CmpE 352 - Milestone 1 Report

GROUP 1

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1. Executive Summary

1.1. Introduction

Online Learning Platform (OLP) is an e-learning platform, which differentiates itself from the standard learning platforms. In the standard learning paradigm, there are well defined categories such as teachers and students, where teachers are responsible for teaching and students are responsible for learning the material. In such a paradigm, there are well defined success metrics assessing the students' ability, including letter grades, certificates etc. On the contrary, one of the most fundamental points of the *Online Learning Platform (OLP)* is that it has no such classifications as teachers and students. Everyone who is willing to teach teaches and everyone who is willing to learn learns. In this context, it resembles Wikipedia-like platforms, where the community benefits from and adds to the content. It is more than Wikipedia, however, since *Online Learning Platform (OLP)* is a platform specifically designed for empowering learning processes. Below, there is a summary of the specifications of the platform.

As mentioned above, one of the keystones of the *Online Learning Platform (OLP)* is its antagonism to the classical learning paradigm, constituted by a well defined relationship between the teacher and the student. We already mentioned how it differs in terms of the teacher-student relationships above by explaining it has no such categories. Adding onto that, it also differs in its success metrics. In *Online Learning*

Platform (OLP), success of the students are not measured by grades or certificates. In fact, there is no attempt to measure success. It is believed that learning is an individual task and there is no well-defined metric assessing everyone's needs and expectations. To summarize, *the Online Learning Platform (OLP)* is a platform where everyone learns and teaches as much as they want according to their needs. So, to be specific, the success, if we want such a thing in the platform, is measured by students. If they believe they get what they want, then it is a clear success for them.

The *Online Learning Platform (OLP)* erases the classical education paradigm. In the classical paradigm, one of the motivators for teaching is economic benefit. However, *Online Learning Platform (OLP)* makes a clear move and wants no money-related issues permitted in the platform. We want a platform in which people teach just because they like to teach, not because of the economic benefit. We believe that teaching itself is a fulfilling task and there are people who are willing to teach in the absence of such economic motivators.

As we mentioned above, *the Online Learning Platform (OLP)* is specifically designed for learning. So it shall be able to allow activities which facilitate the learning process, including note taking and annotations. Students shall be able to annotate the material and take notes about the course content. Moreover, it shall be able to allow for creation of and attendance to events.

All in all, *the Online Learning Platform (OLP)* is a non-conventional learning platform, which aims to provide an alternative learning process. We as a team, thanks to the feedbacks of the customer, are working to make such dream come true. For this end, we made considerable progress, which you will examine throughout this milestone report.

1.2. Project Status

Up to date, our work consists mainly of the logistics of the project. We have not dwelled into the implementation part yet. Our main concern was first meeting one another and then preparing the project logistics. By project logistics, we mean glossary, requirements, scenarios and mock-ups, diagrams consisting of class, use case and sequences. For communication, we set up swift and efficient communication channels, as you may read in the following sections. We have become an efficient team working together. Below, I summarize the work we have done:

At the beginning of the project, we met one another and created personal wiki pages, which describe our interests and communication tools. Then, we prepared a git research page, together with our favorite github repositories, which inspired us in the *Online Learning Project* as well. Moreover, we set up communication channels as zoom and discord, which you may read in the further sections.

After the project descriptions are distributed, we have researched the project and came up with questions, which we also use in the preparation of the glossary and the requirements. After many discussions with the customer, i.e. our teaching assistant, we have refined our glossary and the requirements.
In a similar way, we have prepared scenarios and mock-ups. We prepared an initial version and upon the feedback of the customer, we revised it to adapt the needs of the project. For the diagrams, we again followed a similar path. In this time, we as a team also reviewed and criticized each other to refine our diagrams before showing them to the customer. Upon receiving nice feedback, we further refined our diagrams and now in this document we are presenting all of our work.

In summary, we have finished all the assignments up to date in accordance with the feedback of the customer.

1.3. Future Plans

What we have done so far, the requirements, scenarios & mock-ups, use case, class and sequence diagrams provide a nice basis for our future work. In the next phases of the project, we will dwell into the implementation. The technologies that we will use are not determined yet. With these detailed glossary, requirements, scenarios and diagrams, we believe we have a well-defined task now, which we can handle actively as a team.
In the future, as a team, we should distribute the parts of the project, i.e. we should specialize. While one team member handles the front-end, the other should work on the back-end etc. Moreover, the active and nice use of API's, git-like tools, IDEs are important. The team members shall improve their

2. List and Status of Deliverables

Deliverable	Status	Accessible at	
Communication Plan	Completed	https://github.com/bounswe/bounswe2022group1/wiki/Communication-Plan	
Git Researches and Favorite Repos	Completed	https://github.com/bounswe/bounswe2022group1/wiki/A-brief-information-about-Git https://github.com/bounswe/bounswe2022group1/wiki/Favorite-Github-Repositories	

Glossary for Requirements	Completed	https://github.com/bounswe/bounswe2022group1/wiki/Requirements
Requirements	Completed	https://github.com/bounswe/bounswe2022group1/wiki/Requirements
Student User Personas, Stories, Scenarios and Mock-ups	Completed	https://github.com/bounswe/bounswe2022group1/wiki/Student-User-Web-Scenario-and-Mockup
Teacher User Personas, Stories, Scenarios and Mock-ups	Completed	https://github.com/bounswe/bounswe2022group1/wiki/Teacher-User-Web-Scenario-and-Mockup
Teacher User Personas, Stories, Scenarios and Mock-ups	Completed	https://github.com/bounswe/bounswe2022group1/wiki/Guest-Web-Scenario-and-Mockup
Class Diagram	Completed	https://github.com/bounswe/bounswe2022group1/wiki/Class-Diagram
Sequence Diagram	Completed	https://github.com/bounswe/bounswe2022group1/wiki/Sequence-Diagrams
Use Case Diagram	Completed	https://github.com/bounswe/bounswe2022group1/wiki/Use-Case-Diagram
Project Plan	Completed	https://github.com/bounswe/bounswe2022group1/wiki/Project-Libre-File
RAM	Completed	https://github.com/bounswe/bounswe2022group1/wiki/Responsibility-Assignment-Matrix

3. Evaluation of Deliverables

3.1. Project Repository

We use a GitHub repository as the main workspace for the collective and collaborative work. Our project repository is named bounswe2022group1 and there are 10 team members who are contributing to the repository.

When you first enter the repo, the reademe.md file welcomes you. Readme.md file consists of an introduction, team members, brief about cmpe352 course, instructor and TAs.

We use wiki structure to document our research and the work that needs to be done. There is a homepage named Home in our wiki. Homepage shows our picture at first, then shows team members with personal wiki page links. Homepage also shows meeting notes, communication plan, requirements, researches, scenarios, mockups and diagrams with links to their wiki pages. In our wiki page there is a sidebar to access pages easily.

3.1.1 Communication Plan

Our first meeting we defined how and where we would establish communication between us. We chose Zoom for online meetings and for face to face meetings. Although we mostly used zoom due to the pandemic, we also had face-to-face meetings. In detail:

We first decided on our main communication tool between various tools such as Zoom, Skype, Teams and Discord. We decided Discord has the features that we need for our communication purposes. We have created five main channels for our discussions: Genel for general discussions, toplantı-notları for storing meeting notes, araştırma-notları for notes on researches, grup-çalışması for tasks on groups, rastgele for random messages not related to the project. We decided we will have our weekly meetings on Discord every Thursday between 20.00 - 22.00. However, we had numerous meetings other than our weekly meetings on topics of designing UML diagrams. Addition to Discord, we have a Slack channel for purposes of communicating with our TA's and instructor and informing everyone about announcements.

GitHub is our main progress tracking tool and task sharing. Completed tasks, our personal wiki pages, reports and researches and many more can be reached from our GitHub Wiki.

For urgent communication, we have our Whatsapp group. However, communication is mostly held in Discord.

Members	Purpose	Platform	Time
All	Scheduled Meetings About the Topic of that Week	Discord/Zoom	22:30 T or W
All	Emergency Messages	Whatsapp	Always
All	Checking, Editing, Updating the Project	Github	Everyday

3.1.2 Researches for Git and Github

We have created a page for git and github. Also, everyone has added their favorite github repos to another page. Git and github page starts with a short introduction and shows about what git and github are. This page also shows basic command lines for git.

3.2. Requirements and Glossary

Requirements are written according to the project specification sheet and the information obtained via the customer meetings. The glossary briefly explains the terms that are frequently encountered in the requirements. The conventions for requirements that are discussed in the class such as format, consistency and enumeration are applied as much as possible. Requirements for the online learning project are classifed as functional and non-functional requirements. Functional requirements include two main titles which are: user requirements and system requirements.

3.3. Scenarios and Mockups

We have overall 3 scenarios : Teacher & Student & User scenarios. These three scenarios show the actions users can take. We did some research and as a result of the research we decided to use canva to create mockups. Second, Templates are created for mockups on canva. The following are defined for all user modes.

- The user and his/her persona
- Preconditions
- Specific actions to achieve some desired goal
- Acceptance criteria

Then we created mockups.

3.4. Software Design Documents in UML

Unified Modeling Language (UML) design constitutes great importance since the diagrams that are used in UML designs will be referred to in the development process. For the UML design, we started with the reviewing of requirements followed by the preparation of the class diagram, use-case diagram and sequence diagrams, respectively. We used LucidChart in all of the UML documents, the feature of LucidChart to prepare the documents collaboratively was useful in the preparation.

3.4.1 Class Diagram

Class diagram is the part where the structure and relations of the object are referred. An object-oriented approach is used during the process. To start, a meeting is arranged and an outline of the class diagram is constructed which consists of the essential classes and relations. Composition relations, association relations and inheritance are frequently used. Multiplicities for the associations are also added. Sub-groups are formed in order to elaborate the classes; these sub-groubs wrote the specific attributes and methods of the objects. Later, the diagram is concluded after doing reviews for the other groups' works, which is done mainly via the GitHub issues.

3.4.2 Use Case Diagram

Use case diagram is the part where the actors of the system and their interactions/activities are illustrated. For the Online Learning Platform: student, lecturer and guest are the main actors. In this diagram <<extend>> and <<include>> relations are used. <<extend>> indicates the additional or preferential use cases related to a base case, whereas <<include>> indicates the usage of the other use case. For the preparation of use case diagrams, a procedure similar to the one mentioned in the class diagram section is followed. The topics are discussed, and an outline is constructed in the meeting. Then the details are written and the review procedure is applied via GitHub.

3.4.3 Sequence Diagrams

Sequence diagrams illustrates the objects' interactions with respect to a sequence, which is similar to a scenario. Lifelines and messages generated by the objects according to the interactions are the base of sequence diagrams. Several topics are discussed and listed in the meeting and distributed among the group members. A total of 10 sequence diagrams is created by individual group members and review procedure is done via GitHub.

3.5. RAM

The responsibility assignment matrix shows the distribution of the individual efforts, it has the labels lead, contributor and reviewer.

4. Evaluation of Tools and Processes

4.1. GitHub

We used GitHub as our project version management system. We did some research on github and added this research to our repo. GitHub is a cloud-based service that hosts project code and structure as well as track and control changes to projects' code. GitHub makes controlling codes and project development a lot easier for developers to use Git for version control and collaboration. GitHub helps developers work together on a project from any location while facilitating collaboration. GitHub is a user-friendly git repository. Thus, anyone can use GitHub to do things a developer can do with git commands via the interface.

4.2. Slack

We used slack for communication. Slack is a messaging app for business so We thought that the slack app could help us in business. Slack brings people together to work as one unified team.

4.3. Zoom

During the distance-education, we have used Zoom for our weekly meetings. Zoom was a very convenient application for many people to have meetings at the same time. Breakout rooms allowed us to work in teams. The video quality is well

4.4. LucidChart

LucidChart is a chart creation tool and free for students. But it also has a premium mode and it's paid. We used it for creating our diagrams. It lets multiple users edit diagrams at the same time.

4.5. Canva

We used Canva for creating our mock-ups. It is a free tool and pretty useful. It is also possible to work simultaneously. Also, it's pretty easy to create mockups.

4.6. Whatsapp

WhatsApp is currently the most used messaging application and we preferred WhatsApp because everyone has a WhatsApp account.

5. Summary of Work Done by Each Team Member

Name	Work	Issue links	Wiki and external links
Ece Sarkın			
	Publishing meeting notes	#15, #33, #67, #84, #142	Meeting #1, Meeting #2, Meeting #3, Meeting #4, Meeting #5, Meeting #6
	Adding favorite Github repository to the wiki page	#10	Favorite Github repository
	Creating a collaborative document for customer meeting questions, and adding my questions	#32	Document
	Preparing initial version of the requirements, and specifying requirements 1.1.6 and 1.1.7	#63	Requirements wiki page
	Creating Scenario and Mockup for User (Persona: Banu Balkan)	#74	Student user web scenario and mockup
	Contribution to the Class Diagram	#90, #91, #100	Class diagram wiki
	Contribution to the Use Case Diagram	#107	Use case diagram wiki
	Preparing a sequence diagram for *follow a user* case	#132	Sequence diagrams wiki
	Creating the responsibility assignment matrix (RAM), and filling the column corresponding to me	#141	Google Sheet: RAM
Efekan Kavalcı			
	Overall Summary: I actively participated all our group meetings which are done in both Zoom and CmpE Lounge. I created my personal wiki page. I summarized my efforts weekly in my personal page in wiki. I looked up for github repositories and added a repo about sentiment analysis to our wiki page. I prepared questions for the first		

	requirements elicitation and took notes in the Q&A session. I documented the Q&A session according to my notes with the contributions from Kadir Gökhan Sezer, then uploaded & edited it onto our wiki page. I made a research about GDPR and added material to the wiki page I have arranged the meeting for our sub-group in the scenario & mock-up part, in which our topic was a teacher reviewing her statistics in the online learning platform. I initiated the scenario and contributed to it according to our sub-group discussion; I contributed to the mock-ups. In the UML Class Diagram, I attended to the discussions and had some contributions in lecturer and student classes, I also added a subject class later according to my sequence diagram topic. I formed a template for the UML Use Case Diagram and presented it to the group in order to speed up the design process. I designed a sequence diagram of creating a subject in forum. For the report, I added UML diagrams and written the evaluations for UML, and filled the RAM.		
	Customizing labels	#5, #31	Labels
	Requirement elicitation Q&A documentation	#57, #43	Customer meeting #1 notes (Q&A)
	Research about GDPR	#58	GDPR Wiki Page
	Preparing initial version for requirements with Ece and Ege Onur	#63	Requirements
	Scenario & Mock-up for teacher scenario	#72	Teacher Scenario
	Use case diagram research and template	#87	Use Case Diagram
	Sequence diagram about creating subject on forum	#129	Sequence Diagrams
Ege Onur Tağa			
	Overall Summary: I have attended all the meetings, lectures and ps's held. In the first weeks, I created my personal wiki page and edited the front page of our repository. I researched GIT and published my findings in its wiki page, which I add below. Moreover, I took the role of organizing favorite github repositories and added my favorite one, which has many pre-trained deep learning models. I took an active role in the upcoming tasks and edited and fixed nearly all the things I encountered, let it be a typo, or stylic change in the home page navigator. Moreover, for the online learning project, I have searched semantic searching and published my findings in its wiki page. I prepared questions for the customer meeting and added them to a google doc. I prepared the glossary on my own and prepared the requirements draft and taught how to edit the requirements wiki page to the team members. Moreover, I collaborated with Efekan and Ece to prepare student user mock-ups and scenarios. I also participated in the preparation of all parts of the diagrams. For the class diagram, I detailed and drew User, Guest and Statistics classes. Moreover I contributed to the general design of the classes. For the use case and sequence diagrams, I contributed "note taking" and "retrieve statistics", respectively. Moreover, now for this milestone, I took the role for writing executive summary, preparing content page and preparing the glossary and requirements pages. Below, I will summarize my work with respective issues:		
	Being an editor for the "Favorite Github Repositories" of team members and adding my Favorite Repository, i.e. pytorch-imagk-models	#10	Favorite Github Repositories
	Updating README.md to a more user friendly interface	#18	Our GitHub repository
	Prepared a glossary for the Online learning project	#38	Glossary and Requirements
	Added questions about the OLP for the customer meeting to the google doc	#44	Questions for the customer meeting
	Researched git, created and edit git research page.	#45	Git research wiki
	Specifying date and time for the customer meeting	#45	
	Researched Semantic Searching and prepared its wiki page	#60	Semantic Search wiki page
	Prepared a template (general layout) and initial version for the requirements with Ece and Efekan. I solely prepare requirements 1.1.1, 1.1.2, 1.2.2 and edited and fixed typos of the team-members.	#63	Requirements wiki

	Organized the class diagram preparation in part and held a checklist to regulate the preparation.	**#90**	
	Prepared scenario and mock-up for student user scenario, contributed to all of the scenarios and mock-ups in general as seen in the following issue.	**#74** **#72**	**Student User Web Scenario and Mock-up** **Teacher Mod Scenario and Mock up** **Guest Web Scenario and Mock-up**
	Prepared Class Diagram: User	**#94**	**Class Diagram wiki**
	Prepared Class Diagram: Guest	**#97**	**Class Diagram wiki**
	Prepared Class Diagram: Statistics	**#98**	**Class Diagram wiki**
	Prepared Use Case Diagram: Note Taking	**#108**	**Use Case Diagram wiki**
	Prepared Sequence Diagram: Retrieve Statistics	**#145**	**Sequence Diagrams wiki**
	Prepared Executive Summary and Requirements pages for the Online Learning Project Milestone 1	**#162**	**Milestone 1 Report**
	Preparing summary of the work done for Milestone 1	**#147**	**Milestone 1 Report**
Harun Sami			
Harun ERKURT	**Overall Summary:** I have attended all the meetings, lectures and PS's held. Besides, I studied all the course slides and other resources. In the first weeks I created my personal wiki page. I created and customized the main Wiki page, updated Readme File, Edited and Categorized labels. I researched Git, GıtHub and published my findings in the wiki page I created. I edited the Git Wiki Page to make it more structured. Moreover, I took the role of organizing favorite github repositories and added my favorite one. I took an active role in the upcoming tasks and edited and fixed nearly all the things I encountered. I actively used github and when I saw an error or wrong commit, I immediately corrected it. Moreover, for the online learning project I tried to understand the project and prepared questions about it. I researched drawing tools for mockups. I created home page mockups for all scenarios and a template for mockups. I prepared a teacher scenario with my peers as a subgroup. I created mockups for the teacher role almost all of them by myself. I did research on KVKK Rules and documented it on wiki. I revised the requirements page one more time and added non-functional requirements. I prepared, discussed and took actions regarding the Class diagram, Use Case Diagram and Sequence Diagram. I helped prepare the Milestone 1 report and I edited the whole report.		
	Creating and editing Home wiki page	**#2 #16 #156**	**Home Page**
	Creating and customizing personal wiki page	**#3 #49 #56**	**Harun ERKURT's Personal wiki page**
	Modifying Readme File	**#8**	**Readme.md File**
	Doing research on Github repos and adding my favorite repo.	**#10**	**Favorite Github Repositories**
	Editing labels and making them more structured.	**#19**	**Labels**
	Preparing Git and Github Page	**#24**	**A Brief Information About Git**
	Researching and Documenting KVKK Rules	**#59**	**KVKK Rules**
	Researching and Choosing Graphic Editor Tool for Creating Mockups	**#64**	**Canva**
	Creating Mockup template for all scenarios	**#72 #73 #74**	

