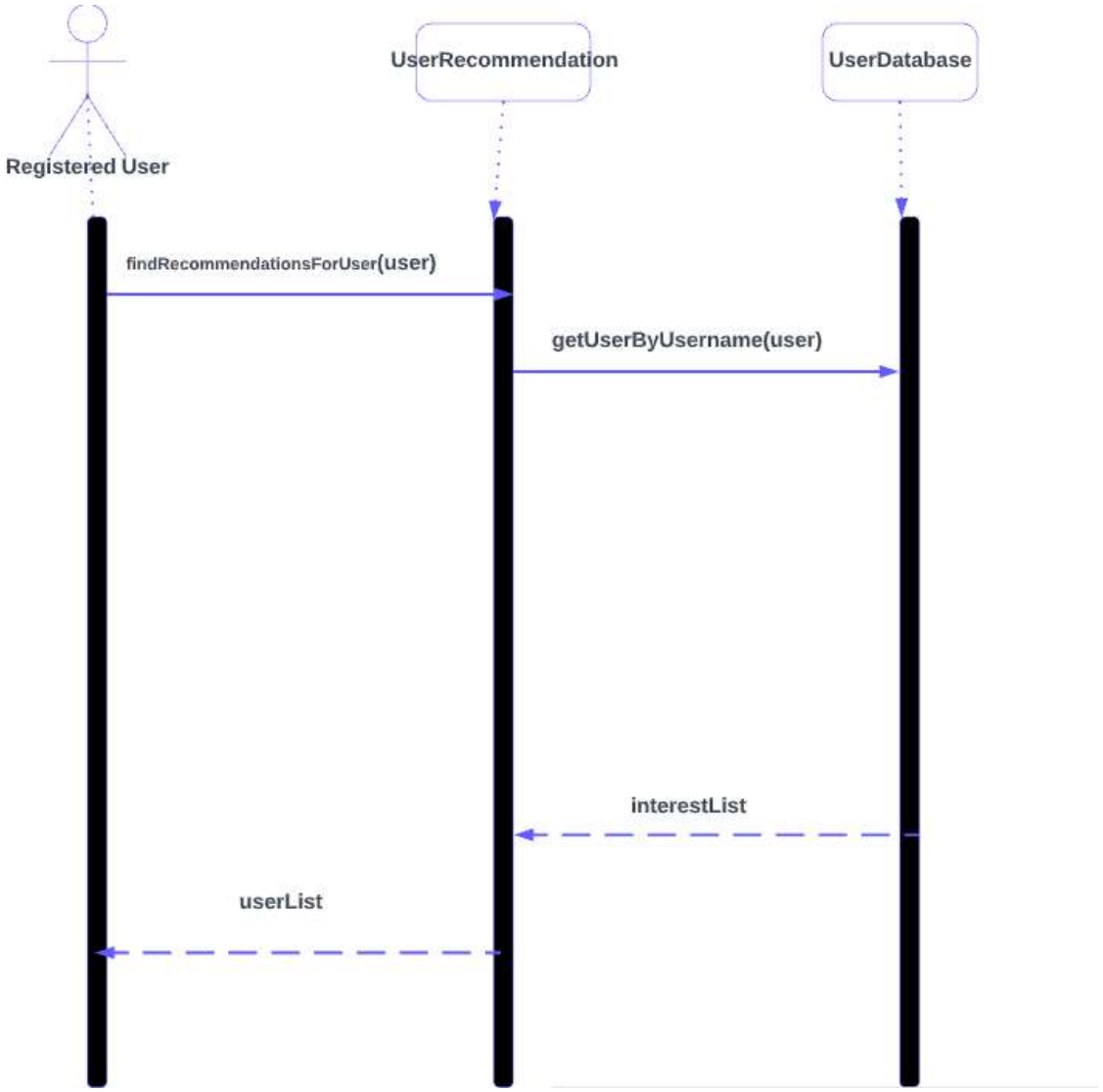
prepared by Berkkant Koç

6.4.3.7. Physical Event Recommendation



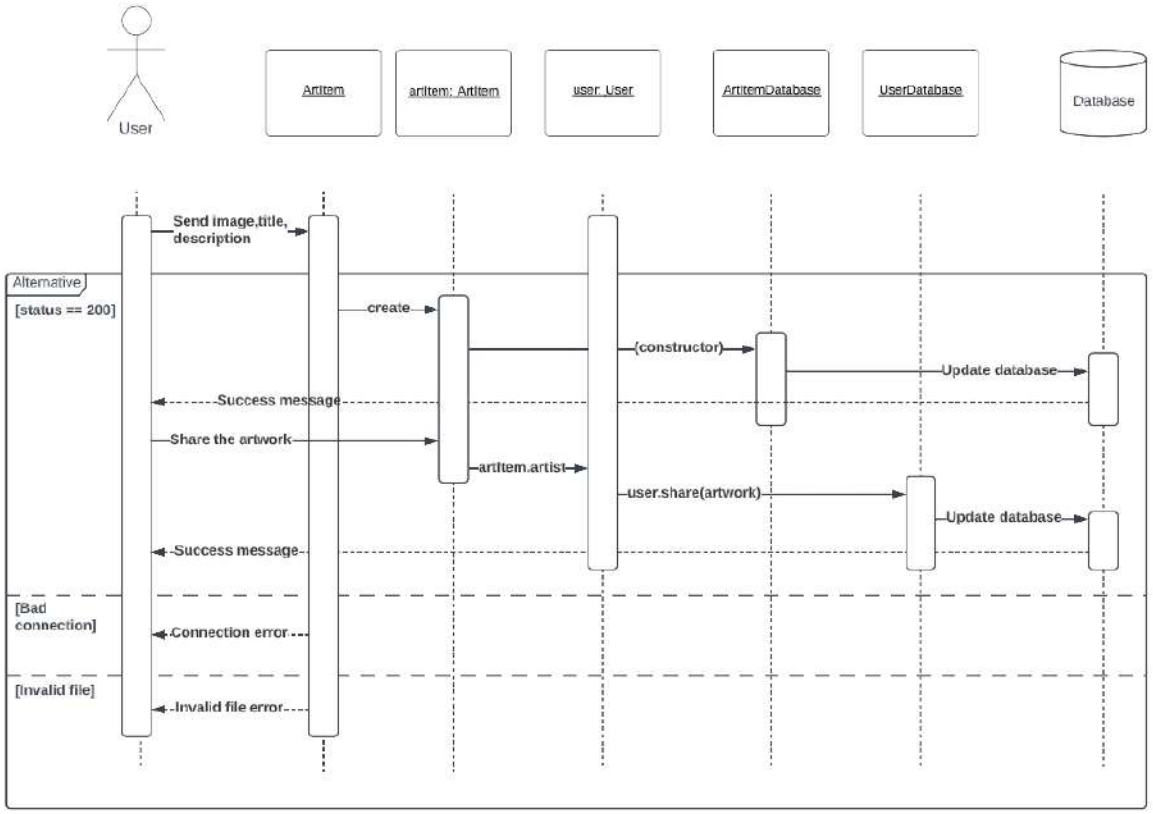
prepared by Berkkant Koç

6.4.3.8. User Recommendation



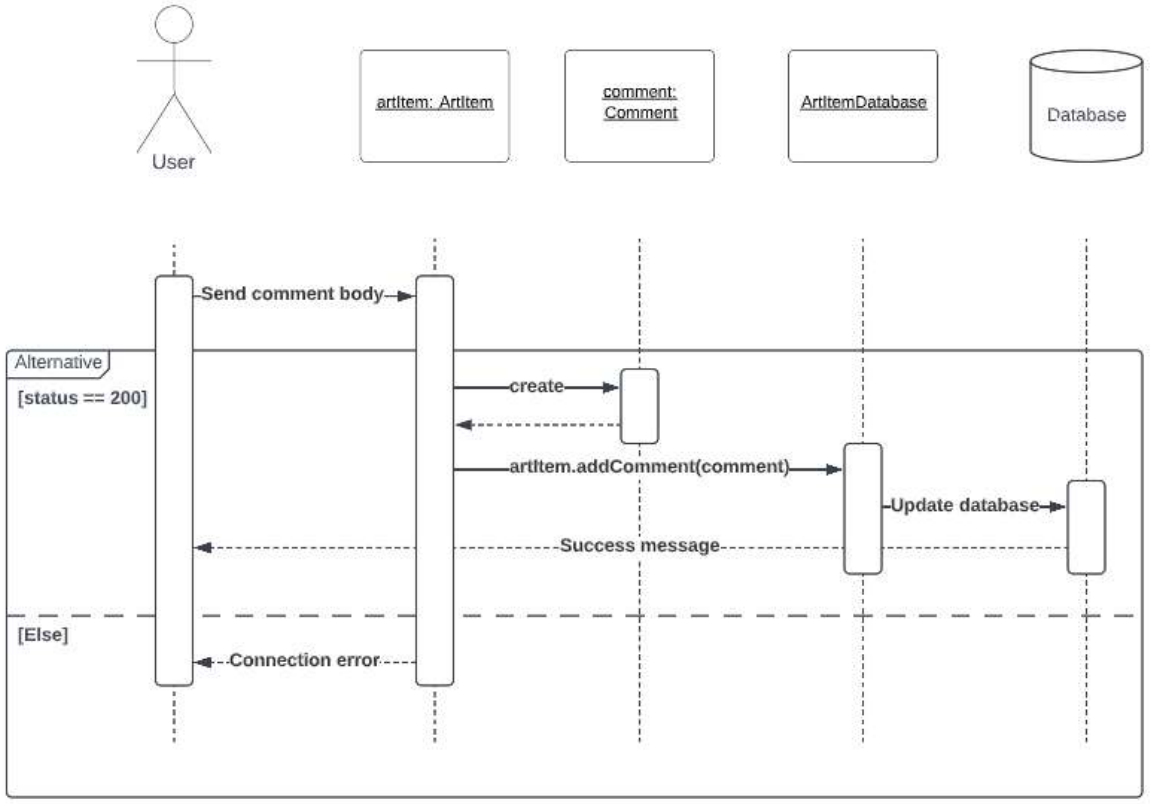
prepared by Berkkant Koç

6.4.3.9. Share an Art Item



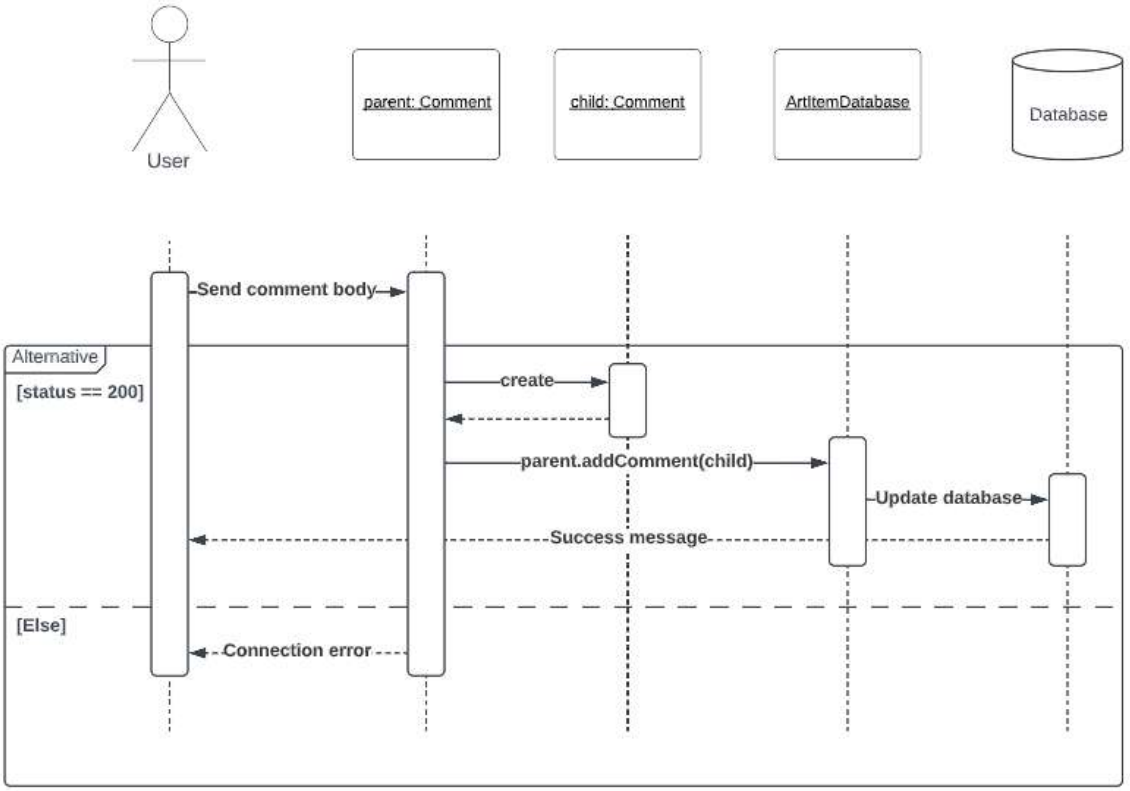
prepared by Can Bora Uğur

6.4.3.10. Comment on Art Item



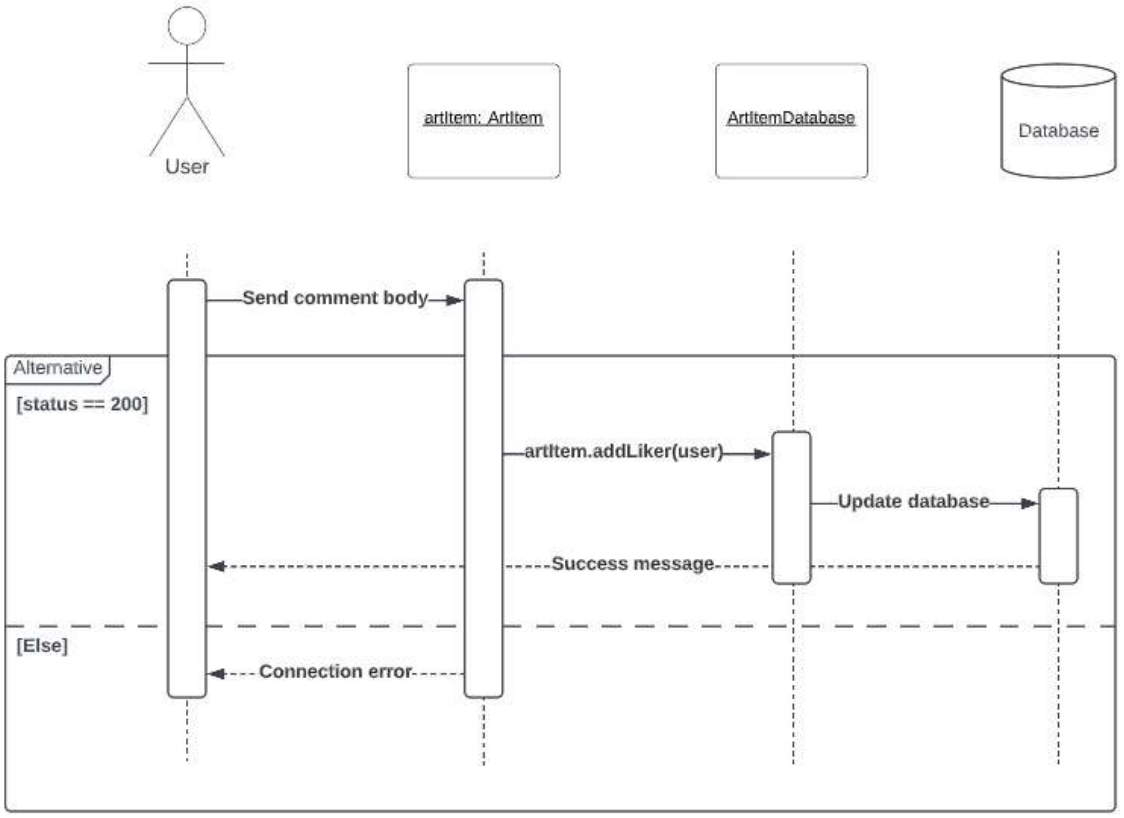
prepared by Can Bora Uğur

6.4.3.11. Reply to Comment



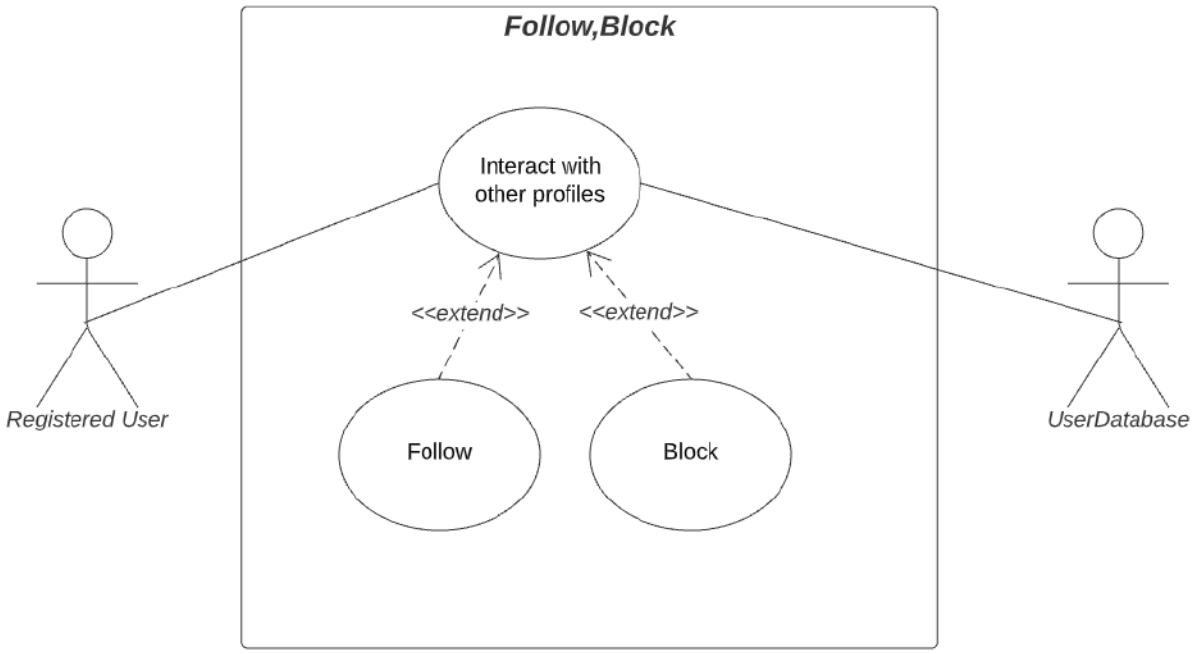
prepared by Can Bora Uğur

6.4.3.12. Like Art Item



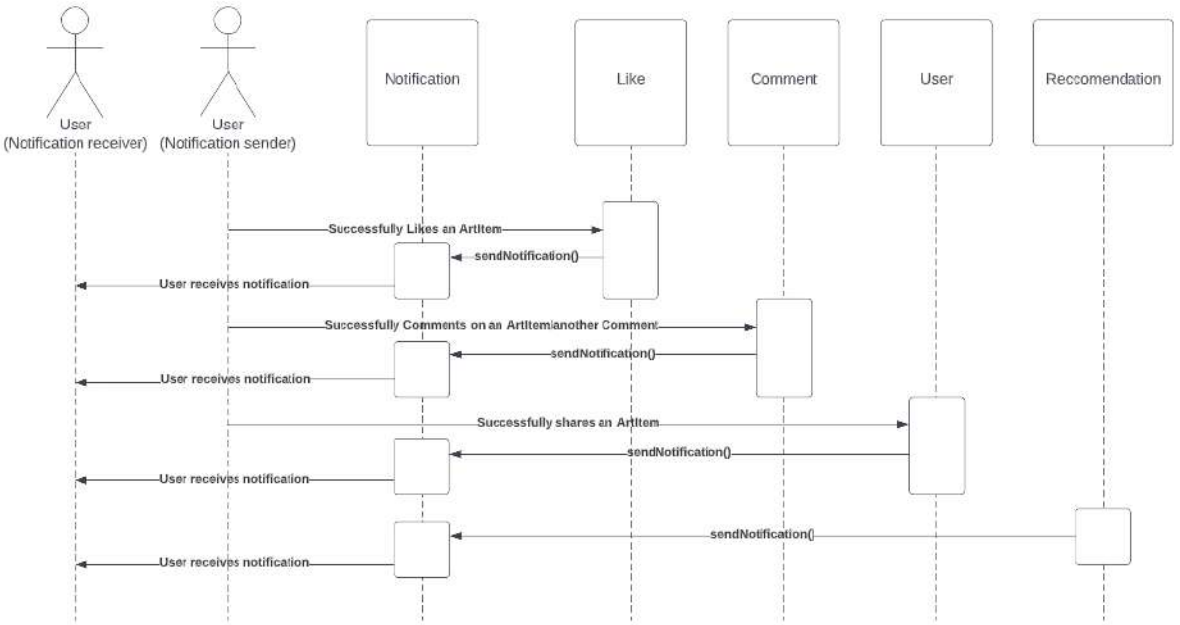
prepared by Can Bora Uğur

6.4.3.13. Follow a User



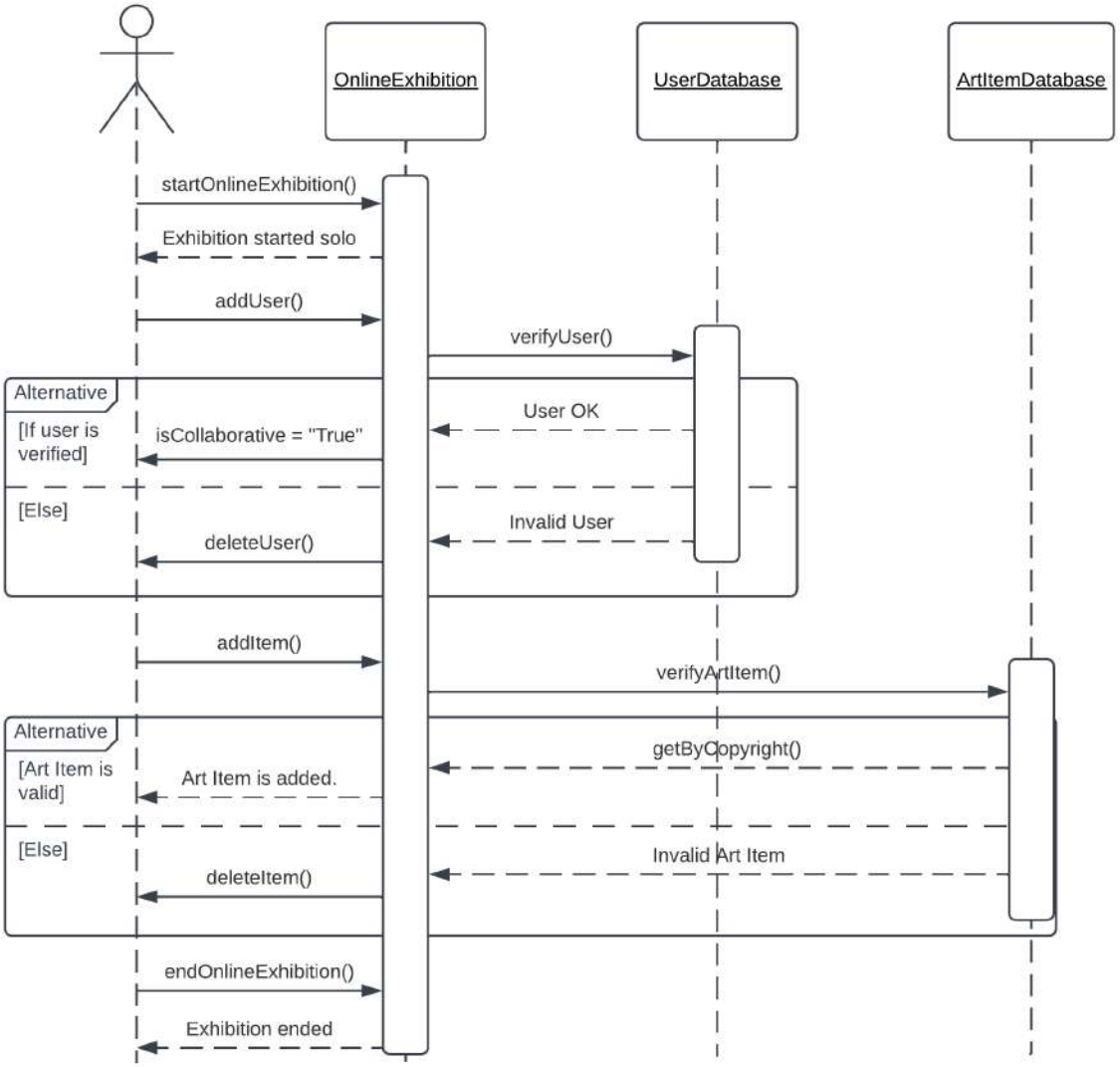
prepared by Berke Çalışkan

6.4.3.14. Send Notification



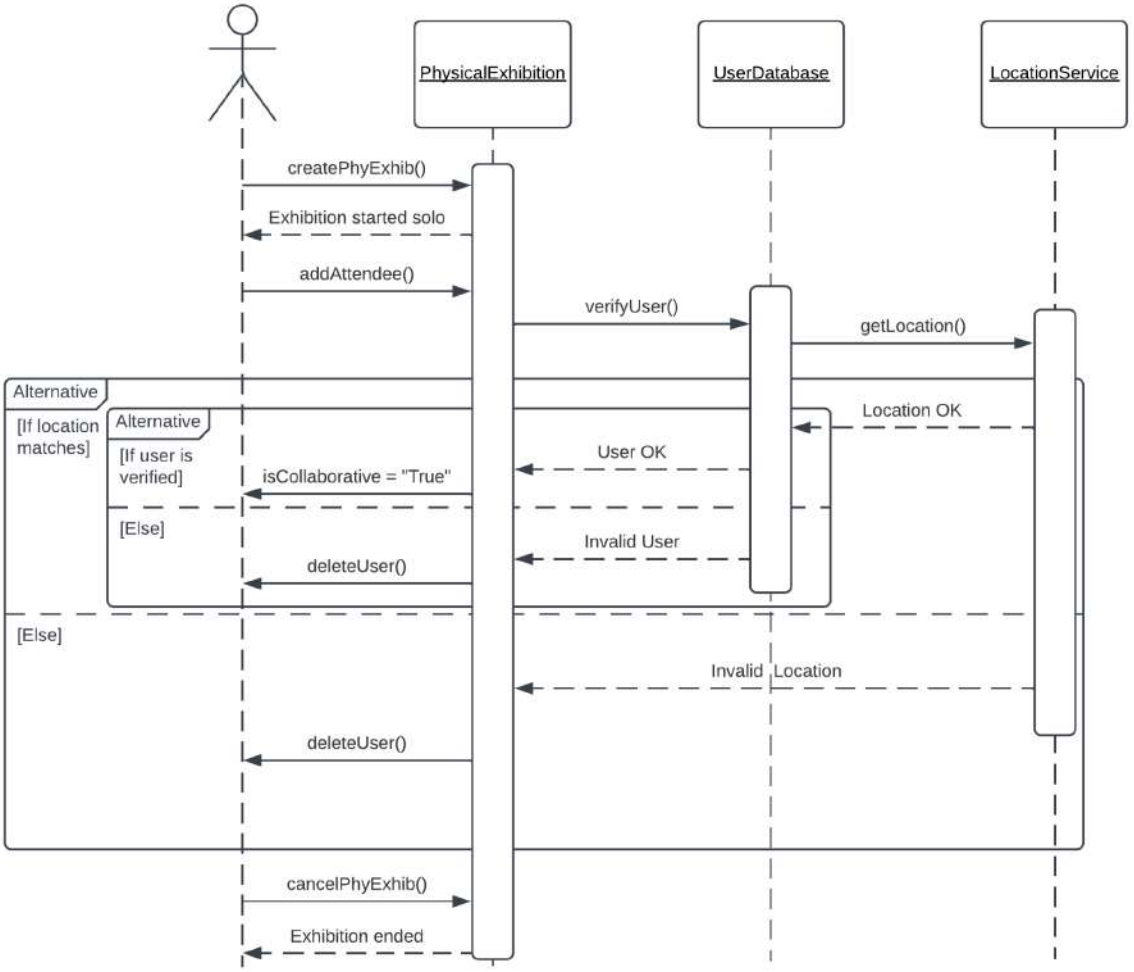
prepared by Hüseyin Türker Erdem

6.4.3.15. Online Exhibition



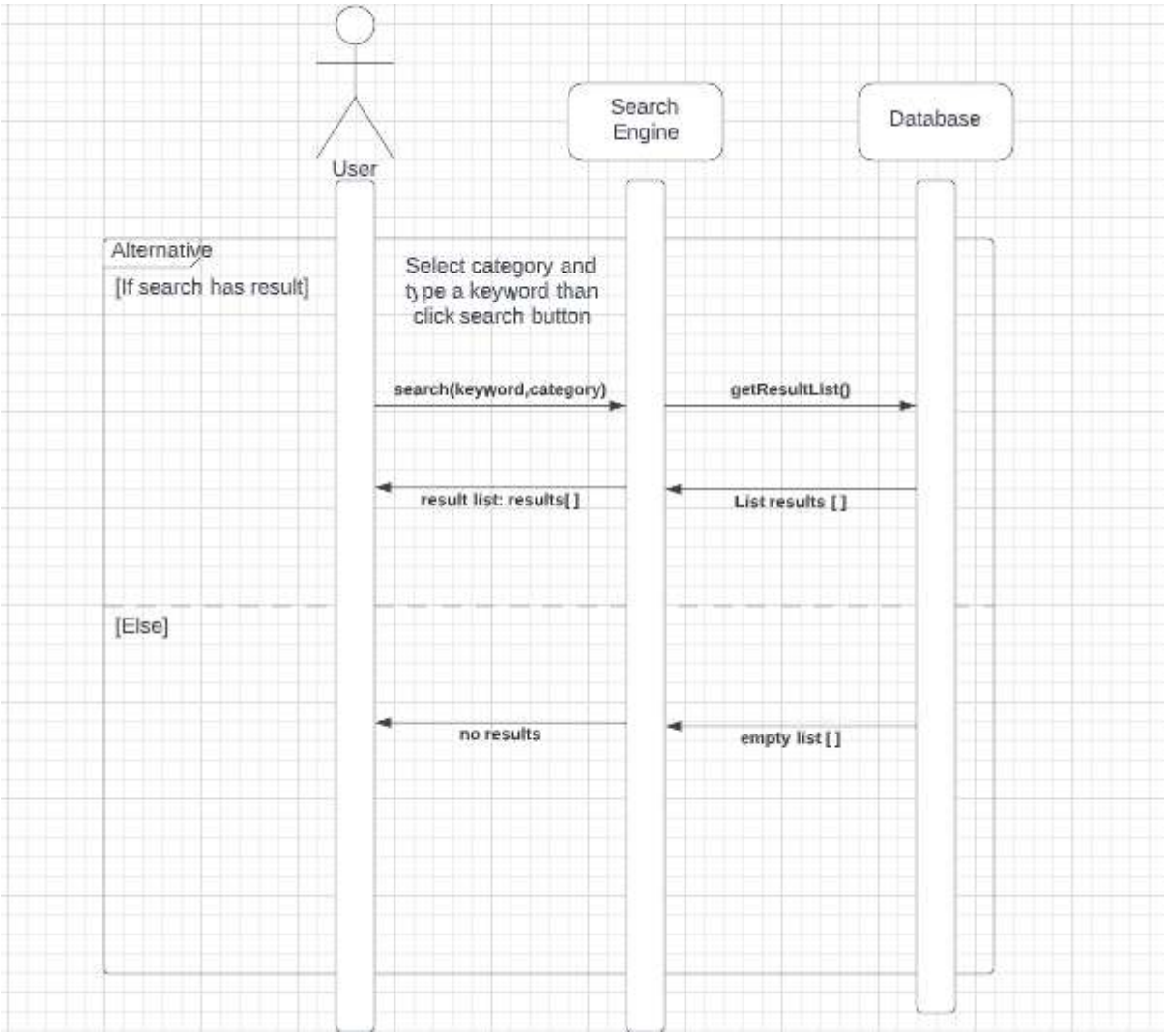
prepared by Furkan Özdemir

6.4.3.16. Physical Exhibition



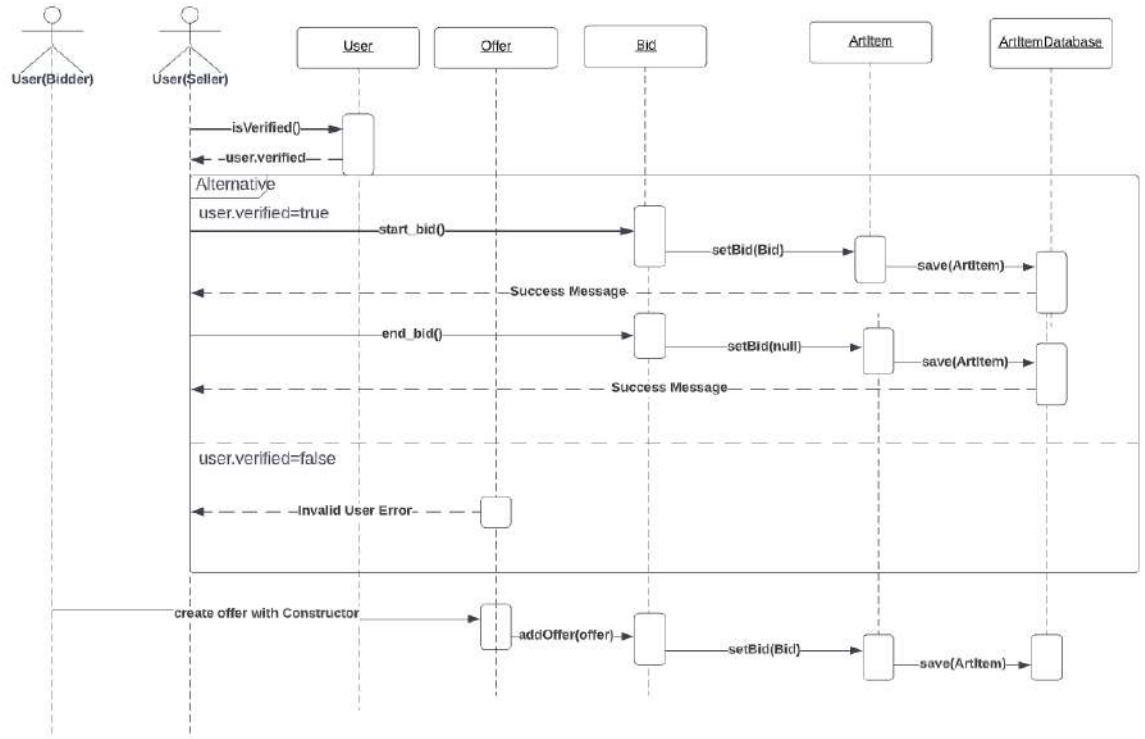
prepared by Furkan Özdemir

6.4.3.17. Search



prepared by Kutay Saran

6.4.3.18. Bid



prepared by Sena Özpınar

6.5 Project Plan

	Ad	Süre	Başlat	Bitirme	Kaynak Adları