	Creating Scenario and Mockups for Teacher Role	#72	Teacher User Web Scenario and Mockup
	Preparing Non-functional Requirements	#78	Requirements
	Preparing Use Case Diagrams of Teacher	#130	Use Case Diagram
	Preparing some Sequence Diagrams	#160 #161	Sequence Diagram
	Identifying and editing the missing places in the class diagram	#131	Class Diagram
	Uploading Meeting Notes 5.1	#134	Meeting Notes 5.1
	Documenting Evaluation Of Tools	#158	**Milestone 1 Report**
	Documenting List and Status of Deliverables	#159	**Milestone 1 Report**
	Documenting Evaluation of Some Deliverables	#157	**Milestone 1 Report**
	Preparing summary of the work done for Milestone 1	#166	**Milestone 1 Report**
Kadir Gökhan Sezer	**Overall Summary:** First of all, I started the lesson with great interest because I wanted to use git for my own work. Of course, how to write a software and how to plan was a very important lesson for me. First of all, when I realized that this course would teach git, I finished a 300 page pdf on git. First of all, I edited my own personal page. I added my own photo. I wrote a short article about myself. Then I added a few pictures related to my life. Finally, I made the arrangement of the part where I would take notes of my weekly workload. After that, I did research on the subject on the internet. I watched several videos on youtube. Afterwards, the first thing that caught my eye was the navigator. Afterwards, I created the necessary pages (in fact, I learned how it works beforehand). Then I added everyone's page to the navigator. I was tasked with editing the gitup-wiki, learning enough about the navigator and correcting what other group members were doing too many times. Then I edited our home page. He then added it to github-wiki when we made our communication plan. I made edits on the labels. I edited Homepage's icon. In this process, I made constant edits to the navigator. I did some homework on script and mockups. One of them was for the user role. Then I made the recommendations part and the searching part for the requirements. I also handled accessability, performance&realiability and standards kisminid. I also handled the notes and achievements parts within the class diagrams. The "view events" and "view profile page" parts of the use case diagrams were also made by me. These diagrams were very important for our project and software life, because thanks to them, I learned why these diagrams were made. While doing these, I found many mistakes in the previous ones. Then, when it comes to sequence diagrams, I found many errors in requirements while developing there. I opened their issues nicely. Later, when all this was over, we came to milestone 1 and worked on it. Our meetings here took a long time because we did not know what to do. I took the notes of the division of labor meeting. I've made a few edits where it's pertinent to other people's posts. For example, there were deficiencies in the sequence diagram, I added it. My task here was to maintain the layout, take notes, prepare the communication plan, prepare the Evaluation of processes, complete the team meeting, and add TA/custome Mettings. Afterwards, I opened the necessary issues and added the necessary comments. In this process, I tried to be someone who shared the screen many times in meetings and was close to solving problems. Because I have a lot of unanswered questions on Whatsapp. I was constantly wondering how everything was done and why, and I tried to learn from my group friends. We are a team with a busy life and we have motivated each other many times during this process. I became one of the motivators. I also made my comments about the wrong issues. It was a fun and intense process for me. Finally, I have always been pleased with the interest of TA's with us, I tried to keep their word. During this whole process, I followed slack constantly		
	Created personal Wiki Page.		Personal wiki page
	Editing Navigator of Wiki	#6	
	Fixing Ahmet Yazisi's Personal Page	#13	Ahmet's Page
	Adding Notes of Meeting 1	#15	
	Adding our photos from zoom to Homepage	#16	HomePage
	Favorite Github Repositories	#20	Favorite Github Repos
	Meeting Notes	#21	
	Communication Plan	#22	Communication Plan

	Labels	#23	
	The Logo of Research Page	#27	
	Icon of Homepage	#28	
	Sections in Navigator	#29	
	Landing Page	#39	Page
	Github Logins on Personal Pages	#56	My Page
	Customer Meeting Notes	#57	The Page
	Meeting #3 Notes 17.03.2022	#67	URL
	Creating Scenario and Mockups for User Role	#74	Canva
	Fixing the Mockups and Scenarios part on the navigator	#75	
	Preparing the Recommendations and Searching Part on Requirements	#81	Requirements
	Class Diagram: Achievements	#89	Requirements
	Class Diagram: Note	#93	
	Use Case Diagram: View Profile Page	#114	
	Use Case Diagram: View Events	#115	
	Use Case Diagram: Event Related Cases	#116	Blocking Issue
	A Missing Point on Requirements 1.1.2.1 Profile Specifications	#117	Requirements
	Events planned by Lecturers	#118	Requirements , #116
	Use Case Diagram: Update on Edit Profile	#119	Requirements
	Use Case Diagram: Login by Lecturer	#120	URL , Requirements
	Sequence Diagram: Login as User	#121	Helping URL
	Sequence Diagram: Login-Search-View Case	#122	Requirements
	Use Case Diagram: Login as Student	#123	
	Class Diagram: log in function	#124	
	Distribution of Tasks for Milestone 1	#150	
	Milestone 1: Sequence Diagrams	#151	#121
	Milestone 1: Page Layout	#152	
	Requirements: Non-functional Requirements	#154	
	Section Reserved for Summary of Work Done by Me	#155	

	Milestone1 : Communication Plan	#168	
Kamil Korkut	**Overall Summary:** I created my personal wiki page. I studied Git as a version management system. I researched for Github repositories. I prepared questions for the customer meeting. I researched W3C standards and prepared related wiki page. I attended teacher scenario and mockup meeting and I worked on two pages of the teacher mockup but they were not been used because of change in the scenario. I prepared annotations part of the requirements. I studied class diagrams and use case diagrams. I prepared the sequence diagram for taking a note. I attended all of the group meetings except the meeting where use case diagram and class diagram were prepared. I filled my part in the RAM.		
	Created personal wiki page	#3	Personal wiki page
	Research about GitHub repositories.	#10	Favorite Github Repositories
	Preparing questions for customer meeting	#53	Customer meeting notes
	W3C Standards Research	#65	W3C Standards Research
	Creating scenario and mockups for teacher	#72	Scenario and Mockup for Teacher
	Sequence diagram for taking a note	#133	Sequence Diagrams
	Adding sequence diagram to the wiki page	#140	Sequence Diagrams
	Preparing summary of work done	#146	**Milestone 1 Report**
	Annotations part of the system requirements	#167	Requirements
Mustafa Atay			
	Created my personal wiki page.	#3	Personal Wiki Page
	Created and updated navigator.	#4, #65, #83	Sidebar history
	Added my research about favorite Git repos.	#10	Favorite Github Repositories Page
	Participated in communication plan	#22	
	Prepared questions for customer meeting	#40	Customer Meeting Questions Doc
	Participated in creating system requirements	#42, #79	Fundamental Features of the Project Page, Glossary and System Requirements Page
	Researched GDPR rules and W3C Standards	#58, #65	GDPR Rules Page, W3C Standards Page
	Participated in scenario and mockup for Guest Mode	#73	Guest Scenario and Mockup Page,
	I did research, prepared a template for the class diagram and drew some parts of the class diagram. I Led the team in this part.	#83, #86, #88, #89, #90, #92	Class Diagram Page, Lucid Chart Class Diagram
	Prepared a part of the use case diagram	#109	Use Case Diagram Page
	Prepared a sequence diagram	#137	Sequence Diagrams Page
	Participated in creating Milestone1 Report and created Responsibility Assignment Matrix	#141	**Milestone 1 Repost**, Responsibility Assignment Matrix
	Prepared summary of work done by me for Milestone 1	#153	
Osman Fehmi Albayrak			

	Overall Summary: I attended every group meeting, except the first one due to the add/drop period. I designed my personal wiki page and updated it according to my weekly accomplishments. I did research about github repositories and chose VueJS to add our favorite github repositories. I did some research about W3C GeoInfo, and prepared a page to inform others on this subject. I prepared the teacher scenario and mockup with a few of my teammates. I did research about UML class, use case and sequence diagram. After researching, we arranged several meetings to design these diagrams. During these meetings, I designed "Video, Image, Text, Link" classes and "Content" abstract class. In the use case diagram, I designed View functionality. For the sequence diagrams, I designed a sign up diagram. I updated necessary points in my designs according to views done by my team members. For Milestone 1, I prepared the Project Plan and Project repository with some of my team members. I wrote a summary of work done by me, and finally added them to the Milestone report.		
	Created my personal wiki page	**#3**	**My wiki page**
	Adding Favorite GitHub Repository	**#10**	**Favorite Github Repositories**
	Research on W3C GeoInfo	**#66**	**W3C GeoInfo wiki**
	Prepared scenario & mockup for teacher role	**#72**	**Teacher Scenario**
	Research on UML Class and Use Case Diagram	**#95**, **#96**	**Class Diagram wiki** **Use Case Diagram wiki**
	Prepared Class Diagrams of Content, Video, Image, Text and Link	**#103**	**Class Diagram wiki**
	Prepared Use Case Diagram of View	**#111**	**Use Case Diagram wiki**
	Prepared Sequence Diagram of Sign Up	**#127**	**Sequence Diagrams wiki**
	Prepared Project Plan for Milestone 1	**#136**	**Project Libre File**
	Introduction of Project Repository for Milestone 1	**#139**	
	Prepared summary of work done by me for Milestone 1	**#153**	
Ömer Özdemir	**Overall Summary:** I attended all the meetings, lectures and problem sessions. In the first weeks, I created my personal wiki page and edited the wiki page, research how git works and some github repos in which I found one that I like most and shared with other via our favorite github repositories wiki page. I regularly visited our github repository and did some slight changes when necessary like editing navigator. Moreover, for the online learning project, I have searched semantic searching and published my findings in its wiki page. I prepared questions for the customer meeting and added them to a google doc. Then, I added requirements for communication channels and guests . Moreover, I collaborated with Mustafa and Ahmet to prepare student user mock-ups and scenarios. I also participated in the preparation of all parts of the diagrams. For the class diagram, I detailed and drew Course and Progress classes. For the use case and sequence diagrams, I contributed "Register" and "Logout", respectively. Moreover, now for this milestone, I took the role for writing project plan, project repository pages. Below, I will summarize my work with respective issues:		
	Adding my favorite github repo	**#10**	**Favorite Github Repositories**
	Modifying README.md	**#8**	**ReadMe**
	Creating personal wikipage and time tracking	**#3**	**Personal Wiki Page**
	Added questions about the Online Learning Project for the customer meeting to the google doc	**#41**	**Questions for the customer meeting**
	Editing labels and making them more structured.	**#5**	**Labels**
	Researched Semantic Searching and prepared its wiki page	**#62**	**Semantic Search wiki page**

	Participated in scenario and mockup for Guest Mode	**#73**	**Guest Scenario and Mockup Page,**
	Prepared requirements for Communication Channel and Guest.	**#80**	**Requirements**
	Research on UML Class and Use Case Diagram	**#95, #96**	**Class Diagram wiki** **Use Case Diagram wiki**
	Prepared fundamental features of project	**#42**	**Fundamental Features**
	Prepared briefing part of project	**#36**	**Project Briefing**
	Proposed a meeting template	**#17**	**The meeting template**
	Studied git and github	**#170**	**Week 1 and Week 3**
	Added Project Documentation and its wiki pages into navigator	**#47**	**Navigator**
	Added Project Plan and RAM into navigator	**#169**	**Wiki Pages**
	Prepared Class Diagram: Course	**#105**	**Class Diagram**
	Prepared Class Diagram: Progress	**#106**	**Class Diagram**
	Prepared Use Case Diagram: Register	**#112**	**Use Case Diagram**
	Prepared Sequence Diagram: Logout	**#128**	**Sequence Diagram**
	Introduction of Project Repository for Milestone 1	**#139**	**Project Repository**
	Prepared Project Plan for Milestone 1	**#136**	**Project Libre File**
	Prepared summary of work done by me for Milestone 1	**#149**	**Milestone Report 1**
	Determined Research topics and created corresponding pages with linked them in our navigator.	**#48**	**Navigator**
	Created sequence diagram, class diagram, use case diagram wiki pages and linked them into our navigator.	**#171**	**Navigator**
	Added our class diagram and my sequence diagram logout into corresponding pages.	**#172**	**Class Diagram**

6. Project Repository

We are a team of 10 people trying to prepare an online learning platform. We decided to use github in order to communicate with each other. If you do not know what github is, you can see our A brief information about Git page. The names of members of our team and photos of them can be viewed in our wikipage . So far we have done 5 meetings with team members and 1 customer meeting with the customer. The meeting notes can be viewed in our wikipage. Each member of our team has a favorite repository and it can viewed in Favorite Github Repositories. We keep informed other team members about Works we accomplished via github issues. At the right part of our wikipage, there is a navigatör where we list our documents. The topic of our Project can be viewed in Project briefing page. The requirements of our Project can viewed in requirements page and its brief description in

Fundamental features page. There were some topics to be research to understand requirements. So, those requirements have been done some of our team members. The research topics were Semantic Search, GDPR Rules, KVKK Rules, W3C Web Annotation Data Model, W3C Standards, W3C Geoinfo. We have done some mockups according to the scenarios written by our team members. The mockups were about Student User, Guest User, Teacher User. Then, we designed our class diagrams, Use case diagrams and Sequence diagrams in order to get a better understanding of Project. So, this is the current progress of our project and it can be also seen in our Milestone 1 report.

7. Requirements

7.1. Glossary

1. Online Learning Platform: An online platform that enables student to learn by their own without face-to-face communication. 2. Teacher: Anyone who knows a topic well and willing to teach it to other people.

3. Learner: Anyone who is interested in learning.

4. e-learning: Learning from digital platforms instead of on-site education.

5. Communication Channels: Channels that allow participants to interact with each other via asking questions, answering problems, discussing ideas, sharing resources etc.

6. Semantic Search: Searching for certain things considering the meaning and the context of the word instead of the lexical structure.

7. Browsing: Glancing for some course/content/person randomly, possibly with the help of interface provided to the user.

8. Recommendations: Suggestions that are offered to the user considering their personal traits, previous usage, likes etc.

9. Learning Environment: An environment containing all the learning related things or activities. This includes teacher, learner, learning platform, quizzes, assignments and learning place...

10. Progress: A quantitative metric assessing how well the learners are continuing their learning process.

11. Reputation: A score for teachers gathered by the feedbacks of learners that evaluates the teaching performance.

12. Learning Experience: All the things related to learner's individual learning process. That includes their progress, feedbacks, evaluations etc. 13. User Profile: A virtual entity for the real user, which includes collection of information about a user describing her interests and knowledge. 14. Geolocation: Geographic location of a user.

15. Poll: Survey about a certain question or opinion.

16. RESTful API: An architectural style for distributed hypermedia systems.

7.2 Requirements

1. Functional Requirements
1.1 User Requirements
1.1.1 Authentication
1.1.1.1 Sign up
1.1.1.1.1 Users shall sign up to enroll the courses on the online learning platform by specifying their username, password and an e-mail in the sign-up process.
1.1.1.1.2 Guest user’s e-mail address and username should not be taken by another account beforehand.
1.1.1.1.3 When guest user signs up, it automatically signs-in with the information given at sign-up step.
1.1.1.2 Username, password
1.1.1.2.1 A user shall select a unique username and a password containing at least 8 letters.
1.1.1.3 E-mail verification
1.1.1.3.1 A user shall verify their account creation process by clicking the link on the verification mail.
1.1.1.4 Sign in
1.1.1.4.1 A user shall enter her password correctly. If she fails to enter her password correctly six times, she shall be blocked from further retrying.
1.1.1.4.2 A user shall recover her password if she is blocked from further retrying, for typing wrong password six times.
Password recovery
A user shall enter the url sent to her e-mail account if she wants to recover her password.
1.1.2 Profile
1.1.2.1 Profile Specifications
1.1.2.1.1 Every user shall have a profile page.
1.1.2.1.2 A user shall be able to upload a profile picture, specify their interests and location.
1.1.2.1.3 A user shall be able to follow other users and be followed back.
1.1.2.1.4 A user shall be able to see her followers.
1.1.2.1.5 A user shall be able to see her courses.
1.1.2.2 Privacy
1.1.2.2.1 Every user shall be able to hide her profile from the other user's accesses. If she hides herself, she shall be no longer seen by other users by any means.
1.1.2.2.2 Every user shall be able to partially restrict access to her profile from the other user's accesses. That is, hiding her courses, her followers, her badges etc. from other user's access.
1.1.3 Guest
1.1.3.1 Guest user shall be able to use the search feature and look for courses.

1.1.3.2 Guest user shall be able to see title and brief contents of a course.
1.1.3.3 Guest user shall sign up and create an account to enroll a course and see the full content.
1.1.3.4 Guest users should be able to sign-up
1.1.3.5 Guest users should be able to sign-in

1.1.4 Student
1.1.4.1 A user who enrolls a course shall be considered as a student.
1.1.4.2 Student shall be able to see the full course material.
1.1.4.3 Student shall be able to monitor his/her progress in the course. Progress should indicate the percentage of the viewed content in the course.
1.1.4.4 Students should be able to obtain achievements by progressing in the courses.
1.1.4.5 Student shall be able to contribute to the course via participating polls created by lecturers.
1.1.4.6 Student shall be able to take notes related to the learning material.
1.1.4.7 Student should be able to evaluate the lecturer. Evaluation shall be in two ways: from a rating in the range of 1-5, like or dislike.
1.1.5 Lecturer
1.1.5.1 A user who creates a course shall be considered as a lecturer.
1.1.5.2 Lecturer shall be able to upload video, image, or text material to the course page.
1.1.5.3 Lecturer shall be able to organize the course page.
1.1.5.4 Lecturer shall be able to create polls for the students. Polls shall be in 3 types: anonymous mode, multiple answers and quiz mode.
1.1.5.5 Lecturer shall have a reputation based on the feedback they have obtained from students
1.1.6 Events
1.1.6.1 Users shall be able to create events by providing the information on whether the meeting is online/in-person, whether there's going to be an entrance fee, amount of the entrance fee, date, time, and location.
1.1.6.2 Event holders shall be able to edit the related information fields (See 1.1.6.1) of their event.
1.1.6.3 Event holders shall be able to cancel or postpone their events.
1.1.7 Browsing and Searching </summary>
1.1.7.1 Users shall type on the search bar, press enter or click on the search button in order to search for a tag, course, or profile.
1.1.7.2 Users shall be able to inspect the summary of the course content without enrolling in them.
1.2 System Requirements

1.2.1 Searching

1.2.1.1 A user shall be able to search any topic with the search box in top of the page.

1.2.1.2 Results of the search will be in order based on section 1.2.3 in Requirements.

1.2.1.3 Searching shall be based on semantic searching.

1.2.1.4 Courses shall be searched in search bar of search page.

1.2.1.5 Users shall be able to be searched.

1.2.1.6 Courses that a user is enrolled shall be searched.

1.2.2 Pages

1.2.2.1 Profile Page

1.2.2.1.1 Profile page shall include profile picture, username and personal information considering user's privacy settings.

1.2.2.1.2 System shall be able to allow users to edit their profile picture and personal information on their profile page.

1.2.2.1.3 There shall be a follow button on every user's profile page, which users use to follow other people.

1.2.2.2 Main Page

1.2.2.2.1 Main page shall include timeline for logged in users and most popular courses for the guest users.

1.2.2.3 My Courses Page </summary>

1.2.2.3.1 My courses page shall show the courses that a user is enrolled or that a user created.

1.2.2.4 Course Pages </summary>

1.2.2.4.1 A course page shall include the course overview if a user is not enrolled yet, or the course content fully if a user is enrolled.

1.2.2.4.2 A course page shall be able to be fully customizable by a teacher.

1.2.2.4.3 A course page shall include a note-taking part.

1.2.3 Recommendations

1.2.3.1 Users will see recomended courses in the homepage.

1.2.3.2 The recommeded courses will be decided based on their interests that they chose at the beginning, courses to which users enrolled, and what they searched.

1.2.4 Note Taking

1.2.4.1 Users should have a page to take notes while taking the course.

1.2.4.2 Users should have access to different colors and fonts while taking notes.

1.2.4.3 User notes should stay unchanged when user loggs off.

1.2.5 Annotations

1.2.5.1 System shall support creating annotation on the screen.

1.2.5.2 System shall support to add text or images to the annotation.

1.2.5.3 System shall create hyperlink in the annotation if given text is a link.

1.2.6 Communication Channels

1.2.6.1 Messaging

1.2.6.1.1. System should support direct messaging between the registered users.

1.2.6.1.2 System should mark up all messages with corresponding timestamp just right corner of the username.

1.2.6.1.3 System should put the username of the sender just above the message.

1.2.6.1.4 System should hide messages happening between two users from the others.

1.2.6.1.5 System should save the messages in the database for forever.

1.2.6.1.6 System should support sharing of resource like image.

1.2.6.1.7 System should support text messages for discussing ideas.

1.2.6.1.8 System should support asking and answering questions.

1.2.6.1.9 System should support sharing of notes with other users.

1.2.6.2 Forum

1.2.6.2.1 System must have communication channels support.

1.2.6.2.2 System should support leaving comment for the lecturer.

1.2.6.2.3 System should support leaving comment for the course.

1.2.6.2.4 System should support sharing of resource like image.

1.2.6.2.5 System should make everyone to be able to write into forum page for discussing ideas.

1.2.6.2.6 System should support asking and answering questions on the forum.

1.2.6.2.7 System should make lecturers be able to create pools in three modes: anonymous mode, multiple answers, and quiz mode.

2. Non-functional Requirements

2.1 Privacy

2.1.1 The platform must comply with all rules regarding https://www.kvkk.gov.tr/ and https://gdpr.eu/ . 2.1.2 User should register only accepting the privacy policy based on KVKK and GDPR.

2.2 Security

2.2.1 Registering email address should be valid and unique because of using that email address to activate account, change password.

2.2.2 Passwords must be at least 8 characters long and includes at least one uppercase letter, one lowercase letter, one number, one special character.

2.2.3 The system shall encrypt passwords with https://en.wikipedia.org/wiki/SHA-2 algorithm using a randomly generated salt. Passwords hashes and the respective salt shall be stored in the database.

2.2.4 Users cannot be able to perform actions without privileges not defined for them. For example users should not access to data of other users.

2.2.5 New access tokens should be generated for every user and api endpoints should be protected with access tokens.

2.2.6 All inputs should be validated in order to mitigate attacks like SQL injection.

2.3 Accessability

2.3.1 The platform should be accessed via Android application and web interface which should be responsive and support Chrome, Firefox, Safari, Edge and Opera.

2.3.2 The platform language should be English and support UTF-8 character encoding.

2.4 Performance & Realiability

2.4.1 At least 1.000 registered users with their actions should be satisfied simultaneosly.

2.4.2 At least 15.000 guest users should be able to inspect the system.

2.4.3 A user should have a response in at most 1.5 seconds excluding the delay based on the machine that the user uses.

2.4.4 The system should back up every data related the project in every 1 hour.

2.4.5 Updates on the system are done at the time that usage of the system has least users. This time will be determined 2 months after the first start.

2.5 Standards

2.5.1 The project should satisy the rules of W3C Standards.

2. 5.2 The semantic should be based on wikidata.org

7.2 Scenarios and Mockups

7.2.1 Student User Scenario and Mockup

Persona

- Student user *Banu Balkan* is a product manager in an Insurance firm.
- She is 32 years old.
- She lives in Istanbul.
- She knows advanced English and Turkish as her mother tongue.
- She studied management.
- She has been very ambitious about her career. In fact, when she was an undergraduate student at Bogazici University, she was participating in many events of BUIK (Management and Economics Club).
- She is an overachiever and never stops learning. For her, there is always a possibility to improve herself.

Story

- She heard that Blockchain is booming and there are many upcoming financial opportunities in the area.
- She is a non-technical person. So, reading technical reports or books confuses her.
- She is looking for easy-to-understand introductory blockchain courses with an opportunity ask her questions.
- Attending face to face courses is not an option for her, since she is a very busy person and she wants to learn at her own pace.

Preconditions

1. She already signed up but did not log in to the platform.

2. She is already enrolled in a course on "Excel".
3. There are already several Blockchain courses on platform.

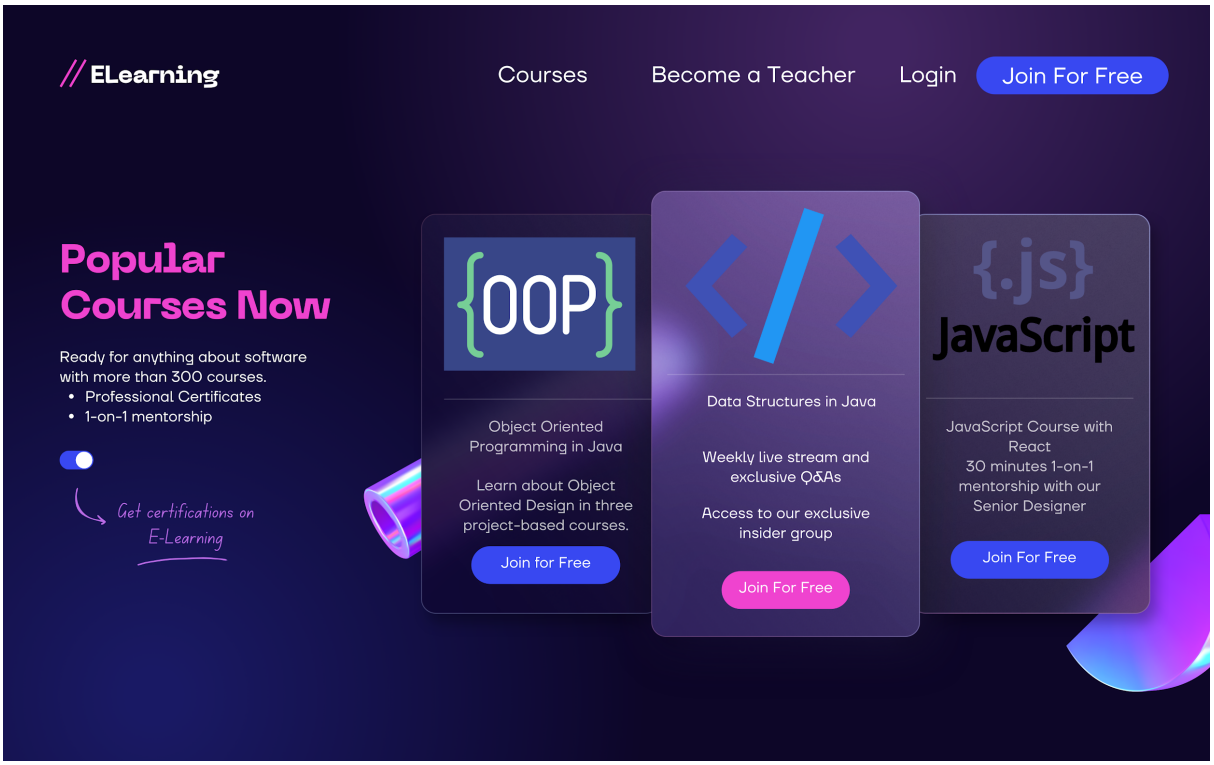
Goals

1. She wants to browse available Blockchain courses.
2. She wants to inspect the summary of course contents from the browsed result
3. Enroll the inspected course

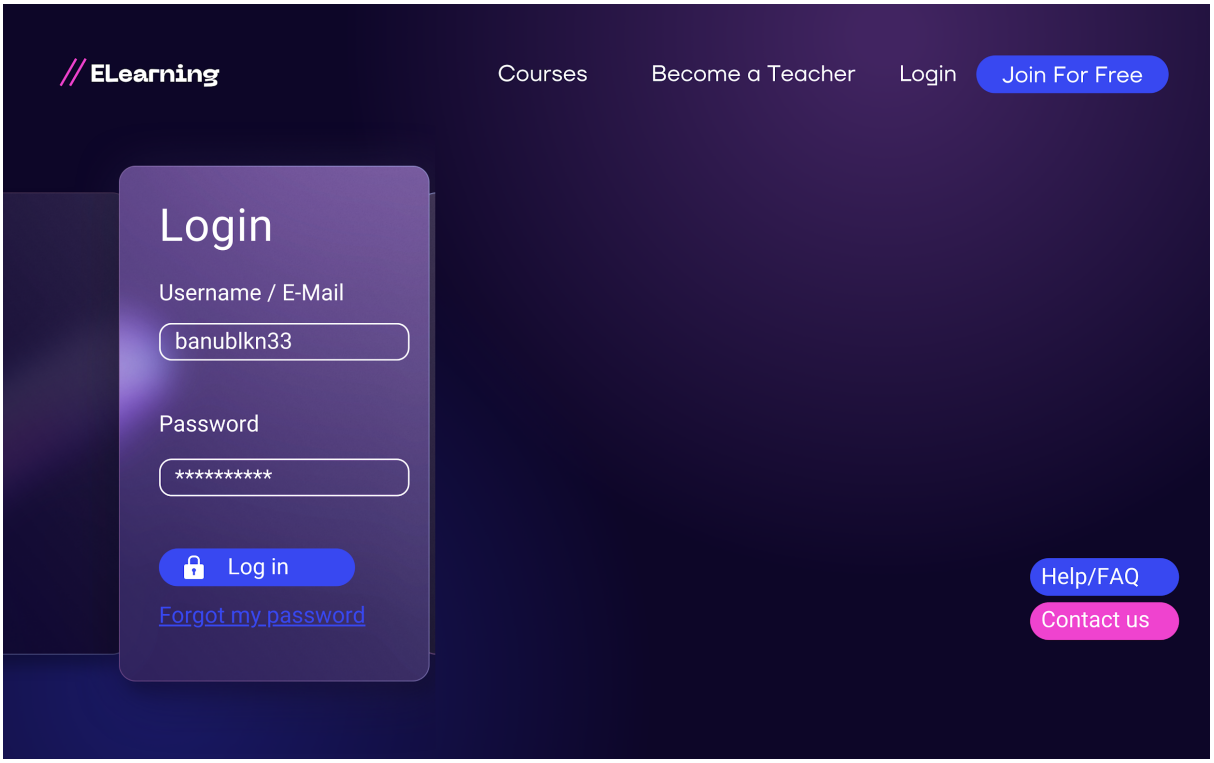
Acceptance Criteria

- 1.1.1.4.1 Users shall be able to login with their username and passwords.
- 1.1.7.1 Users shall be able to search for courses by typing the course name, category etc.
- 1.1.7.2 Users shall be able to inspect the summary of the course content without enrolling in them.
- 1.1.4.1 Users shall be able to enroll in a course.

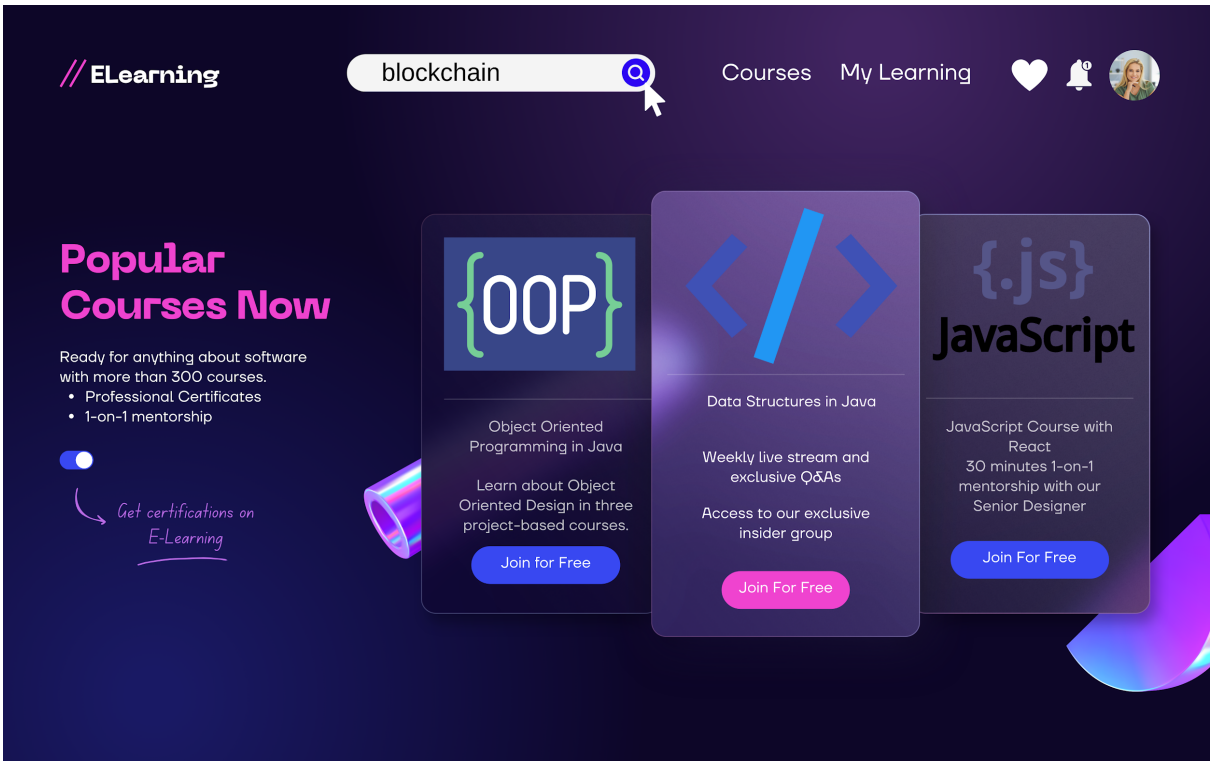
Scenario



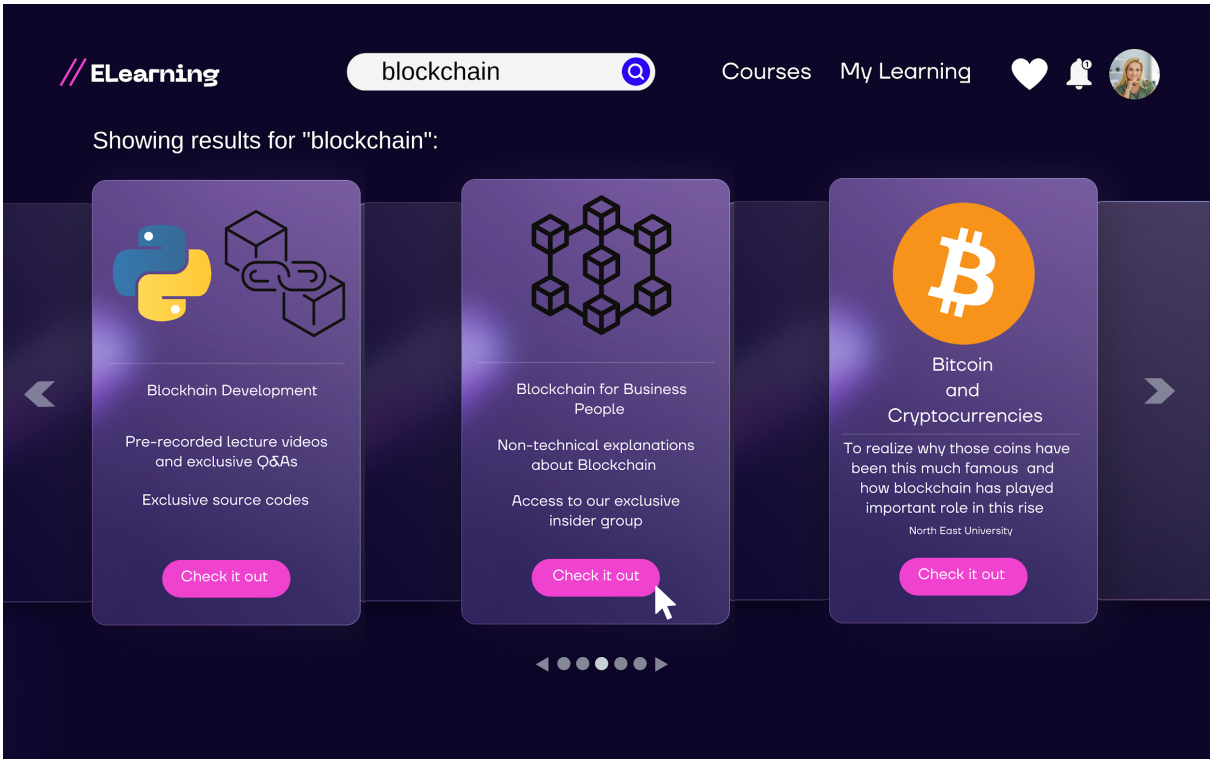
1. She enters the website.
2. She is not logged in.
3. She sees the popular courses and button to log in, becoming a teacher, and join for free.
4. She clicks the login button.



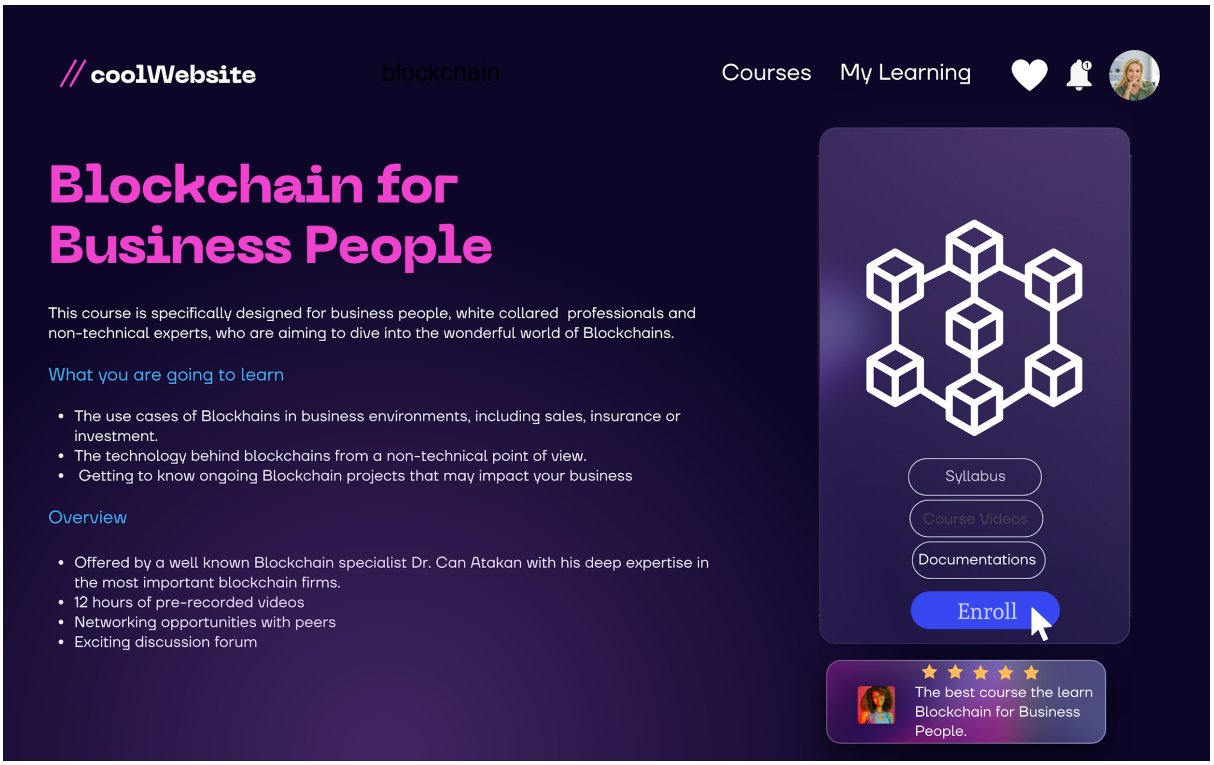
5. She types her username and her password.
6. She sees the button "I forgot my password".
7. She sees the buttons "Help/FAQ", "Contact Us".
8. She clicks the "Log in" button.



9. She sees a page with a search bar, "Courses" button, "My Learning Button", notification button, favorite courses button with a button to her user page.
10. She sees the popular courses now.
11. She searches "Blockchain" in the search bar.

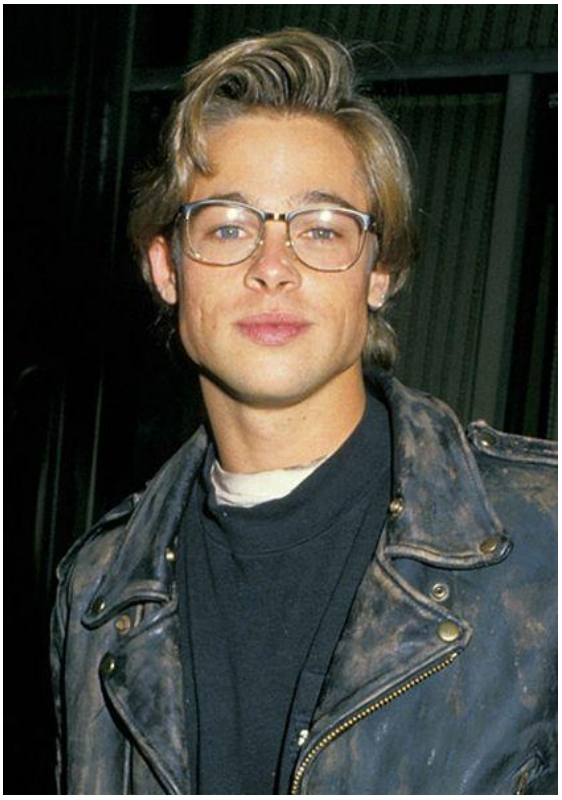


12. She sees search results.
13. Each page contains three courses.
14. It is possible to pass to an another page by sliding forward or backward.
15. She clicks "check it out" of "Blockchain for Business People" course to check its content out.



16. She sees a page explaining the content of the course.
17. In this page, she may examine syllabus and documentations. But access to videos are not permitted.
18. She sees the button to enroll the course.
19. If she likes the course, she may enroll it.

7.2.2 Guest User Scenario and Mockup



Persona

1- Guest User (Brad Pitt)

2- Brad Pitt is a freshman Computer Engineering student that wants to learn web programming a little to get a headstart on school curriculum.