1	**Infrastucture Setup**	6 günler?	**01.03.2022 08:00**	**08.03.2022 17:00**	
2	Create a template for the meeting not	6 günler	01.03.2022 08:00	08.03.2022 17:00	Ömer Faruk Şişman
3	Researching about version control sys	6 günler?	01.03.2022 08:00	08.03.2022 17:00	Everyone
4	Researching favourite GitHub reposito	6 günler?	01.03.2022 08:00	08.03.2022 17:00	Everyone
5	Researching about markdown	6 günler?	01.03.2022 08:00	08.03.2022 17:00	Everyone
6	Creating a discord channel	6 günler?	01.03.2022 08:00	08.03.2022 17:00	Berke Çalışkan
7	**Documentation**	6 günler?	**01.03.2022 08:00**	**08.03.2022 17:00**	
8	Creating wiki home page	3 günler?	01.03.2022 08:00	03.03.2022 17:00	Berkkant Koç;Ömer Faruk Şi...
9	Creating wiki sidebar	6 günler?	01.03.2022 08:00	08.03.2022 17:00	Ömer Faruk Şişman
10	Creating readme.md file	3 günler?	01.03.2022 08:00	03.03.2022 17:00	Burak Ferit Aktan;Cem Sarp...
11	Creating personal wiki + effort pages	6 günler?	01.03.2022 08:00	08.03.2022 17:00	Everyone
12	Preparing Communication Plan	3 günler	01.03.2022 08:00	03.03.2022 17:00	Kutay Saran;Hüseyin Türker...
13	Customizing issue labels	6 günler?	01.03.2022 08:00	08.03.2022 17:00	Berke Çalışkan
14	Creating favourite Github Repositories	6 günler?	01.03.2022 08:00	08.03.2022 17:00	Furkan Özdemir