3- He is 19 years old

4- He likes computer games and partying

5- He is interested in becoming a really good engineer some day.

Story

He heard that some of his friends are coding. Then, His friends suggest a website to him where he enjoyed learning python. Then, when he goes to home, he enters the website and starts to discover it.

Preconditions

1- User should not be registered in to website or app.

2- User can not enroll in a class without being registered.

3- User can view the classes and their feedbacks before being registered in.

4- There should be at least one python programming course

Goals

1- Brad wants to enroll in a class that website provides.

2- Brad wants a good teacher to start with.

3- Brad wants to browse available python courses

Acceptance Criteria

1.1.3.3- Guest users should be able to sign-up

1.1.3.4- Guest users should be able to sign-in

1.1.1.1.1- Guest users should give the following information about themselves to create an account at the website

Username

Password

Confirm Password

E-mail address

1.1.1.1.2- Guest user's e-mail address and username should not be taken by another account beforehand.

1.1.3.1- Guest users should be able to search for courses on the website

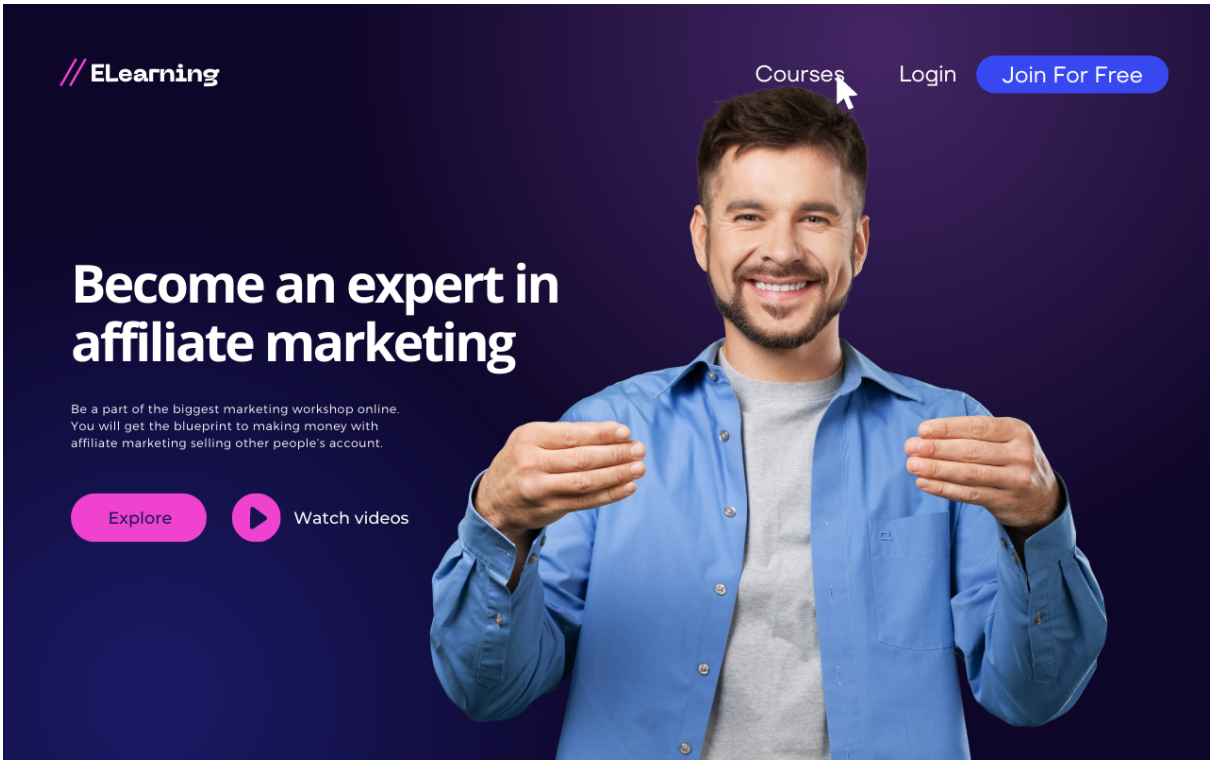
1.1.3.2 - Guest user shall be able to see title and brief contents of a course.

1.1.1.1.3 When guest user signs up, it automatically signs-in with the information given at sign-up step.

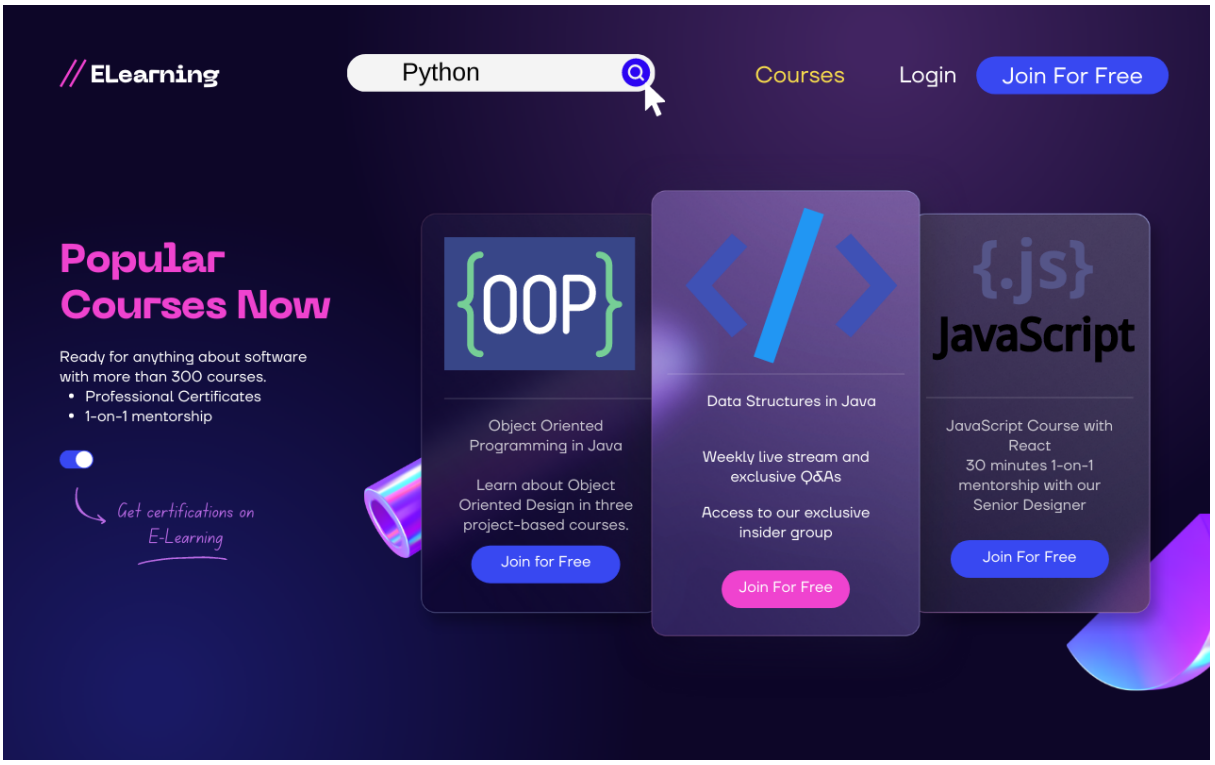
Scenario

1. He enters the website
2. He is not registered

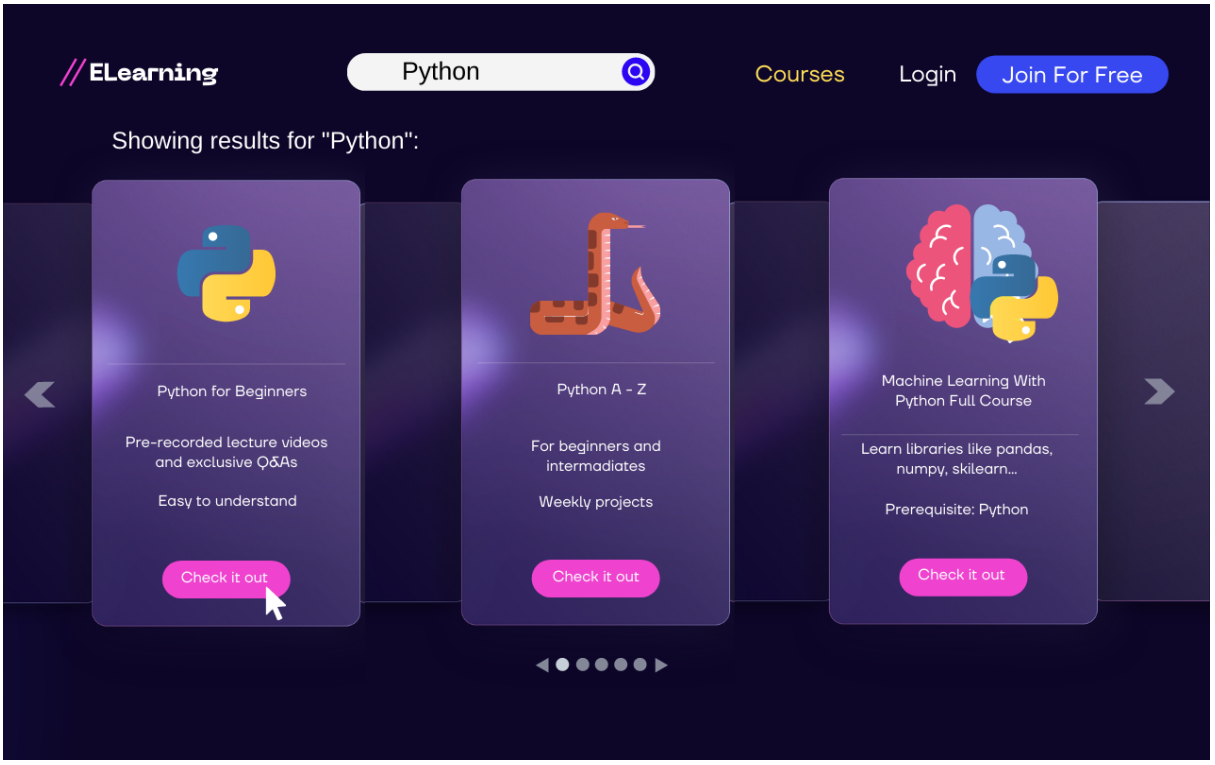
3. He clickes on "courses".



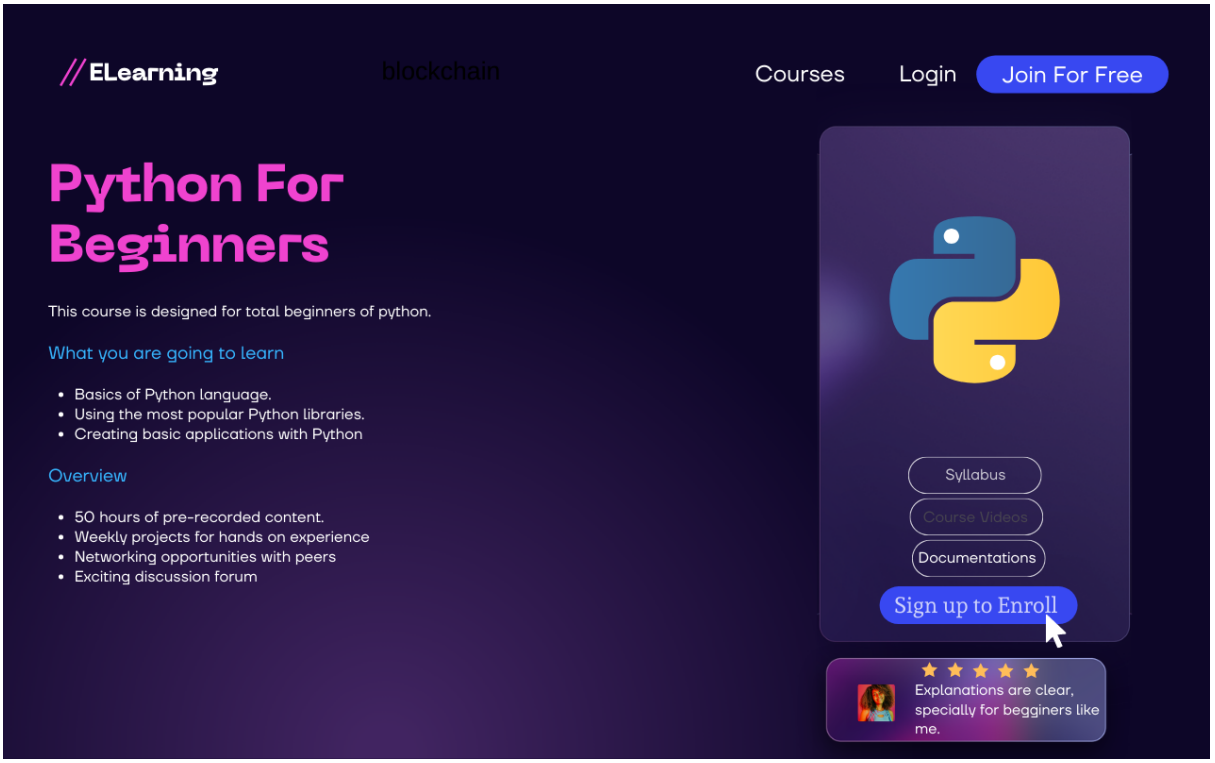
4. He Searchs for a python class. In order to do this writes "Python" to the searchbar and clicks on search icon.



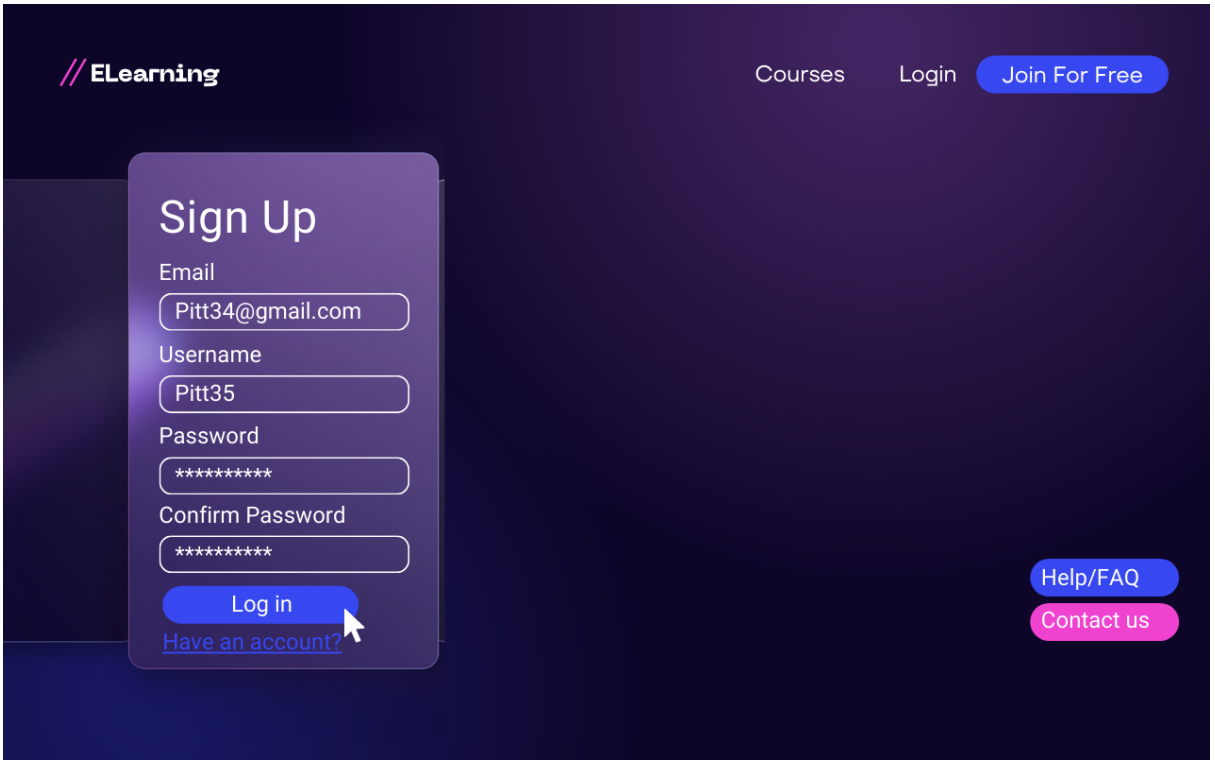
5. Likes "Python For Beginners" course and clicks on it for further information about the course.



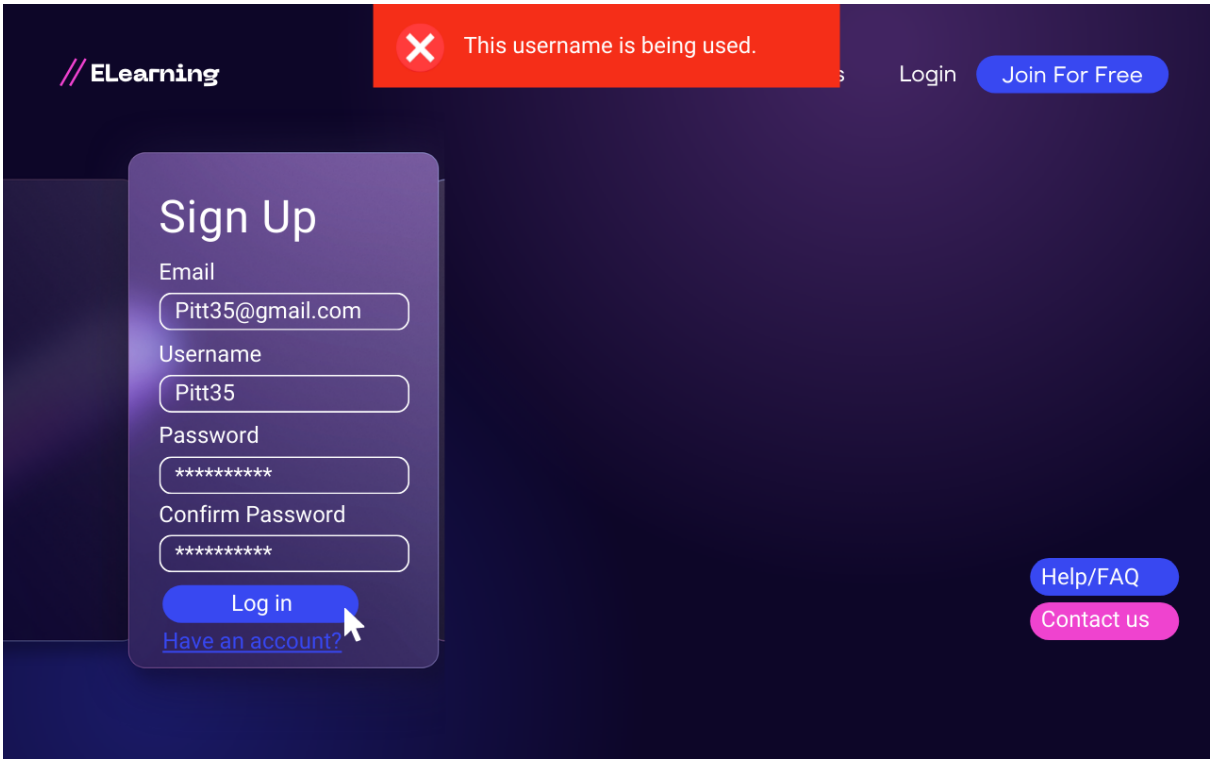
6. Reads further information about "Python For Beginners" course. Decides to enroll it. Clicks on the "Sign up to Enroll" button.