15	Contributing favourite Github repositor	6 günler?	01.03.2022 08:00	08.03.2022 17:00	Everyone
16	**Requirements**	5 günler	**09.03.2022 08:00**	**15.03.2022 17:00**	
17	Examining related software systems	5 günler	09.03.2022 08:00	15.03.2022 17:00	Everyone
18	Requirements analysis	5 günler	09.03.2022 08:00	15.03.2022 17:00	Everyone
19	Creating glossary	5 günler	09.03.2022 08:00	15.03.2022 17:00	Everyone
20	Creating user requirements	5 günler	09.03.2022 08:00	15.03.2022 17:00	Berke Çalışkan;Sena Özpına...
21	Creating system requirements	5 günler	09.03.2022 08:00	15.03.2022 17:00	Burak Ferit Aktan;Furkan Ö...
22	Creating non-functional requirements	5 günler	09.03.2022 08:00	15.03.2022 17:00	Berkkant Koç;Can Bora Uğu...
23	Creating questions for the customers	5 günler	09.03.2022 08:00	15.03.2022 17:00	Everyone
24	**Revisions Regarding Customer Me**	18 günler	**16.03.2022 08:00**	**08.04.2022 16:59**	
25	Revising Glossary	12 günler	16.03.2022 08:00	31.03.2022 17:00	Everyone
26	Revising User Requirements	18 günler	16.03.2022 08:00	08.04.2022 16:59	Burak Ferit Aktan;Berkkant ...
27	Revising System Requirements	12 günler	16.03.2022 08:00	31.03.2022 17:00	Berkkant Koç;Can Bora Uğur

28		**Scenarios**	3 günler	**16.03.2022 08:00**	**18.03.2022 17:00**	