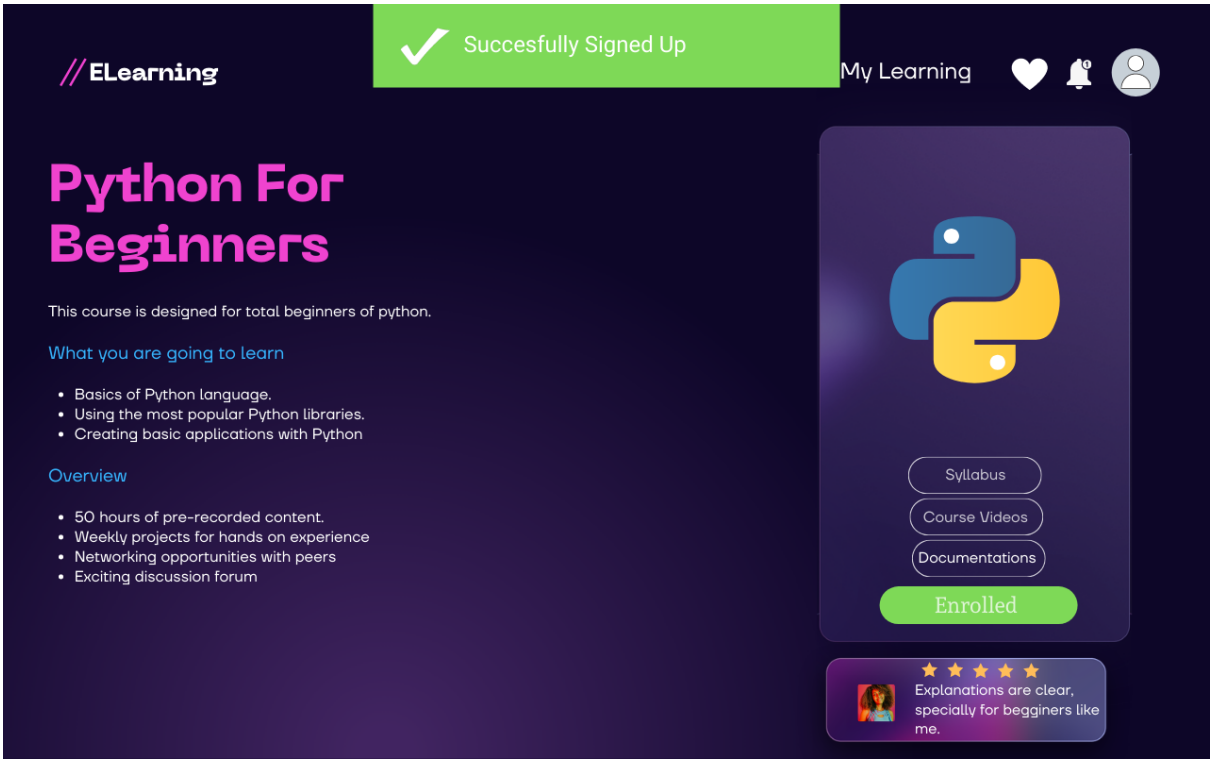
7. Fills the form to sign up. Clicks "Sign Up" button.



8. The webpage shows an error saying "This user name is being used". Therefore, he tries another username and clicks "Sign Up" button again.



9. An info message is shown saying "Succesfully Signed Up". The guest user automatically signs-in and is redirected to the course page.



7.2.3 Teacher User Scenario and Mockup

Persona

- Ezgi Yazan
- 26 years old
- First year master student at BOUN CMPE
- Expertise in data structures, OOP, Spring Boot, Hibernate, JavaScript, C/C++, Rest API, Kafka, Git & Github.

Story

- Ezgi is a daughter of a British mother and a Turkish father
- She started her Master's studies in BOUN CMPE after receiving her B.S. in the same university.
- She played an active role in student clubs in her first years at university.
- She has been to Büyak, BUIK, COMPEC and Sailing Club. She loves sailing, especially windsurfing.
- She had made websites for many companies as a freelancer for a long time
- She helped to develop an automation software in java language for educational institutions using Spring Boot.
- She has been working as a contracted backend developer in Netflix for almost 1 year.

Preconditions

- Ezgi is already a registered teacher on online learning platform website.
- She did not log in to the platform.
- She is already teaching Spring Boot, Data Structures and Rest Api courses.

Goals

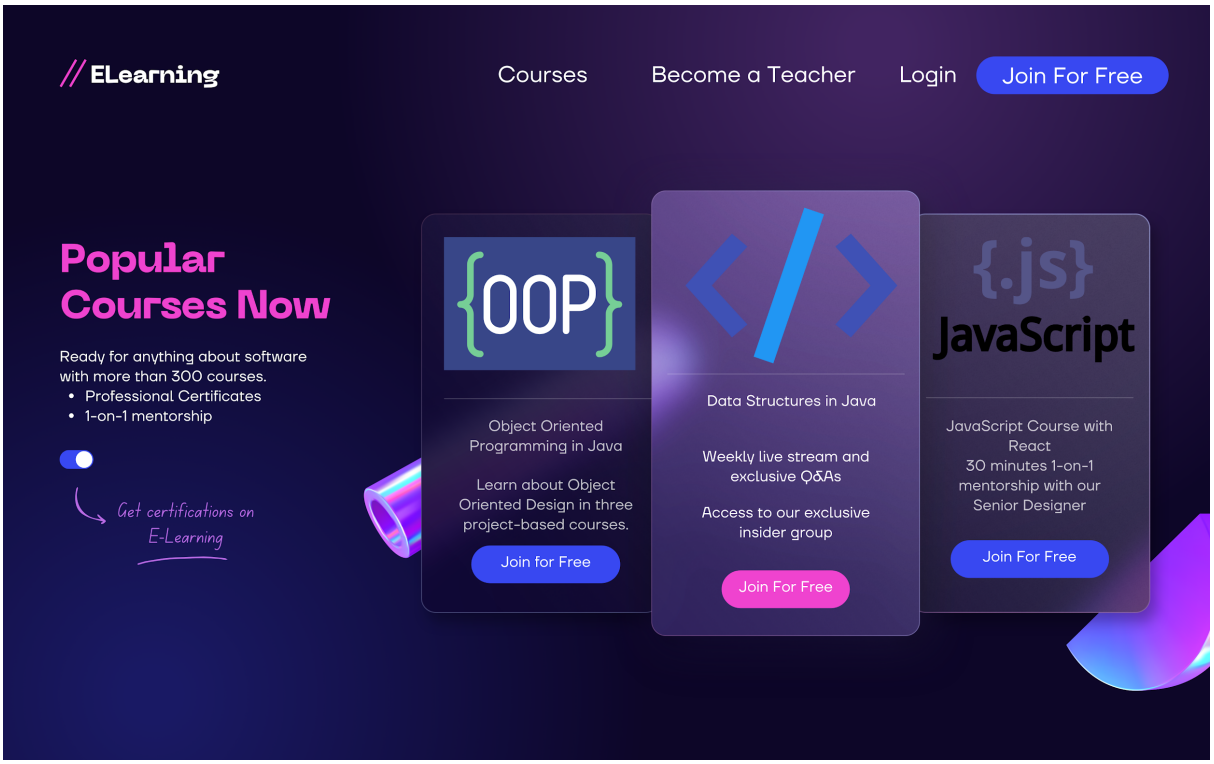
- She wants to login to her account.

- She wants to go to her courses.
- She wants to look at the performance analysis of the courses she teaches

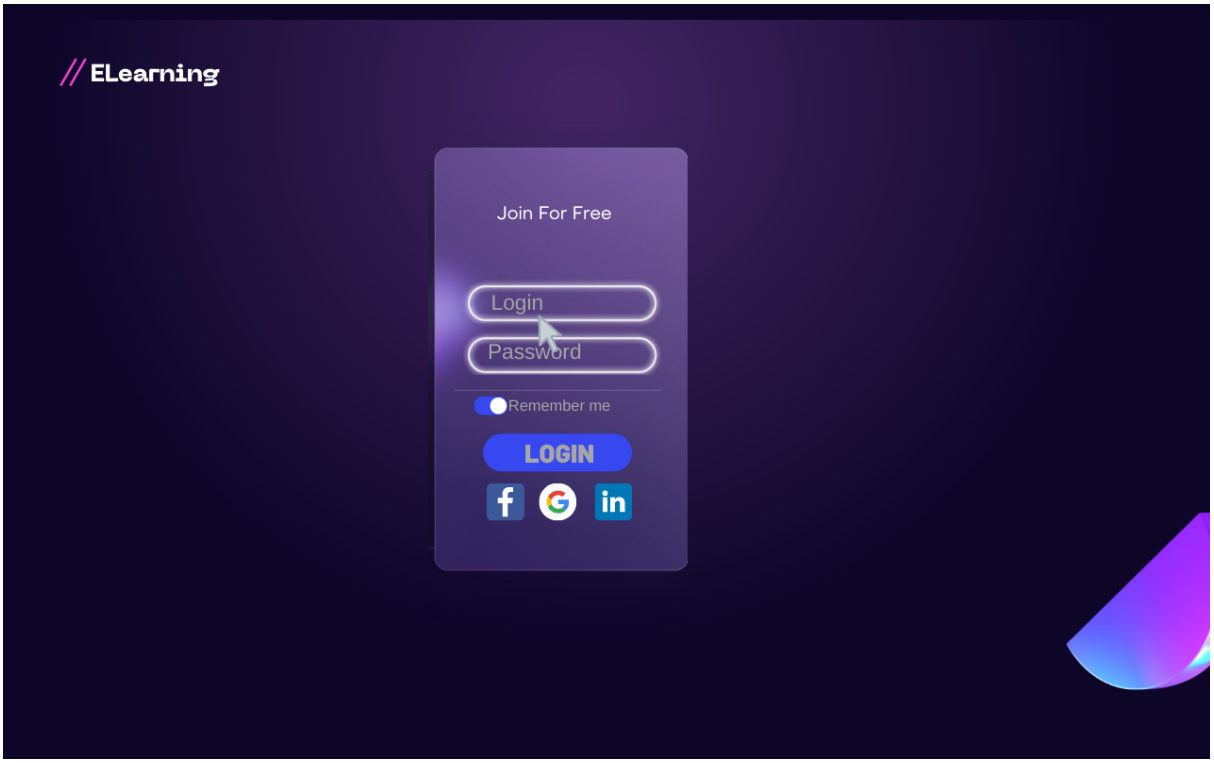
Acceptance Criteria

- 1.1.1.4.1 Users shall be able to login with their username and passwords.
- 1.1.5.5 Lecturer shall have a reputation based on the feedback they have obtained from students
- 1.1.4.7 Student should be able to evaluate the lecturer. Evaluation shall be in two ways: from a rating in the range of 1-5, like or dislike

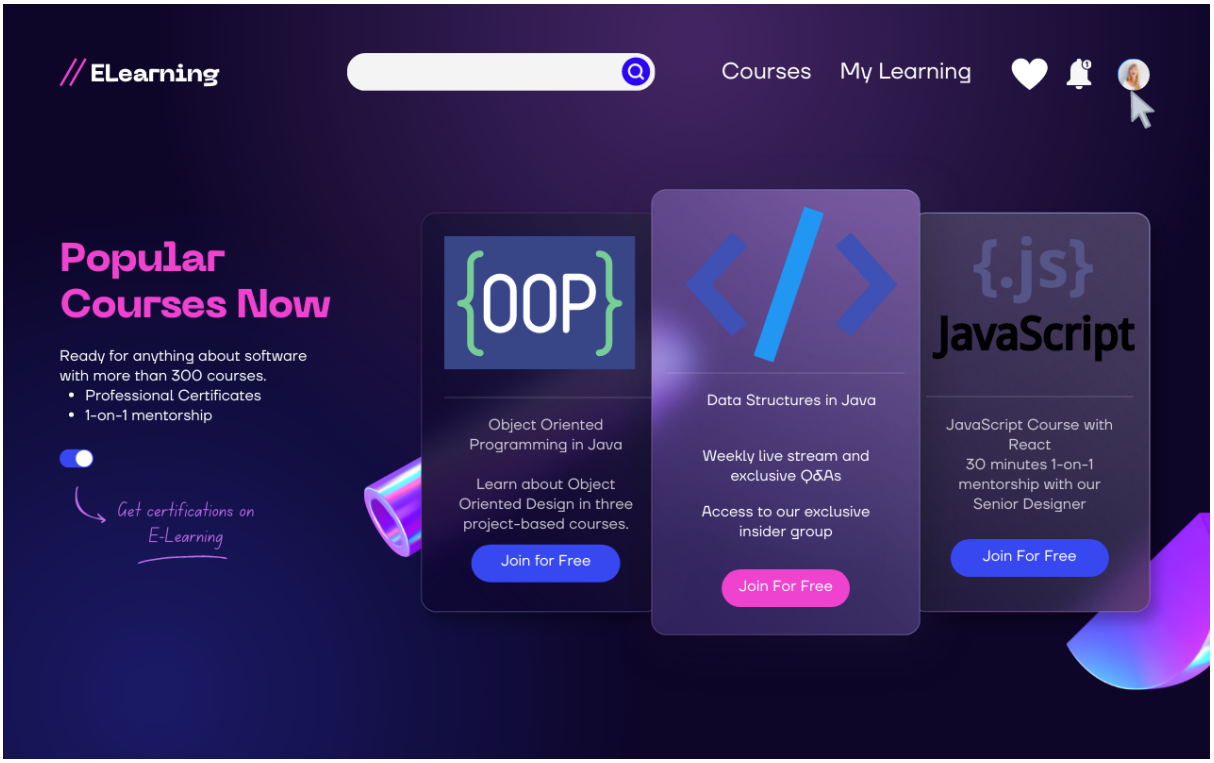
Scenario



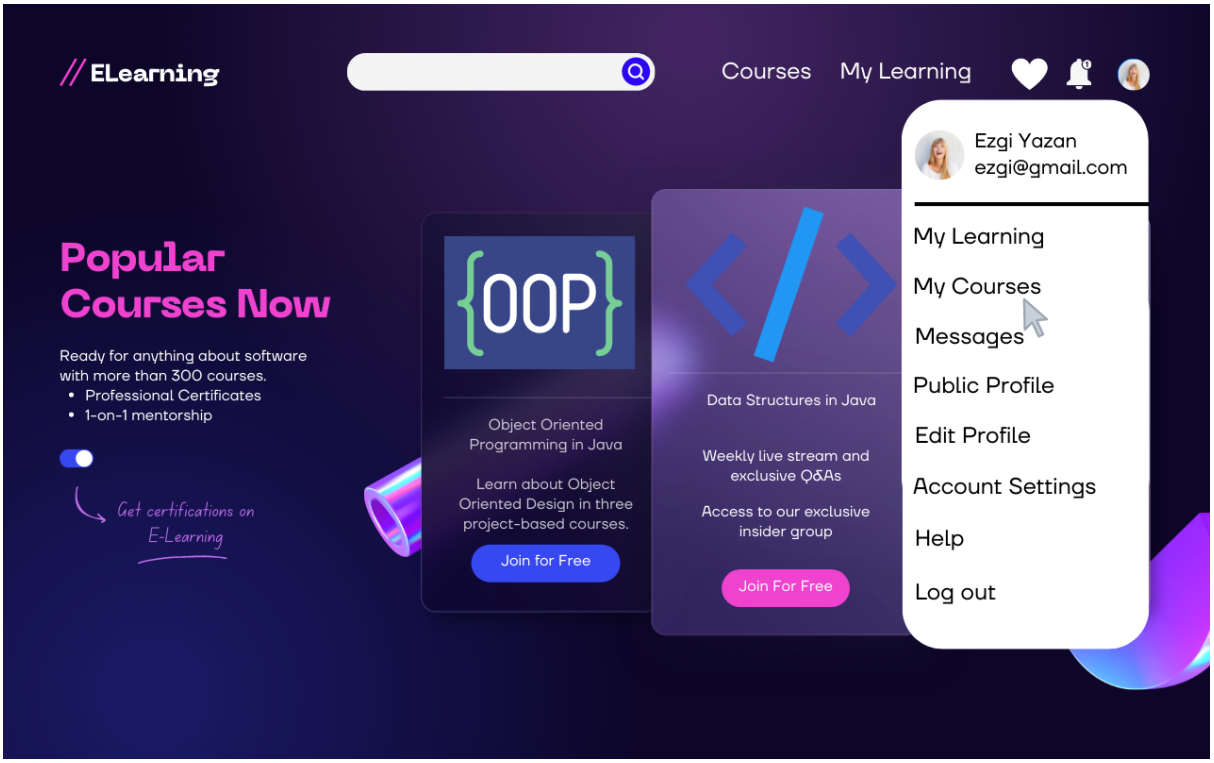
1. She enters to the website.
2. She is not logged in.
3. She sees the popular courses and menu.
4. She clicks the login button.



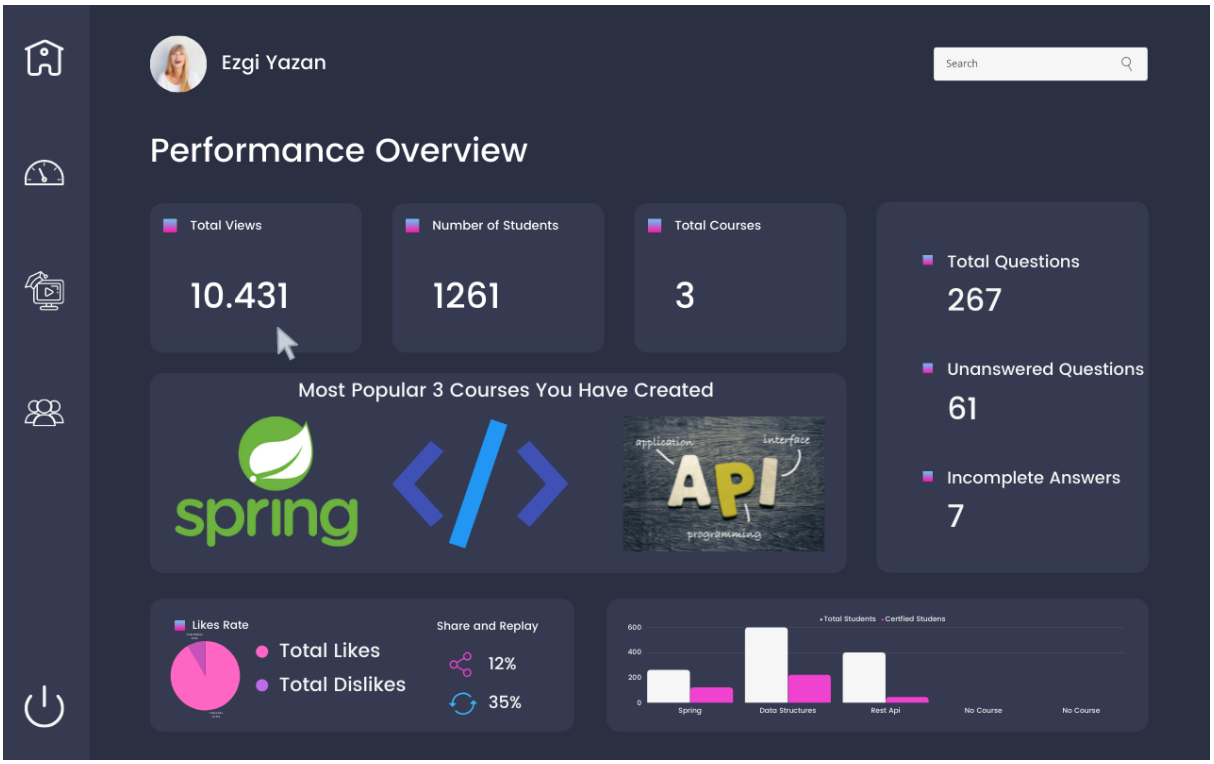
5. She types her username and her password.
6. She clicks the "Log in" button.



7. She sees a page with a search bar, "Courses", "My Learning", Favorite Courses and Notification buttons.
8. She clicks her photo.