29		Creating "Sharing an Art" Scenario	3 günler	16.03.2022 08:00	18.03.2022 17:00	Burak Ferit Aktan;Hüseyin T...
30		Creating "Starting a bid on a work of a	3 günler	16.03.2022 08:00	18.03.2022 17:00	Cem Sarpkaya;Berke Çalışk...
31		Creating "Following a user" Scenario	3 günler	16.03.2022 08:00	18.03.2022 17:00	Berkkant Koç;Kutay Saran
32		Creating "Commenting on art work" Sc	3 günler	16.03.2022 08:00	18.03.2022 17:00	Can Bora Uğur;Berke Çalışkan
33		**Mockups**	3 günler	**21.03.2022 08:00**	**23.03.2022 17:00**	
34		General outlines of Mockup	3 günler	21.03.2022 08:00	23.03.2022 17:00	Everyone
35		Creating Mockup for Sharing an art	3 günler	21.03.2022 08:00	23.03.2022 17:00	Burak Ferit Aktan;Hüseyin T...
36		Creating Mockup for Starting a bid	3 günler	21.03.2022 08:00	23.03.2022 17:00	Cem Sarpkaya;Berke Çalışk...
37		Creating Mockup for Following a user	3 günler	21.03.2022 08:00	23.03.2022 17:00	Berkkant Koç;Kutay Saran
38		Creating Mockup for Commenting on a	3 günler	21.03.2022 08:00	23.03.2022 17:00	Can Bora Uğur;Berke Çalışkan
39		**Diagrams**	13 günler	**24.03.2022 08:00**	**11.04.2022 17:00**	
40		Preparing Use Case Diagram	13 günler	24.03.2022 08:00	11.04.2022 17:00	Burak Ferit Aktan;Berkkant ...