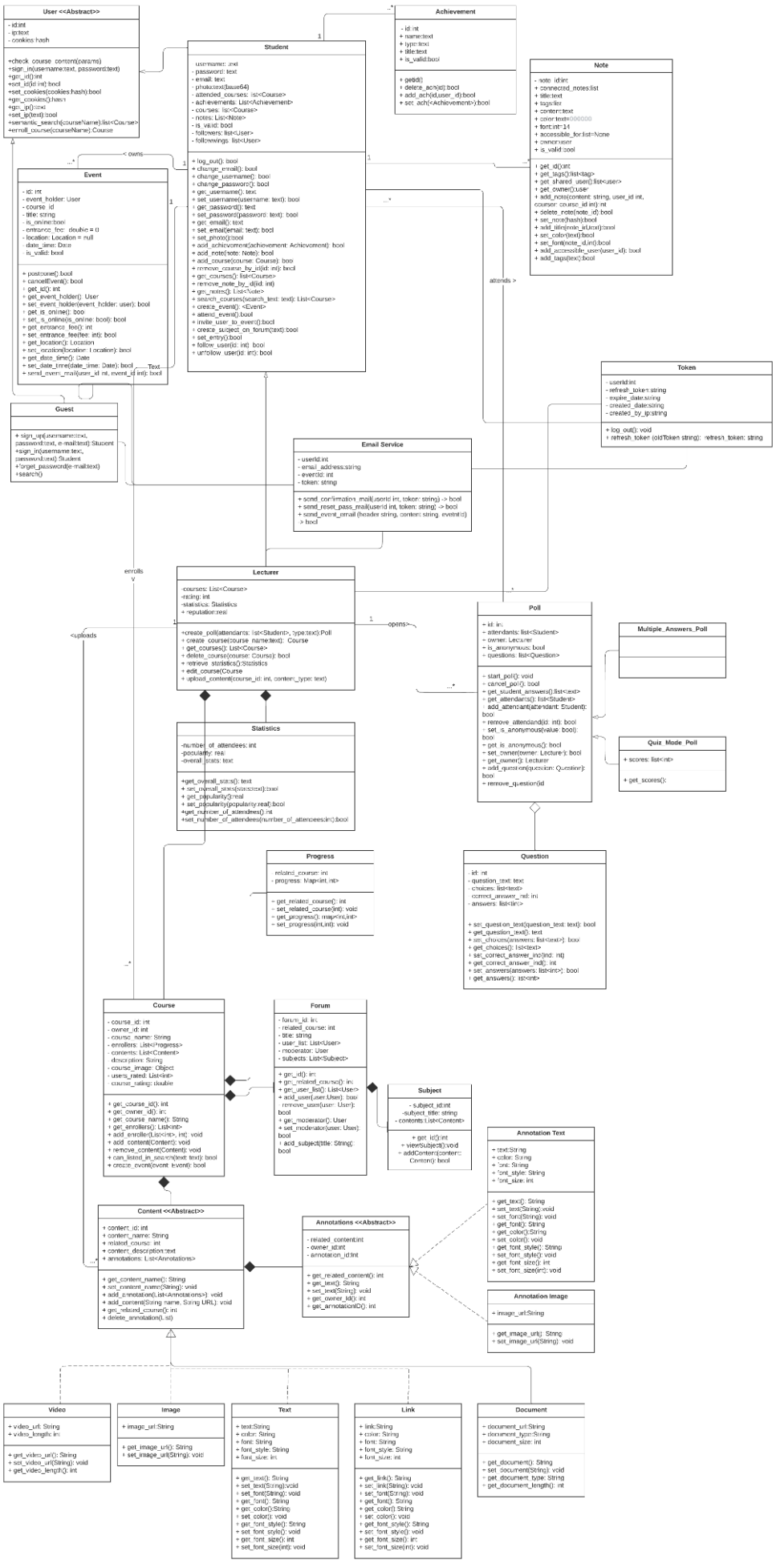
9. A sub-menu opens under the picture and she sees a menu and clicks my courses button.



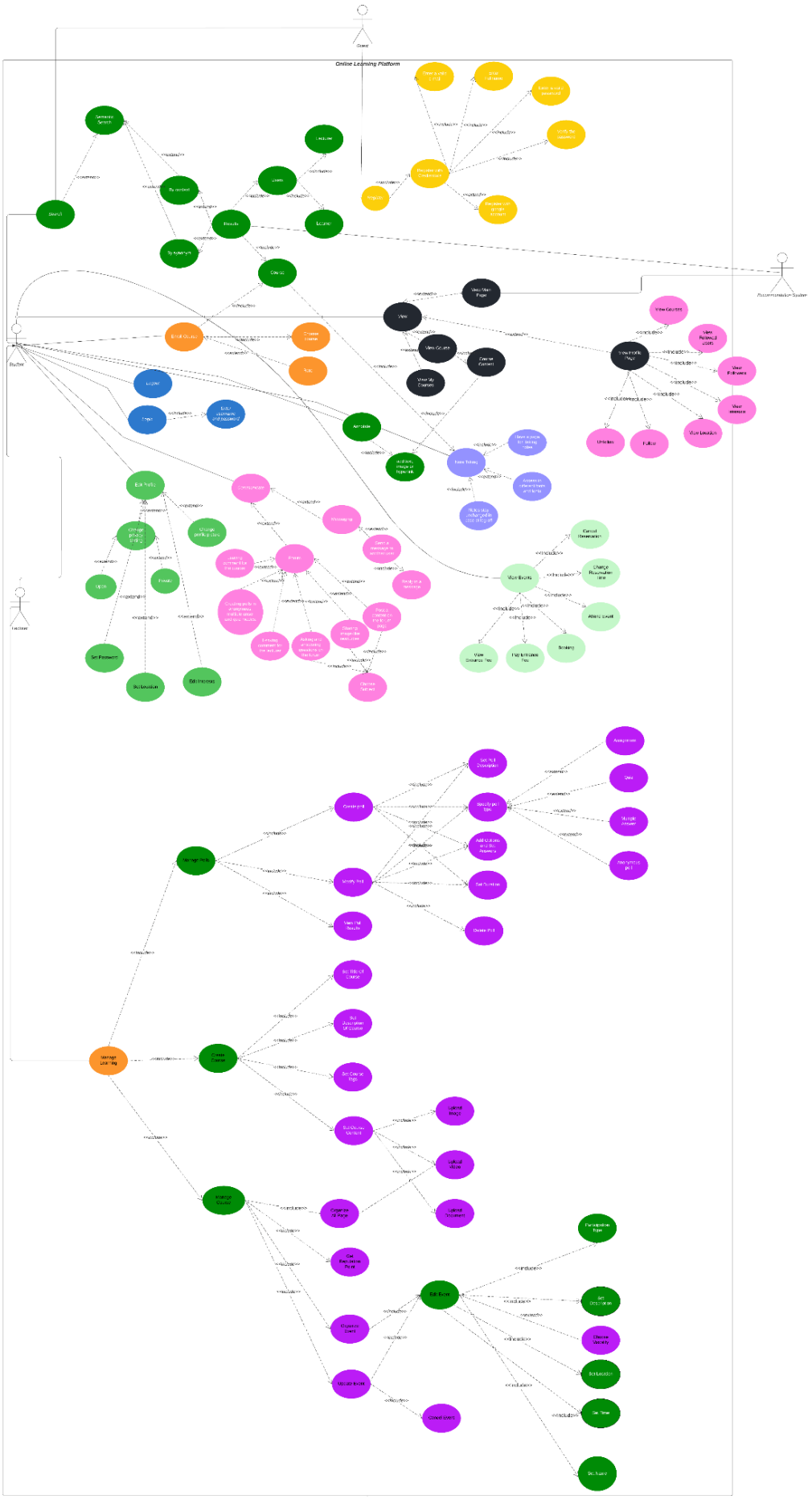
10. She sees a page of name performance overview.
11. She sees some graphs depicting rates of likes and certified students. She sees the total number of views that the courses she has created.

8. D3: Software Design Documents in UML

8.1. Class Diagram

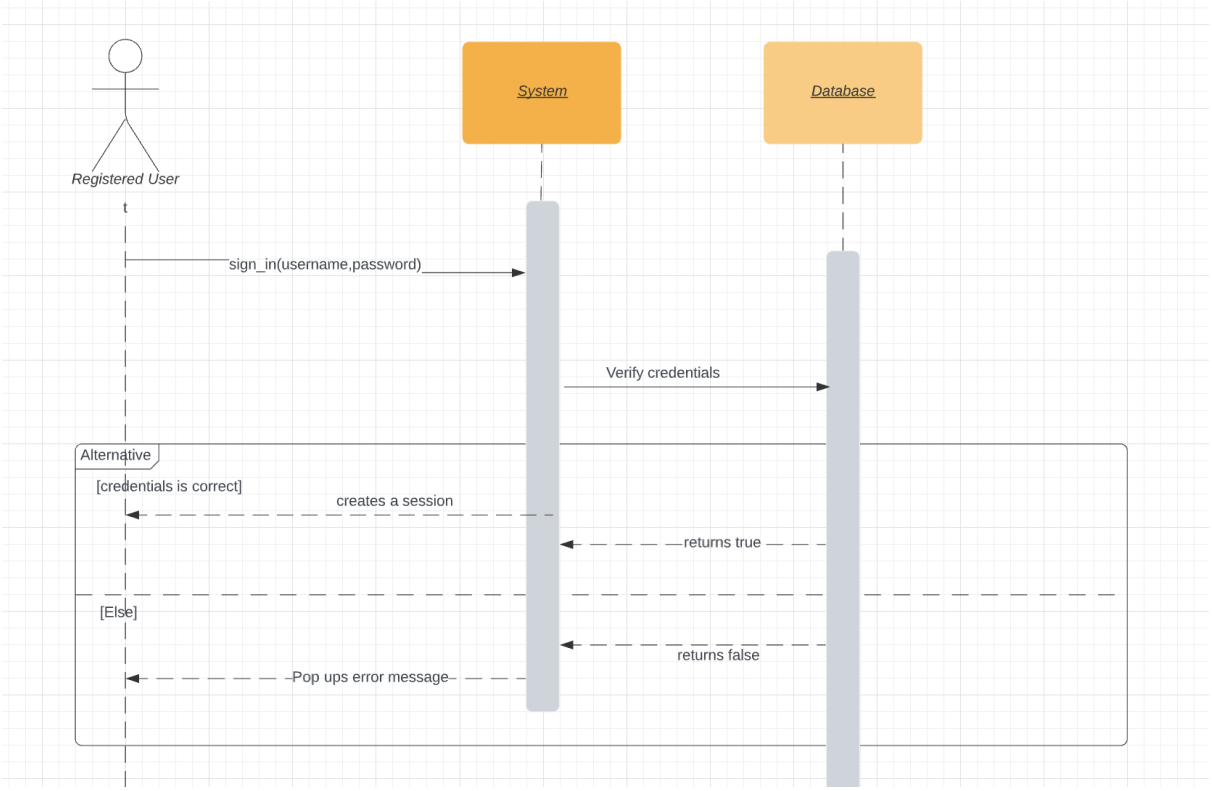

User <<Abstract>>
- id:int
- ip:text
- cookies:hash
+check_course_content(params)
+sign_in(username:text, password:text)
+get_id():int
+set_id(id:int): bool
+set_cookies(cookies:hash):bool
+get_cookies():hash
+get_ip():text
+set_ip(text):bool
+semantic_search(courseName):list<Course>
+enroll_course(courseName):Course
Student
- username: text
- password: text
- email: text
- photo:text(base64)
- attended_courses: list<Course>
- ach:evements: List<Achievement>
- courses: list<Course>
- notes: List<Note>
- is_valid: bool
- followers: list<User>
- followings: list<User>
+ log_out(): bool
+ change_email(): bool
+ change_username(): bool
+ change_password(): bool
+ get_username(): text
+ set_username(username: text): bool
+ get_password(): text
+ set_password(password: text): bool
+ get_email(): text
+ set_email(email: text): bool
+ set_photo():bool
+ add_achievement(achievement: Achievement): bool
+ add_note(note: Note): bool
+ add_course(course: Course): boo
+ remove_course_by_id(id: int): bool
+ get_courses(): list<Course>
+ remove_note_by_id(id: int)
+ get_notes(): List<Note>
+ search_courses(search_text: text): List<Course>
+ create_event(): <Event>
+ attend_event():bool
+ invite_user_to_event():bool
+ create_subject_on_forum(text):bool
+ set_entry():bool
+ follow_user(id: int): bool
+ unfollow_user(id: int): bool
Achievement
- id: int
+ name:text
+ type:text
+ title:text
+ is_valid:bool
+ getId()
+ delete_ach(id):bool
+ add_ach(id,user_d):bool
+ set_ach(<Achievement>):bool
Note
- note_id:int
+ connected_notes:list
+ title:text
+ tags:list
+ content:text
+ color:text#000000
+ font:int=14
+ accessible_for:list=None
+ owner:user
+ is_valid:bool
+ get_id():int
+ get_tags():list<tag>
+ get_shared_user():list<user>
+ get_owner():user
+ add_note(content: string, user_id int, course: course_id int): int
+ delete_note(note_id):bool
+ set_note(hash):bool
+ add_title(note_id,text):bool
+ set_color(text):bool
+ set_font(note_d,int):bool
+ add_accessible_user(user_id): bool
+ add_tags(text):bool
owns >
Event
- id: int
- event_holder: User
- course_id
- title: string
- is_online:bool
- entrance_fee: double = 0
- location: Location = null
date_time: Date
is_valid: bool
+ postpone():bool
+ cancelEvent(): bool
+ get_id(): int
+ get_event_holder(): User
+ set_event_holder(event_holder: user): bool
+ get_is_online(): boo
+ set_is_online(is_online: bool): bool
+ get_entrance_fee(): int
+ set_entrance_fee(fee: int): bool
+ get_location(): Location
+ set_location(location: l ocation): bool
+ get_date_time(): Date
+ set_date_time(date_time: Date): bool
+ send_event_mail(user_id int, event_id int): bool
Text
attends >
Token
- userId:int
- refresh_token:string
- expire_date:string
- created_date:string
- created_by_ip:string
+ log_out(): void
+ refresh_token (oldToken string): refresh_token: string
Guest
+ sign_up(username:text, password:text, e-mail:text): Student
+sign_in(username:text, password:text):Student
+forget_password(e-mail:text)
+search()
Email Service
- userId:int
- email_address:string
- eventId: int
- token: string
+ send_confirmation_mail(userId int, token: string) -> bool
+ send_reset_pass_mail(userId int, token: string) -> bool
+ send_event_email (header string, content: string, eventId) -> bool
enrolls
Lecturer
-courses: List<Course>
-rating: int
-statistics: Statistics
+ reputation:real
+create_poll(attendants: list<Student>, type:text):Poll
+ create_course(course_name:text): Course
+ get_courses(): List<Course>
+ delete_course(course: Course): bool
+ retrieve_statistics():Statistics
+ edit_course(Course
+ upload_content(course_id: int, content, type: text)
opens>
<uploads
Poll
+ id: int
+ attendants: list<Student>
+ owner: Lecturer
+ is_anonymous: bool
+ questions: list<Question>
+ start_poll(): void
+ cancel_poll(): bool
+ get_student_answers():list<text>
+ get_attendants(): list<Student>
+ add_attendant(attendant: Student): bool
+ remove_attendand(id: int): bool
+ set_is_anonymous(value: bool): boo
+ get_is_anonymous(): bool
+ set_owner(owner: Lecture): bool
+ get_owner(): Lecturer
+ add_question(question: Question): boo
+ remove_question(id
Multiple_Answers_Poll
Quiz_Mode_Poll
+ scores: list<int>
+ get_scores():
Statistics
-number_of_attendees: int
-popularity: real
-overall_stats: text
+get_overall_stats(): text
+ set_overall_stats(stats:text):bool
+ get_popularity():real
+ set_popularity(popularity:real):bool
+get_number_of_attendees(): int
+set_number_of_attendees(number_of_attendees:in():bool
Progress
- related_course: int
- progress: Map<int, int>
- get_related_course(): int
- set_related_course(int): void
- get_progress(): map<int,int>
- set_progress(int,int): void
Question
- id: int
- question_text: text
- choices: list<text>
- correct_answer_ind: int
- answers: list<int>
+ set_question_text(question_text: text): bool
+ get_question_text(): text
+ set_choices(answers: list<text>): bool
+ get_choices(): list<text>
+ set_correct_answer_ind(ind: int)
+ get_correct_answer_ind(): int
+ set_answers(answers: list<int>): bool
+ get_answers(): list<int>
Course
- course_id: int
- owner_id: int
- course_name: String
- enrollers: List<Progress>
- contents: List<Content>
- description: String
- course_image: Object
- users_rated: List<int>
- course_rating: double
+ get_course_id(): int
+ get_owner_id(): int
+ get_course_name(): String
+ get_enrollers(): List<int>
+ add_enroller(Lis<int>, int): void
+ add_content(Content): void
+ remove_content(Content): void
+ can_listed_in_search(text: text): bool
+ create_event(event: event): bool
Forum
- forum_id: int
- related_course: int
- title: string
- user_list: List<User>
- moderator: User
- subjects: List<Subject>
+ get_id(): int
+ get_related_course(): int
+ get_user_list(): List<User>
+ add_user(user:User): bool
- remove_user(user: User): bool
+ get_moderator(): User
+ set_moderator(user: User): bool
+ add_subject(title: String): bool
Subject
- subject_id:int
- subject_title: string
- contents:List<Content>
+ get_id():int
+ viewSubject():void
+ addContent(content: Content): bool
Content <<Abstract>>
+ content_id: int
+ content_name: String
+ related_course: int
+ content_description:text
+ annotations: List<Annotations>
+ get_content_name(): String
+ set_content_name(String): void
+ add_annotation(List<Annotations>): void
+ add_content(String name, String URL): void
+ get_related_course(): int
+ delete_annotation(List)
Annotations <<Abstract>>
- related_content:int
- owner_id:int
- annotation_id:int
+ get_related_content(): int
+ get_text(): String
+ set_text(String): void
+ get_owner_Id(): int
+ get_annotationID(): int
Annotation Text
+ text:String
+ color: String
+ font: String
+ font_style: String
+ font_size: int
+ get_text(): String
+ set_text(String):void
+ set_font(String): void
+ get_font(): String
+ get_color():String
+ set_color(): void
+ get_font_style(): String
+ set_font_style(): void
+ get_font_size(): int
+ set_font_size(int): void
Annotation Image
+ image_url:String
+ get_image_url(): String
+ set_image_url(String): void
Video
+ video_url: String
+ video_length: int
+ get_video_url(): String
+ set_video_url(String): void
+ get_video_length(): int
Image
+ image_url:String
+ get_image_url(): String
+ set_image_url(String): void
Text
+ text:String
+ color: String
+ font: String
+ font_style: String
+ font_size: int
+ get_text(): String
+ set_text(String):void
+ set_font(String): void
+ get_font(): String
+ get_color():String
+ set_color(): void
+ get_font_style(): String
+ set_font_style(): void
+ get_font_size(): int
+ set_font_size(int): void
Link
+ link:String
+ color: String
+ font: String
+ font_style: String
+ font_size: int
+ get_link(): String
+ set_link(String): void
+ set_font(String): void
+ get_font(): String
+ get_color():String
+ set_color(): void
+ get_font_style(): String
+ set_font_style(): void
+ get_font_size(): int
+ set_font_size(int): void
Document
+ document_url:String
+ document_type:String
+ document_size: int
+ get_document(): String
+ set_document(String): void
+ get_document_type: String
+ get_document_length(): int