41		Preparing Class Diagram	13 günler	24.03.2022 08:00	11.04.2022 17:00	Burak Ferit Aktan;Berkkant ...
42		Preparing Sequence Diagrams	13 günler	24.03.2022 08:00	11.04.2022 17:00	Burak Ferit Aktan;Berkkant ...
43		**Project Plan**	3 günler	**12.04.2022 08:00**	**14.04.2022 17:00**	
44		Planning Until	3 günler	12.04.2022 08:00	14.04.2022 17:00	Burak Ferit Aktan;Berkkant ...
45		Planning After	1,5 günler	12.04.2022 08:00	13.04.2022 13:00	Berkkant Koç;Burak Ferit Ak...
46		**Milestone 1**	4 günler	**12.04.2022 08:00**	**15.04.2022 17:00**	
47		Writing Executive Summary	4 günler	12.04.2022 08:00	15.04.2022 17:00	Kutay Saran
48		Listing Deliverables	4 günler	12.04.2022 08:00	15.04.2022 17:00	Hüseyin Türker Erdem
49		Evaluating Deliverables	4 günler	12.04.2022 08:00	15.04.2022 17:00	Hüseyin Türker Erdem
50		Evaluating Tools	4 günler	12.04.2022 08:00	15.04.2022 17:00	Berke Çalışkan
51		Creating work done by each member	4 günler	12.04.2022 08:00	15.04.2022 17:00	Everyone
52		Creating RAM	4 günler	12.04.2022 08:00	15.04.2022 17:00	Berkkant Koç;Kutay Saran
53		Creating Project Plan	4 günler	12.04.2022 08:00	15.04.2022 17:00	Burak Ferit Aktan;Berkkant ...
54		Preparing The Final Document	4 günler	12.04.2022 08:00	15.04.2022 17:00	Burak Ferit Aktan;Berkkant ...