8.2 Use Case Diagram

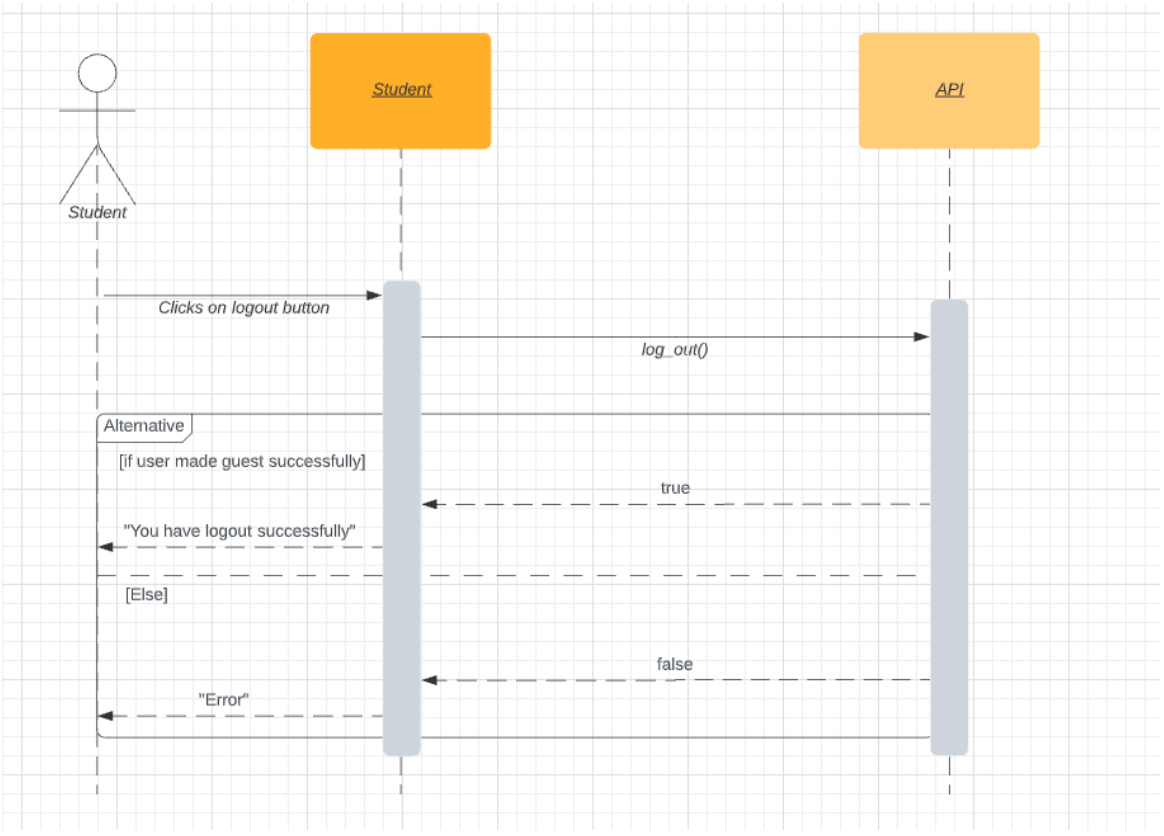


8.3 Sequence Diagrams

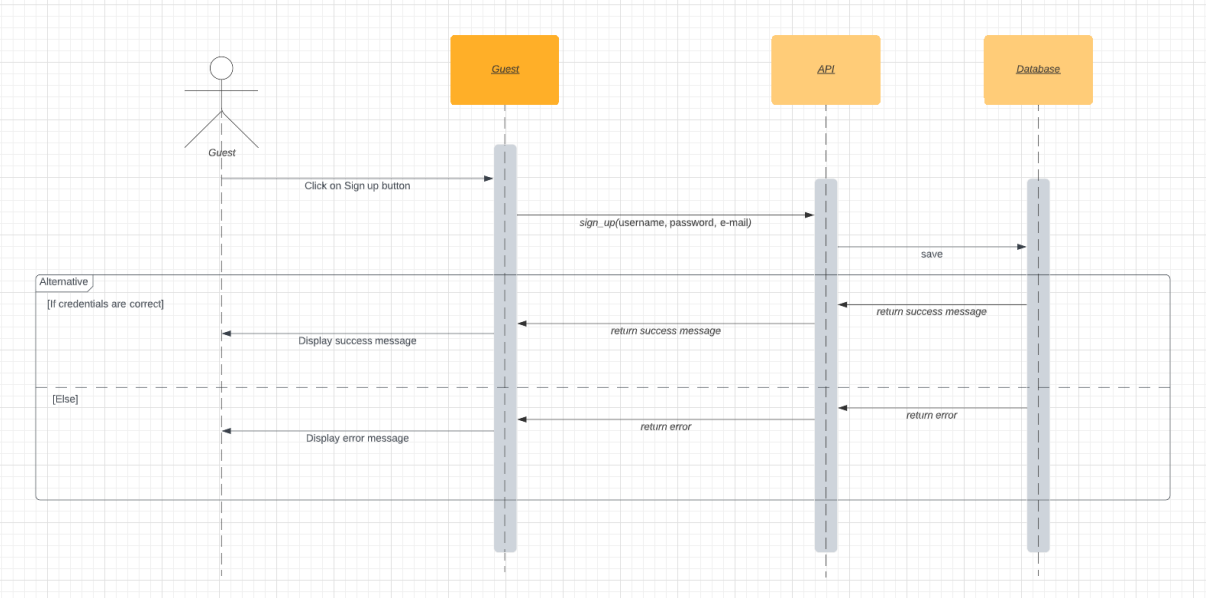
8.3.1 Login



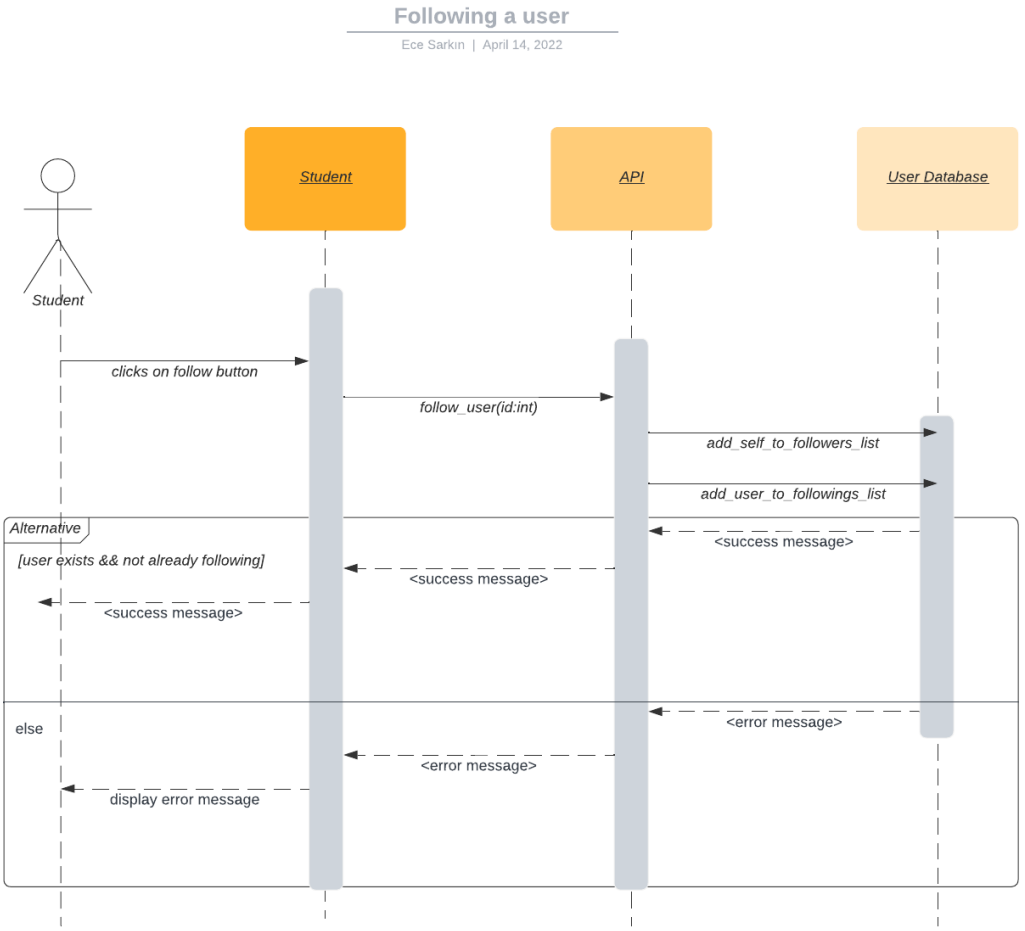
8.3.2 Logout



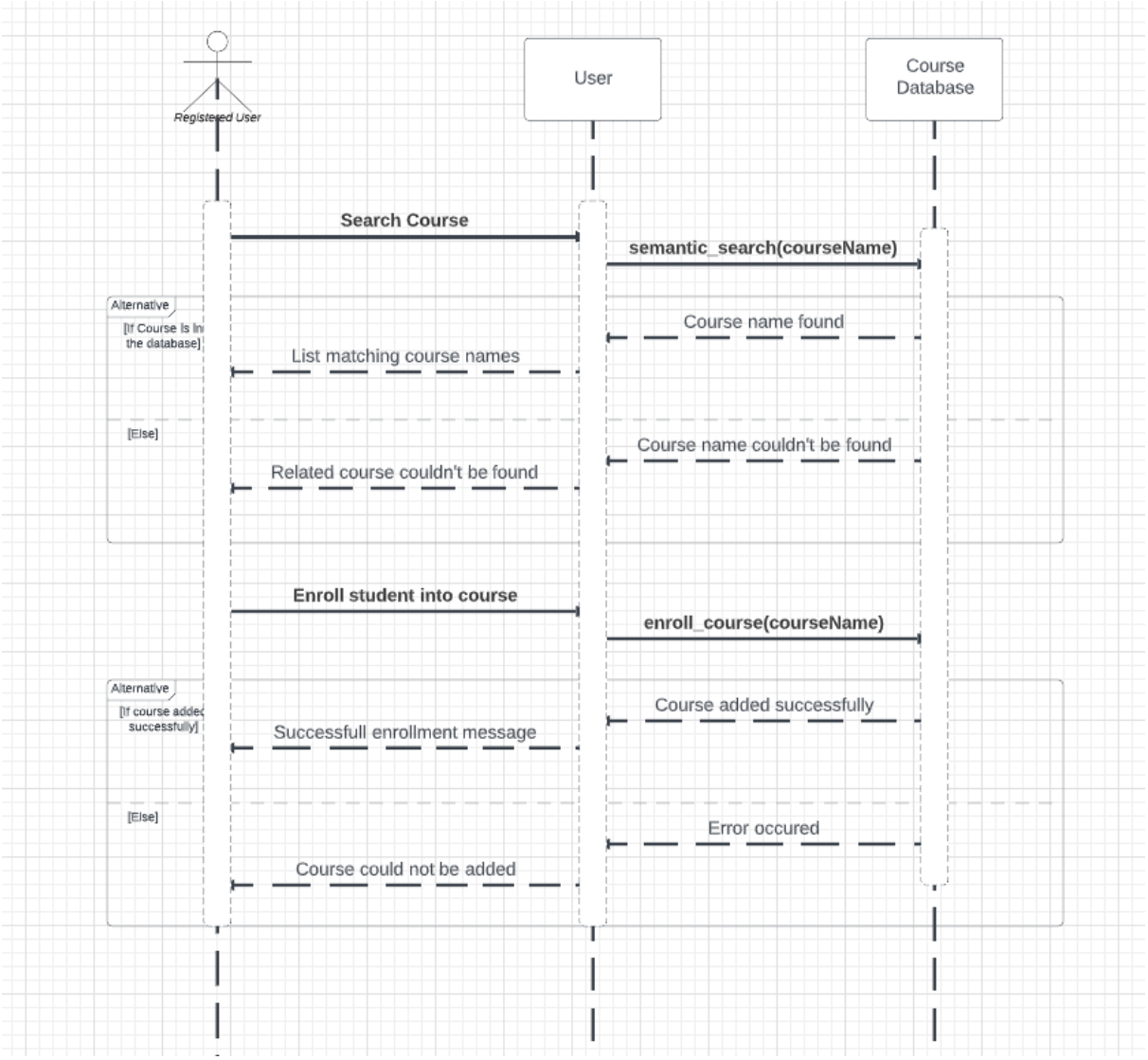
8.3.3 Sign Up



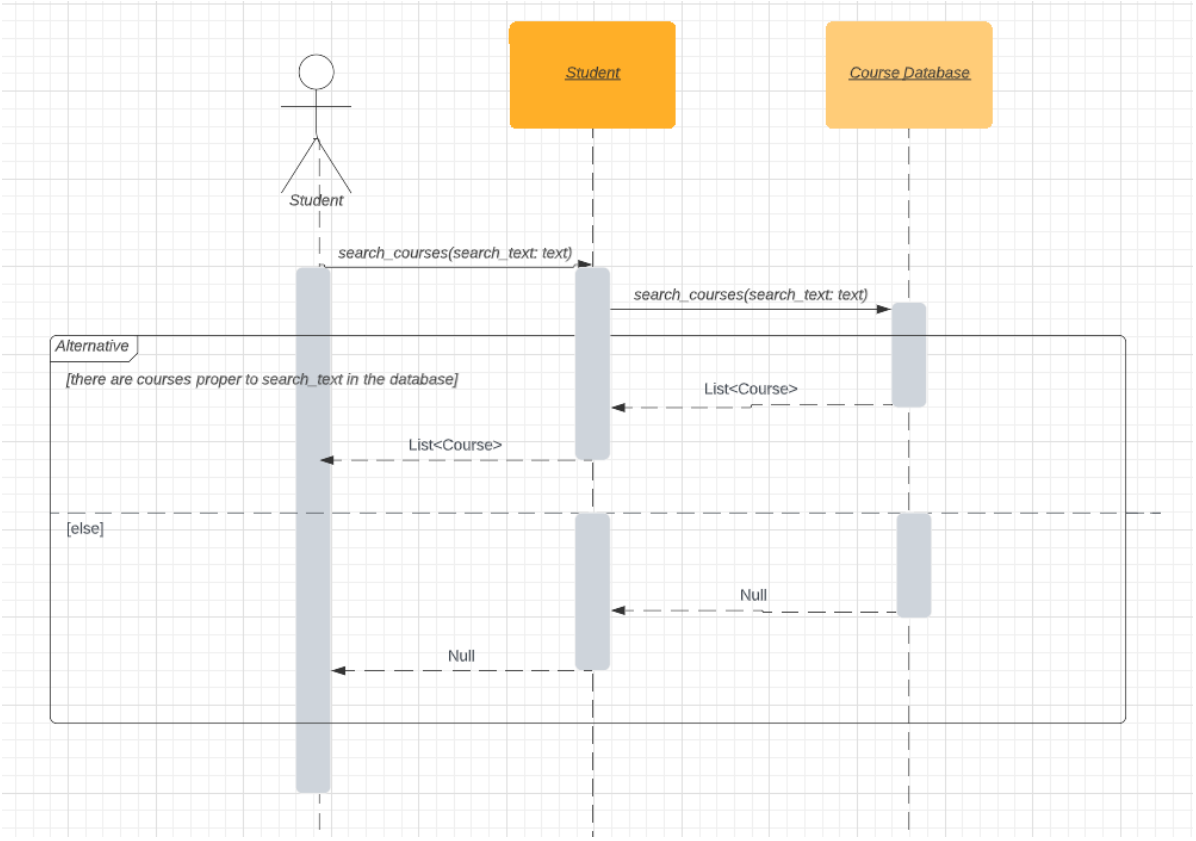
8.3.4 Follow User



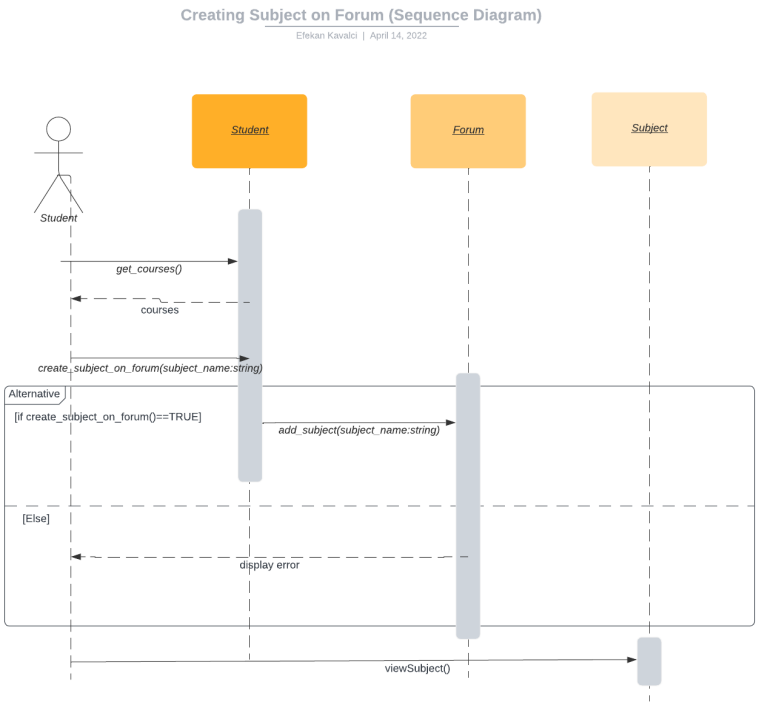
8.3.5 Enrollment in Course



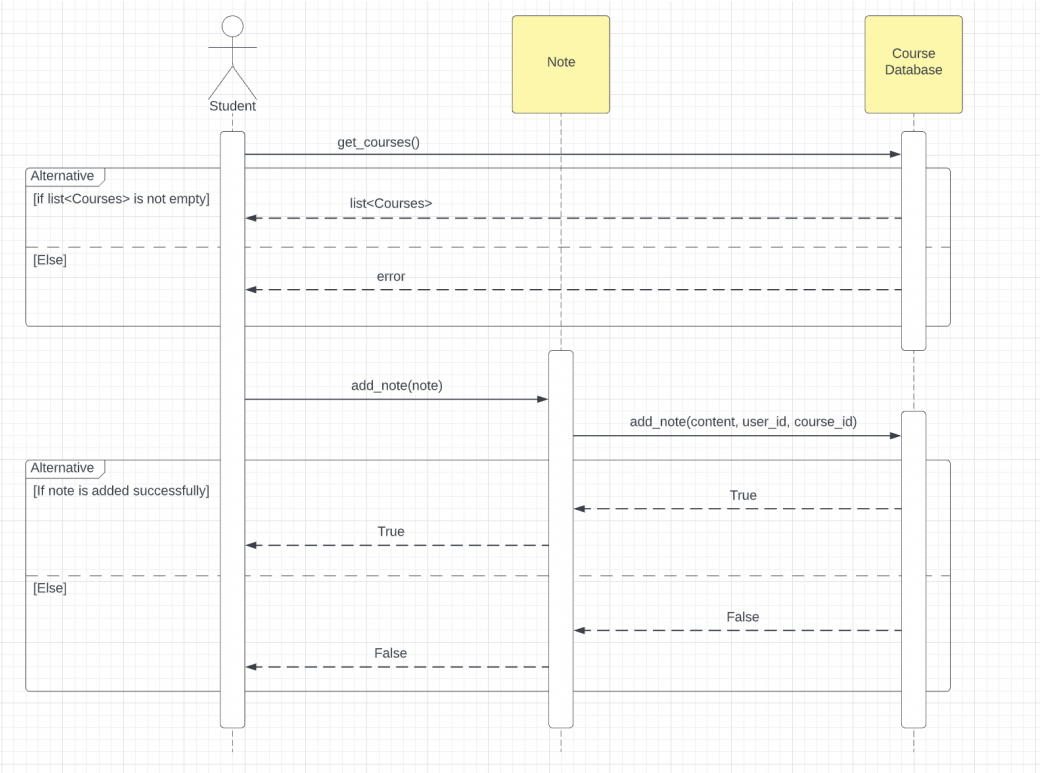
8.3.6 Searching Courses



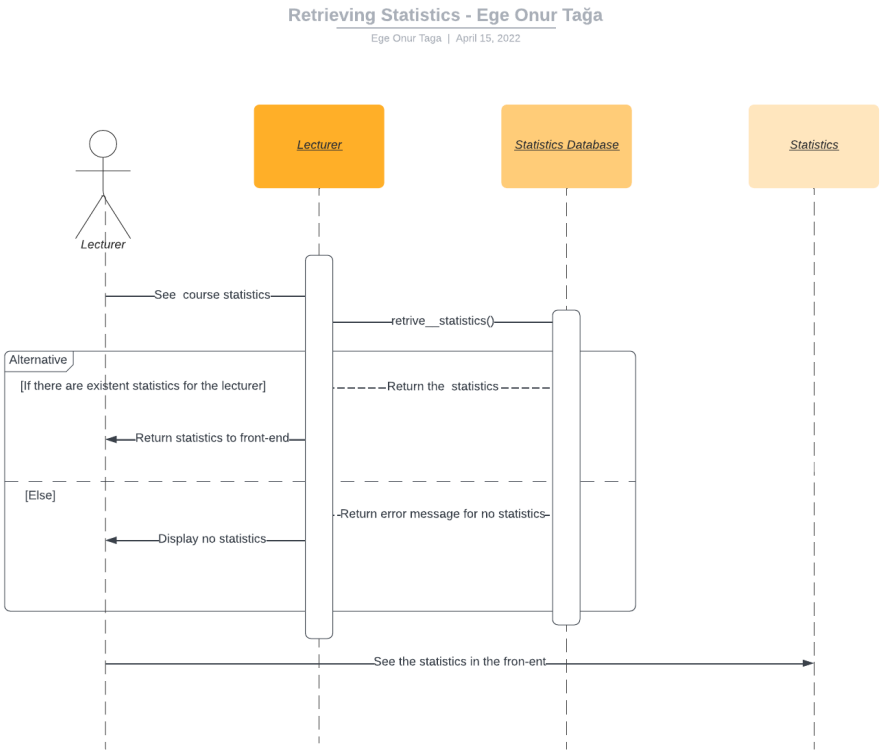
8.3.7 Creating Subject on Forum



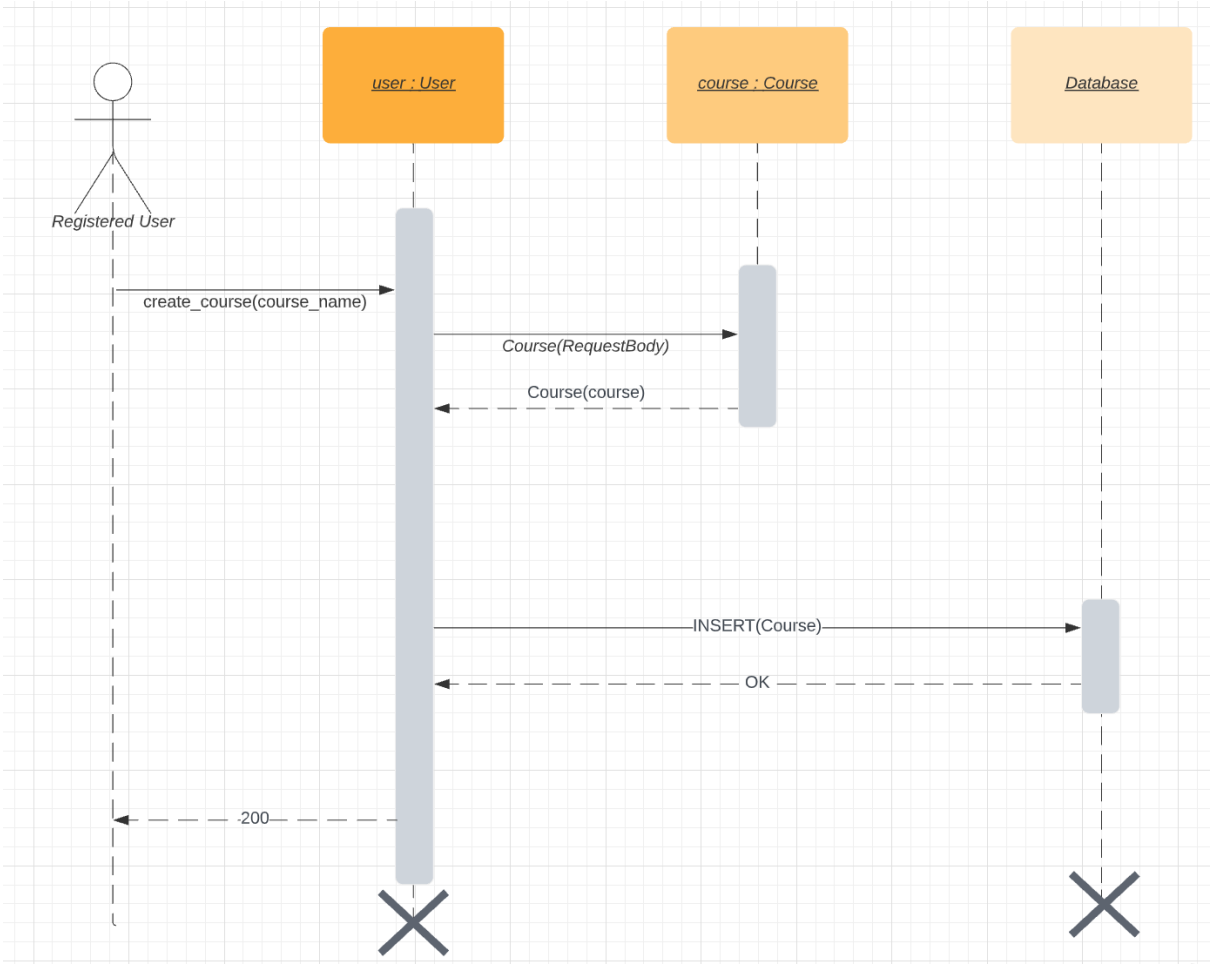
8.3.8 Taking a Note



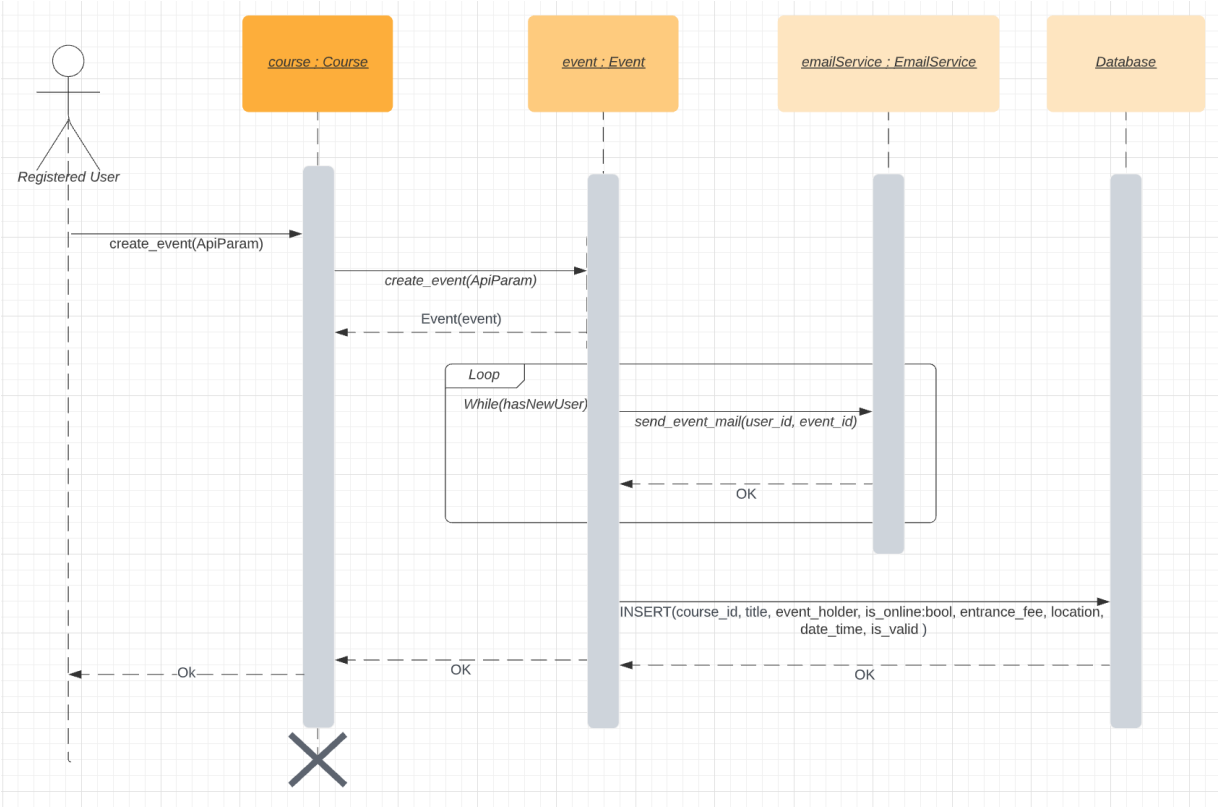
8.3.9 Retrieving Statistics



8.3.10 Create Course



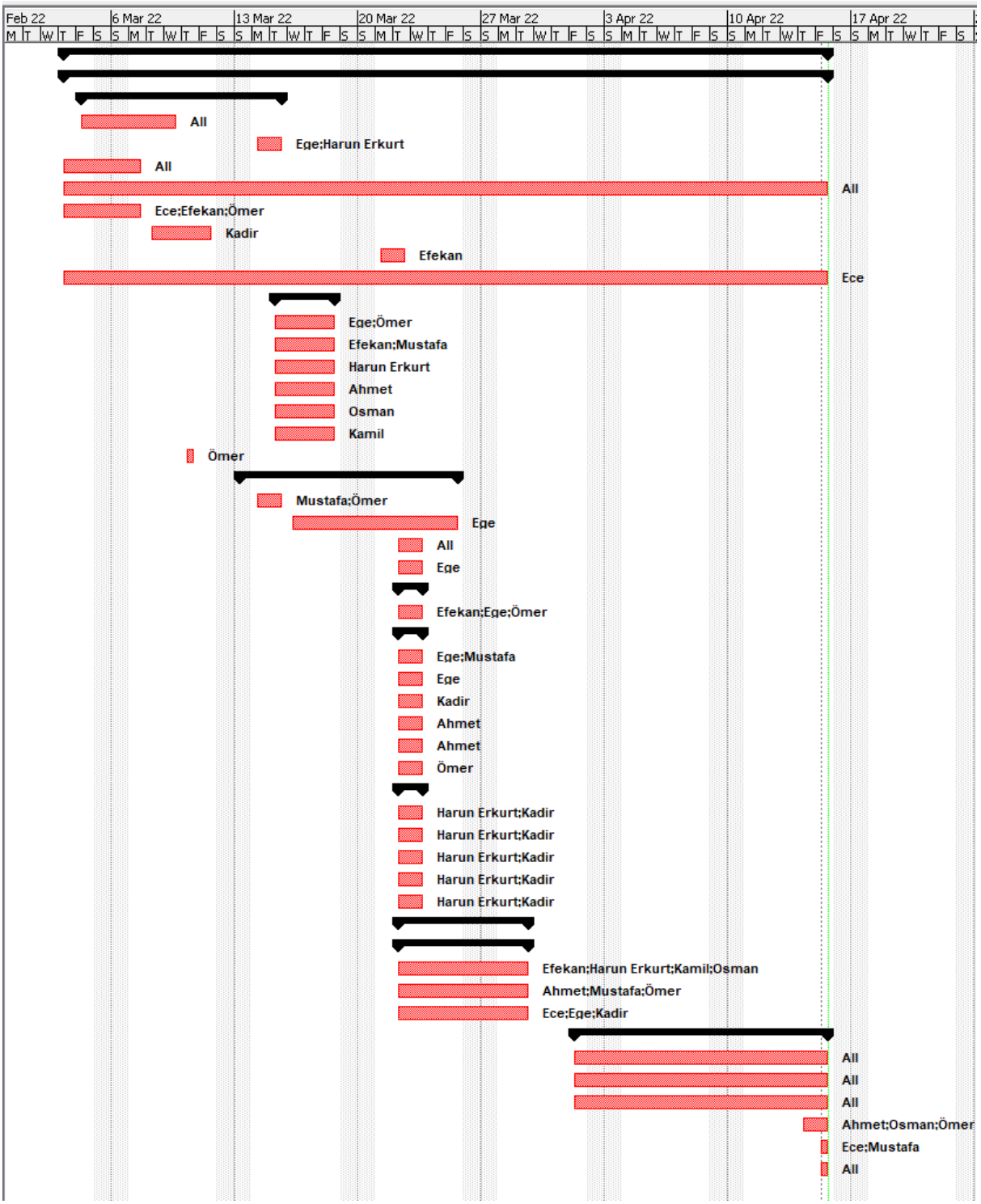
8.3.11 Create Event



9. Project Plan and RAM

9.1 Project Plan

		Name	Duration	Start	Finish	Resource Names
1		**Preparing Deliverables for Milestone 1**	32 days?	**3/3/22 8:00 AM**	**4/15/22 5:00 PM**	
2		**Project Repository**	32 days?	**3/3/22 8:00 AM**	**4/15/22 5:00 PM**	
3		**Research**	8 days?	**3/4/22 8:00 AM**	**3/15/22 5:00 PM**	
4		Favorite Github Repositories	4 days?	3/4/22 8:00 AM	3/9/22 5:00 PM	All
5		Brief Information About Git	2 days?	3/14/22 8:00 AM	3/15/22 5:00 PM	Ege;Harun Erkurt
6		Preparing Personal Wiki Pages	3 days?	3/3/22 8:00 AM	3/7/22 5:00 PM	All
7		Editing Navigator	32 days?	3/3/22 8:00 AM	4/15/22 5:00 PM	All
8		Customizing Labels	3 days?	3/3/22 8:00 AM	3/7/22 5:00 PM	Ece;Efekan;Ömer
9		Communication Plan	4 days?	3/8/22 8:00 AM	3/11/22 5:00 PM	Kadir
10		Preparing Customer Meeting Notes	2 days?	3/19/22 8:00 AM	3/22/22 5:00 PM	Efekan
11		Preparing Weekly Meeting Notes	32 days?	3/3/22 8:00 AM	4/15/22 5:00 PM	Ece
12		**Research Topics**	4 days?	**3/15/22 8:00 AM**	**3/18/22 5:00 PM**	
13		Semantic Search	4 days?	3/15/22 8:00 AM	3/18/22 5:00 PM	Ege;Ömer
14		GDPR Rules	4 days?	3/15/22 8:00 AM	3/18/22 5:00 PM	Efekan;Mustafa
15		KVKK Rules	4 days?	3/15/22 8:00 AM	3/18/22 5:00 PM	Harun Erkurt
16		W3C Web Annotation Data Model	4 days?	3/15/22 8:00 AM	3/18/22 5:00 PM	Ahmet
17		W3C GeoInfo	4 days?	3/15/22 8:00 AM	3/18/22 5:00 PM	Osman
18		W3C Standarts	4 days?	3/15/22 8:00 AM	3/18/22 5:00 PM	Kamil
19		Project Briefing	1 day?	3/10/22 8:00 AM	3/10/22 5:00 PM	Ömer
20		**Requirements**	10 days?	**3/13/22 8:00 AM**	**3/25/22 5:00 PM**	
21		Determining Fundemental Features	2 days?	3/13/22 8:00 AM	3/15/22 5:00 PM	Mustafa;Ömer
22		Preparing Template for Requirements	8 days?	3/16/22 8:00 AM	3/25/22 5:00 PM	Ege
23		Specifying Project Requirements	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	All
24		Preparing glossary	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Ege
25		**Functional Requirements**	2 days?	**3/22/22 8:00 AM**	**3/23/22 5:00 PM**	
26		User Requirements	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Efekan;Ege;Ömer
27		**System Requirements**	2 days?	**3/22/22 8:00 AM**	**3/23/22 5:00 PM**	
28		Searching	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Ege;Mustafa
29		Pages	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Ege
30		Recommendations	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Kadir
31		Note Taking	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Ahmet
32		Annotations	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Ahmet
33		Communication Channels	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Ömer
34		**Nonfunctional Requirements**	2 days?	**3/22/22 8:00 AM**	**3/23/22 5:00 PM**	
35		Privacy	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Harun Erkurt;Kadir
36		Security	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Harun Erkurt;Kadir
37		Accessibility	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Harun Erkurt;Kadir
38		Performance & Reliability	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Harun Erkurt;Kadir
39		Standarts	2 days?	3/22/22 8:00 AM	3/23/22 5:00 PM	Harun Erkurt;Kadir
40		**Scenarios & Mockups**	6 days?	**3/22/22 8:00 AM**	**3/29/22 5:00 PM**	
41		**Preperation of Scenarios and Mockups**	6 days?	**3/22/22 8:00 AM**	**3/29/22 5:00 PM**	