55		**Meetings before Milestone 1**	28 günler?	**07.03.2022 08:00**	**13.04.2022 17:00**	
56		**Meeting #1**	1 gün?	**07.03.2022 08:00**	**07.03.2022 17:00**	**Burak Ferit Aktan;Berkk...**
57		Note taking	1 gün?	07.03.2022 08:00	07.03.2022 17:00	Sena Özpınar
58		Documenting	1 gün?	07.03.2022 08:00	07.03.2022 17:00	Can Bora Uğur;Sena Özpınar
59		**Meeting #2**	1 gün?	**14.03.2022 08:00**	**14.03.2022 17:00**	**Burak Ferit Aktan;Berkk...**
60		Note taking	1 gün?	14.03.2022 08:00	14.03.2022 17:00	Kutay Saran
61		Documenting	1 gün?	14.03.2022 08:00	14.03.2022 17:00	Kutay Saran
62		**Meeting #3.1**	1 gün?	**21.03.2022 08:00**	**21.03.2022 17:00**	**Burak Ferit Aktan;Berkk...**
63		Note taker	1 gün?	21.03.2022 08:00	21.03.2022 17:00	Hüseyin Türker Erdem
64		Documenter	1 gün?	21.03.2022 08:00	21.03.2022 17:00	Hüseyin Türker Erdem
65		**Meeting #3.2**	1 gün?	**21.03.2022 08:00**	**21.03.2022 17:00**	**Burak Ferit Aktan;Berkk...**
66		Note taker	1 gün?	21.03.2022 08:00	21.03.2022 17:00	Berkkant Koç
67		Documenter	1 gün?	21.03.2022 08:00	21.03.2022 17:00	Berkkant Koç
68		**Meeting #4.1**	1 gün?	**01.04.2022 08:00**	**01.04.2022 17:00**	**Burak Ferit Aktan;Berkk...**
69		Note taker	1 gün?	01.04.2022 08:00	01.04.2022 17:00	Furkan Özdemir
70		Documenter	1 gün?	01.04.2022 08:00	01.04.2022 17:00	Furkan Özdemir
71		**Meeting #4.2**	1 gün?	**04.04.2022 08:00**	**04.04.2022 17:00**	**Burak Ferit Aktan;Furka...**
72		Note taker	1 gün?	04.04.2022 08:00	04.04.2022 17:00	Furkan Özdemir
73		Documenter	1 gün?	04.04.2022 08:00	04.04.2022 17:00	Furkan Özdemir
74		**Meeting #4.3**	1 gün?	**05.04.2022 08:00**	**05.04.2022 17:00**	**Burak Ferit Aktan;Berkk...**
75		Note taker	1 gün?	05.04.2022 08:00	05.04.2022 17:00	Furkan Özdemir
76		Documenter	1 gün?	05.04.2022 08:00	05.04.2022 17:00	Furkan Özdemir
77		**Meeting #5.1**	1 gün?	**13.04.2022 08:00**	**13.04.2022 17:00**	**Burak Ferit Aktan;Berkk...**
78		Note taker	1 gün?	13.04.2022 08:00	13.04.2022 17:00	Hüseyin Türker Erdem
79		Documenter	1 gün?	13.04.2022 08:00	13.04.2022 17:00	Hüseyin Türker Erdem

		Preimplementation Research	40,333 gün...	**20.04.2022 08:00**	**05.10.2022 17:00**	
		Research on API and web technologies	3,375 günler?	20.04.2022 08:00	23.04.2022 17:00	Everyone
		Research on Django, Springboot, Nodejs	3,375 günler?	20.04.2022 08:00	23.04.2022 17:00	Everyone
		Meeting Notes 6	3,667 günler?	20.04.2022 08:00	04.05.2022 17:00	Berkkant Koç
		Searching necessaary and purposeful APIs	3,375 günler?	20.04.2022 08:00	23.04.2022 17:00	Everyone
		Research on Mongodb and Sqlite	3,375 günler?	20.04.2022 08:00	23.04.2022 17:00	Everyone

Pre Implementation	2,667 günl...	**27.04.2022 08:00**	**06.05.2022 17:00**	
Watching Django Tutorials	9,375 günler?	27.04.2022 08:00	06.05.2022 17:00	Everyone
Creating Basic Django Project	9,375 günler?	27.04.2022 08:00	06.05.2022 17:00	Everyone
Creating Art Item API Template	2,375 günler?	27.04.2022 08:00	29.04.2022 17:00	Everyone
Creating Post API Template	1,333 günler?	27.04.2022 08:00	02.05.2022 17:00	Furkan Özdemir;Kutay Saran
Meeting Notes 9	1,333 günler?	27.04.2022 08:00	02.05.2022 17:00	Berke Çalışkan
Implementation	4 günler?	**03.05.2022 08:00**	**18.05.2022 17:00**	
Homa Page	4 günler?	03.05.2022 08:00	18.05.2022 17:00	Sena Özpınar
Login	4 günler?	03.05.2022 08:00	18.05.2022 17:00	Can Bora Uğur
Register	4 günler?	03.05.2022 08:00	18.05.2022 17:00	Berkkant Koç
Art Item API	0,333 günl...	**12.05.2022 08:00**	**12.05.2022 17:00**	
Create Art Item	0,333 günler?	12.05.2022 08:00	12.05.2022 17:00	Burak Ferit Aktan;Kutay Saran
View Item	0,333 günler?	12.05.2022 08:00	12.05.2022 17:00	Burak Ferit Aktan;Kutay Saran
Bid Art Item	0,333 günler?	12.05.2022 08:00	12.05.2022 17:00	Burak Ferit Aktan;Kutay Saran
Delete Art Item	0,333 günler?	12.05.2022 08:00	12.05.2022 17:00	Burak Ferit Aktan;Kutay Saran
Post API	0,333 günl...	**03.05.2022 08:00**	**03.05.2022 17:00**	
Create Post	0,333 günler?	03.05.2022 08:00	03.05.2022 17:00	Berke Çalışkan;Berkkant Koç
View Post	0,333 günler?	03.05.2022 08:00	03.05.2022 17:00	Berke Çalışkan;Berkkant Koç
Create Post Template	0,333 günler?	03.05.2022 08:00	03.05.2022 17:00	Berke Çalışkan;Berkkant Koç
Get All Posts	0,333 günler?	03.05.2022 08:00	03.05.2022 17:00	Berke Çalışkan;Berkkant Koç
Deployment	0,667 günl...	**03.05.2022 08:00**	**04.05.2022 17:00**	
Dockerizing	0,667 günler?	03.05.2022 08:00	04.05.2022 17:00	Cem Sarpkaya
Pushing AWS	0,667 günler?	03.05.2022 08:00	04.05.2022 17:00	Ömer Faruk Şişman

Writing Test Case	2,375 günler?	05.05.2022 08:00	07.05.2022 17:00	Everyone
Meeting Notes 10	1 gün?	05.05.2022 08:00	09.05.2022 17:00	Can Bora Uğur
Meeting Notes 11	0,667 günler?	07.05.2022 08:00	10.05.2022 17:00	Hüseyin Türker Erdem

Third Party API	8,667 günl...	**30.05.2022 08:00**	**04.07.2022 17:00**	
News API	8,667 günler?	30.05.2022 08:00	04.07.2022 17:00	Furkan Özdemir;Hüseyin Türker Erdem
Youtube Data API and Youtube IFrame API	8,667 günler?	30.05.2022 08:00	04.07.2022 17:00	Furkan Özdemir;Hüseyin Türker Erdem
GIPHY API	8,667 günler?	30.05.2022 08:00	04.07.2022 17:00	Furkan Özdemir;Hüseyin Türker Erdem
Detect Language API	8,667 günler?	30.05.2022 08:00	04.07.2022 17:00	Kutay Saran;Ömer Faruk Şişman
Detect Country from IP	1,667 günler?	30.05.2022 08:00	03.06.2022 17:00	Kutay Saran;Ömer Faruk Şişman
Google Image Suggestion API	8,667 günler?	30.05.2022 08:00	04.07.2022 17:00	Kutay Saran;Ömer Faruk Şişman
Cat Facts API	8,667 günler?	30.05.2022 08:00	04.07.2022 17:00	Kutay Saran;Ömer Faruk Şişman
Semantic Search API	0,333 günler?	30.05.2022 08:00	30.05.2022 17:00	Kutay Saran;Ömer Faruk Şişman

Review Project	3,667 günl...	**01.06.2022 08:00**	**15.06.2022 17:00**	
Review Requirements	14,375 günler?	01.06.2022 08:00	15.06.2022 17:00	Everyone
Review Diagrams	14,375 günler?	01.06.2022 08:00	15.06.2022 17:00	Everyone
Review Mockups	14,375 günler?	01.06.2022 08:00	15.06.2022 17:00	Everyone
Update Requiremets	3,667 günler?	01.06.2022 08:00	15.06.2022 17:00	Berkkant Koç
Update Sequence Diagrams	3,667 günler?	01.06.2022 08:00	15.06.2022 17:00	Furkan Özdemir
Update Questions	3,667 günler?	01.06.2022 08:00	15.06.2022 17:00	Burak Ferit Aktan
Backend	1 gün?	**03.10.2022 08:00**	**05.10.2022 17:00**	
Studying Django Framework to catch up	0,889 günler?	03.10.2022 08:00	05.10.2022 14:20	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Participating in Backend Meeting 1	0,111 günler?	03.10.2022 08:00	03.10.2022 10:40	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Learning Activity Streams	0,333 günler?	03.10.2022 08:00	03.10.2022 17:00	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Learning JsonLD	0,333 günler?	03.10.2022 08:00	03.10.2022 17:00	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Sketching the initial outline for Backend API	0,667 günler?	03.10.2022 08:00	04.10.2022 17:00	Furkan Özdemir
Initializing the Django project for the backen	0,333 günler?	03.10.2022 08:00	03.10.2022 17:00	Ömer Faruk Şişman
Migrating the model from the practice app to	0,111 günler?	03.10.2022 08:00	03.10.2022 10:40	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Implementing initial registration functions	0,111 günler?	03.10.2022 08:00	03.10.2022 10:40	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Implementing initial post template functions.	0 günler?	03.10.2022 17:00	03.10.2022 17:00	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Implementing initial posting functions	1 gün?	03.10.2022 08:00	05.10.2022 17:00	Ömer Faruk Şişman
Implementing initial Art item Features	1 gün?	03.10.2022 08:00	05.10.2022 17:00	Furkan Özdemir
Implementing initial post feed functions.	0,222 günler?	03.10.2022 08:00	03.10.2022 14:20	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Writing unit tests for the Backend API	0,111 günler?	03.10.2022 08:00	03.10.2022 10:40	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Learning Django Rest framework	0,222 günler?	03.10.2022 08:00	03.10.2022 14:20	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Participating in Backend Meeting 2	0,111 günler?	03.10.2022 08:00	03.10.2022 10:40	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Writing serializer classes for the REST API fr	0,111 günler?	03.10.2022 08:00	03.10.2022 10:40	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Adapting existing functions to Django REST A	0,111 günler?	03.10.2022 08:00	03.10.2022 10:40	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
Participating in Backend Meeting 3	0,333 günler?	03.10.2022 08:00	03.10.2022 17:00	Burak Ferit Aktan
Adding Swagger auto-documentation functio	0,333 günler?	03.10.2022 08:00	03.10.2022 17:00	Burak Ferit Aktan
Configuring endpoints for JSON-LD standard	0 günler?	03.10.2022 17:00	03.10.2022 17:00	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman

	Learning Amazon AWS	0 günler?	03. 10. 2022 17:00	03. 10. 2022 17:00	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
	Making database migration from SQLite to My	0 günler?	03. 10. 2022 17:00	03. 10. 2022 17:00	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
	Deploying backend services to AWS instance	0,111 günler?	03. 10. 2022 08:00	03. 10. 2022 10:40	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
	Working on fixing CSRF Token errors	0,111 günler?	03. 10. 2022 08:00	03. 10. 2022 10:40	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
	Working on fixing CORS errors	0,111 günler?	03. 10. 2022 08:00	03. 10. 2022 10:40	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
	Dockerizing the backend application	0,222 günler?	03. 10. 2022 08:00	03. 10. 2022 14:20	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
	Adding secrets to the backend codebase	0,222 günler?	03. 10. 2022 08:00	03. 10. 2022 14:20	Burak Ferit Aktan;Furkan Özdemir;Ömer Faruk Şişman
	Frontend	1,111 günl...	**26.10.2022 08:00**	**31.10.2022 10:40**	
	Studying ReactJS-Bootstrap	1,111 günler?	26. 10. 2022 08:00	31. 10. 2022 10:40	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Participating in Frontend Meeting 1	0,111 günler?	26. 10. 2022 08:00	26. 10. 2022 10:40	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Learning React Hooks	0,333 günler?	26. 10. 2022 08:00	26. 10. 2022 17:00	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Learning React Axios	0,333 günler?	26. 10. 2022 08:00	26. 10. 2022 17:00	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Learning React Navigation	0,333 günler?	26. 10. 2022 08:00	26. 10. 2022 17:00	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Learning React Redux-thunk	0,333 günler?	26. 10. 2022 08:00	26. 10. 2022 17:00	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Participating in Frontend Meeting 2	0,111 günler?	26. 10. 2022 08:00	26. 10. 2022 10:40	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Creating Register Page	0,667 günler?	26. 10. 2022 08:00	27. 10. 2022 17:00	Hüseyin Türker Erdem
	Creating Login Page	0,667 günler?	26. 10. 2022 08:00	27. 10. 2022 17:00	Berkkant Koç
	Creating Create Post Template Page	0,063 günler?	26. 10. 2022 08:00	26. 10. 2022 09:31	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Creating Create Post Page	0,198 günler?	26. 10. 2022 08:00	26. 10. 2022 13:44	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Creating My Posts Page	0,222 günler?	26. 10. 2022 08:00	26. 10. 2022 14:20	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Creating Feed Page	0,292 günler?	26. 10. 2022 08:00	26. 10. 2022 16:00	Sena Özpınar
	Creating Launch Exhibition Page	0,063 günler?	26. 10. 2022 08:00	26. 10. 2022 09:31	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Creating Bidding Page	0,667 günler?	26. 10. 2022 08:00	27. 10. 2022 17:00	Berkkant Koç
	Initialize React App	0,333 günler?	26. 10. 2022 08:00	26. 10. 2022 17:00	Berkkant Koç
	Creating example screens and components.	0,667 günler?	26. 10. 2022 08:00	27. 10. 2022 17:00	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar

	Creating Sidebar	0 günler?	26. 10. 2022 08:00	26. 10. 2022 08:00	Berkkant Koç
	integration of Axios	0,333 günler?	26. 10. 2022 08:00	26. 10. 2022 17:00	Berkkant Koç
	integration and creating examples of Redux	0,111 günler?	26. 10. 2022 08:00	26. 10. 2022 10:40	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Integration of React Navigation	0,111 günler?	26. 10. 2022 08:00	26. 10. 2022 10:40	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Implementation of React-bootstrap	0,111 günler?	26. 10. 2022 08:00	26. 10. 2022 10:40	Berkkant Koç;Hüseyin Türker Erdem;Sena Özpınar
	Backend integration	1 gün?	26. 10. 2022 08:00	28. 10. 2022 17:00	Berkkant Koç
	AWS server creation and deployment	0,333 günler?	26. 10. 2022 08:00	26. 10. 2022 17:00	Berkkant Koç
	Mobile	1,333 günl...	**28.11.2022 08:00**	**01.12.2022 17:00**	
	Learning React Native	1,333 günler?	28. 11. 2022 08:00	01. 12. 2022 17:00	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Creating Initial App	0,111 günler?	28. 11. 2022 08:00	28. 11. 2022 10:40	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Creating Welcome Screen	0,111 günler?	28. 11. 2022 08:00	28. 11. 2022 10:40	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Creating Login Screen	0,111 günler?	28. 11. 2022 08:00	28. 11. 2022 10:40	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Implementing API call for Login feature	0,444 günler?	28. 11. 2022 08:00	29. 11. 2022 10:40	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Creating Registration Screen	0,111 günler?	28. 11. 2022 08:00	28. 11. 2022 10:40	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Implementing API call for Registration feature	0,444 günler?	28. 11. 2022 08:00	29. 11. 2022 10:40	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Creating Feed Screen	0,222 günler?	28. 11. 2022 08:00	28. 11. 2022 14:20	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Implementing API call for getting Feed data	0,556 günler?	28. 11. 2022 08:00	29. 11. 2022 14:20	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Creating Art Platform Timeline	0,222 günler?	28. 11. 2022 08:00	28. 11. 2022 14:20	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Creating User Posts Screen	0,222 günler?	28. 11. 2022 08:00	28. 11. 2022 14:20	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Implementing API call for getting User Posts	0,556 günler?	28. 11. 2022 08:00	29. 11. 2022 14:20	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Creating Launch Exhibitions Screen	0,222 günler?	28. 11. 2022 08:00	28. 11. 2022 14:20	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Implementing API call for Launching Exhibition	0,556 günler?	28. 11. 2022 08:00	29. 11. 2022 14:20	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Creating Settings Screen	0,111 günler?	28. 11. 2022 08:00	28. 11. 2022 10:40	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Creating Post Screen	0,222 günler?	28. 11. 2022 08:00	28. 11. 2022 14:20	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Adding Discuss feature	0,222 günler?	28. 11. 2022 08:00	28. 11. 2022 14:20	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Adding Seamantic Search Feature	0,111 günler?	28. 11. 2022 08:00	28. 11. 2022 10:40	Berke Çalışkan;Can Bora Uğur;Kutay Saran
	Possible Bug Fixing	0,222 günler?	28. 11. 2022 08:00	28. 11. 2022 14:20	Berke Çalışkan;Can Bora Uğur;Kutay Saran

6.6 RAM

L: Lead S: Secondary C: Contributor A: Approval R: Reviewer N: None	Berkkant Koç	Furkan Özdemir	Cem Sarpkaya	Sena Özpınar	Ömer Faruk Şişman	Burak Ferit Aktan	Kutay Saran	Can Bora Uğur	Berke Çalışkan	Hüseyin Türker Erdem	
Orientation											UP TO DATE
Researching about version control system	C	C	C	C	C	C	C	C	C	C	
Researching favourite GitHub repositories	C	C	C	C	C	C	C	C	C	C	
Researching about markdown	C	C	C	C	C	C	C	C	C	C	
Creating a discord channel	N	N	N	N	N	N	N	N	L	N	
Documentation											
Creating wiki home page	C	N	N	N	C	N	N	N	N	N	
Creating wiki sidebar	N	N	N	N	L	N	N	N	N	N	
Creating readme.md file	N	N	C	N	N	C	N	N	N	N	
Creating personal wiki + effort pages	C	C	C	C	C	C	C	C	C	C	
Preparing Communication Plan	N	N	N	N	N	N	C	N	N	C	
Customizing issue labels	N	N	N	N	N	N	N	N	L	N	
Creating favourite Github Repositories page	N	L	N	N	N	N	N	N	N	N	
Contributing favourite Github repositories	C	C	C	C	C	C	C	C	C	C	
Requirements											
Examining related software systems	C	C	C	C	C	C	C	C	C	C	
Requirements analysis	C	C	C	C	C	C	C	C	C	C	
Creating glossary	C	C	C	C	C	C	C	C	C	C	
Creating user requirements	R	R	N	C	C	R	R	R	C	R	
Creating system requirements	R	C	N	R	R	C	C	R	N	R	
Creating non-functional requirements	C	R	N	R	R	R	R	C	R	C	
Creating questions for the customers	C	C	C	C	C	C	C	C	C	C	
Revisions Regarding Customer Meetings											
Revising Glossary	C	C	C	C	C	C	C	C	C	C	
Revising User Requirements	C	C	N	N	C	C	C	C	N	C	
Revising System Requirements	C	C	N	N	C	N	N	C	N	N	
Scenarios											
Creating "Sharing an Art" Scenario	R	R	R	R	C	C	R	R	R	C	
Creating "Starting a bid on a work of art" Scenario	R	R	C	C	R	R	R	R	C	R	
Creating "Following a user" Scenario	C	R	R	R	R	R	C	R	R	R	
Creating "Commenting on art work" Scenario	R	C	R	R	R	R	R	C	C	R	
Mockups											
General outlines of Mockup	C	C	C	C	C	C	C	C	C	C	
Creating Mockup for Sharing an art	R	R	R	R	C	C	R	R	R	C	
Creating Mockup for Starting a bid	R	R	C	C	R	R	R	R	C	R	
Creating Mockup for Following a user	C	R	R	R	R	R	C	R	R	R	
Creating Mockup for Commenting on art work	R	C	R	R	R	R	R	C	C	R	
Diagrams											
Preparing Use Case Diagram	C	C	N	C	C	C	C	C	C	C	
Preparing Class Diagram	C	C	N	C	C	C	C	C	C	C	
Preparing Sequence Diagrams	C	C	N	C	C	C	C	C	C	C	
Project Plan											
Planning Until	C	N	N	N	N	C	N	N	N	N	
Planning After	C	N	N	N	N	C	N	N	N	N	
Milestone 1											
Writing Executive Summary	R	N	N	N	N	N	C	N	N	N	
Listing Deliverables	C	C	N	N	N	N	N	N	N	N	
Evaluating Deliverables	C	N	N	N	N	N	N	C	N	N	
Evaluating Tools	N	N	N	N	N	N	N	N	C	N	
Creating Table of Work Done by Each Member	C	C	C	C	L	C	C	C	C	C	
Creating RAM	C	R	N	N	N	N	N	C	N	N	
Creating Project Plan Table	C	N	N	N	N	C	N	N	N	N	
Preparing the final document	C	C	N	N	C	C	N	N	C	N	

Meetings											
Meeting #1	C	C	C	C	C	C	C	C	C	N	
Note taker	N	N	N	L	N	N	N	N	N	N	
Documenter	N	N	N	C	N	N	N	C	N	N	
Meeting #2	C	C	N	C	C	C	C	C	C	C	
Note taker	N	N	N	N	N	N	L	N	N	N	
Documenter	N	N	N	N	N	N	L	N	N	N	
Meeting #3.1	C	C	N	C	C	C	N	C	C	C	
Note taker	N	N	N	N	N	N	N	N	N	L	
Documenter	N	N	N	N	N	N	N	N	N	L	
Meeting #3.2	C	N	C	C	C	C	C	C	N	C	
Note taker	L	N	N	N	N	N	N	N	N	N	
Documenter	L	N	N	N	N	N	N	N	N	N	
Meeting #4.1	C	C	N	C	C	C	C	C	N	C	
Note taker	N	L	N	N	N	N	N	N	N	N	
Documenter	N	L	N	N	N	N	N	N	N	N	
Meeting #4.2	N	C	N	C	C	C	C	N	N	N	
Note taker	N	L	N	N	N	N	N	N	N	N	
Documenter	N	L	N	N	N	N	N	N	N	N	
Meeting #4.3	C	C	N	C	C	C	C	C	N	C	
Note taker	N	L	N	N	N	N	N	N	N	N	
Documenter	N	L	N	N	N	N	N	N	N	N	
Meeting #5.1	C	C	N	N	N	C	C	C	C	C	
Note taker	N	N	N	N	N	N	N	N	N	L	
Documenter	N	N	N	N	N	N	N	N	N	L	