42		Scenario and Mockups for Teacher Role	6 days?	3/22/22 8:00 AM	3/29/22 5:00 PM	Efekan;Harun Erkurt;Kamil;Osman
43		Creating Scenario and Mockups for Guest Role	6 days?	3/22/22 8:00 AM	3/29/22 5:00 PM	Ahmet;Mustafa;Ömer
44		Creating Scenario and Mockups for User Role	6 days?	3/22/22 8:00 AM	3/29/22 5:00 PM	Ece;Ege;Kadir
45		**UML Designs**	11 days?	**4/1/22 8:00 AM**	**4/15/22 5:00 PM**	
46		Preperation of Class Diagram	11 days?	4/1/22 8:00 AM	4/15/22 5:00 PM	All
47		Preperation of Use Case Diagram	11 days?	4/1/22 8:00 AM	4/15/22 5:00 PM	All
48		Preperation of Sequence Diagram	11 days?	4/1/22 8:00 AM	4/15/22 5:00 PM	All
49		Project Plan	2 days?	4/14/22 8:00 AM	4/15/22 5:00 PM	Ahmet;Osman;Ömer
50		RAM	1 day?	4/15/22 8:00 AM	4/15/22 5:00 PM	Ece;Mustafa
51		Milestone 1 Report	1 day?	4/15/22 8:00 AM	4/15/22 5:00 PM	All


Feb 22
6 Mar 22
13 Mar 22
20 Mar 22
27 Mar 22
3 Apr 22
10 Apr 22
17 Apr 22
All
Ege;Harun Erkurt
All
All
Ece;Efekan;Ömer
Kadir
Efekan
Ece
Ege;Ömer
Efekan;Mustafa
Harun Erkurt
Ahmet
Osman
Kamil
Ömer
Mustafa;Ömer
Ege
All
Ege
Efekan;Ege;Ömer
Ege;Mustafa
Ege
Kadir
Ahmet
Ahmet
Ömer
Harun Erkurt;Kadir
Harun Erkurt;Kadir
Harun Erkurt;Kadir
Harun Erkurt;Kadir
Harun Erkurt;Kadir
Efekan;Harun Erkurt;Kamil;Osman
Ahmet;Mustafa;Ömer
Ece;Ege;Kadir
All
All
All
Ahmet;Osman;Ömer
Ece;Mustafa
All

9.2 Responsibility Assignment Matrix (RAM)

Lead	L												
Contributor	C												
Reviewer	R												
None	N												
		Harun Erkurt	Ege Onur Tağa	Ece Sarkın	Efekan Kavalcı	Kadir Gökhan Sezer	Kamil Korkut	Mustafa Atay	Ömer Özdemir	Ahmet Yazıcı	Osman Fehmi Albayrak	Elif Nur Akalın	Harun Sami
Communication and Infrastructure Setup													
Communication Plan		N	N	C	N	L	N	C	N	C	N		
Git Research		L	L	N	N	R	N	N	N	N	N		
Git Repositories		C	L	L	C	C	C	C	C	C	C		
Taking and uploading Meeting Notes #1		R	N	L	N	L	N	N	N	N	N		
Taking and uploading Meeting Notes #2		R	N	L	N	R	N	N	N	N	N		
Taking and uploading Meeting Notes #3		R	N	L	N	C	N	N	N	N	N		
Taking and uploading Meeting Notes #4		R	N	L	N	N	N	N	N	N	N		
Taking and uploading Meeting Notes #5		R	N	L	N	R	N	N	N	N	N		
Taking and uploading Meeting Notes #5.1		L	N	N	N	N	N	N	N	N	N		
Taking and uploading Meeting Notes #6		R	N	L	N	N	N	N	N	N	N		
Customizing labels		L	C	N	C	C	N	C	C	C	N		
Wiki - Customizing the navigator		L	C	N	C	L	N	C	C	C	N		
Wiki - Customizing the wiki homepage		L	C	N	C	L	N	N	C	C	N		
Wiki - Customizing personal wiki pages		C	C	C	C	C	C	C	C	C	C		
Customer Meeting													
Preparing customer meeting questions		C	C	C	C	C	C	C	C	C	N		
Organizing questions page		N	N	L	C	C	N	N	N	N	N		
Taking notes of the customer meeting		N	N	C	C	L	N	N	N	N	N		
Documenting customer meeting answers		N	N	N	L	C	N	N	N	N	N		
Requirements													
Creating glossary		C	L	N	N	C	N	N	N	N	N		
Documenting Features of Project		N	N	N	N	C	N	C	C	N	N		
Creating the template for the requirements		N	L	C	N	N	N	C	N	N	N		
User requirements		N	L	C	C	N	N	N	C	N	N		
System requirements		N	C	N	C	C	C	C	C	C	N		
Non-functional requirements		L	C	N	N	C	N	N	N	N	N		
Scenario & Mockups													
Determining which scenerios will be analyzed		L	C	C	C	C	C	C	C	C	C		
Scenario: User Mode		N	L	C	N	C	N	N	N	N	N		
Scenario: Guest Mode		N	C	N	N	C	N	L	L	L	N		
Scenario: Teacher Mode		L	C	N	L	C	C	N	N	N	C		
Mockup: User Mode		C	L	C	N	C	N	N	N	N	N		
Mockup: Guest Mode		C	C	N	N	C	N	L	L	L	N		
Mockup: Teacher Mode		L	C	N	C	C	C	N	N	N	C		
Software Design Documents In UML													
Class Diagram		C	C	C	C	C	N	L	C	C	C		
Use Case Diagram		L	C	C	L	C	N	C	C	C	C		
Sequence Diagram: create subject on forum		N	R	N	L	N	N	N	N	N	N		
Sequence Diagram: follow user		N	N	L	N	N	N	R	N	N	N		
Sequence Diagram: search courses		N	N	R	N	N	N	L	N	R	N		
Sequence Diagram: sign up		N	N	N	N	L	N	N	R	N	L		
Sequence Diagram: note taking		N	N	N	R	N	L	N	N	N	N		
Sequence Diagram: Create Event		L	N	N	N	N	N	N	N	R	N		
Sequence Diagram: create note		N	N	N	N	L	N	R	N	N	N		
Sequence Diagram: enroll		N	N	N	R	N	N	N	R	L	N		
Sequence Diagram: Retrieving Statistics		N	L	N	R	N	N	N	N	N	N		
Sequence Diagram: Create Course		L	N	N	N	N	N	N	N	R	N		
Sequence Diagram: logout		N	N	N	N	N	N	N	L	N	R		
Milestone 1 Report													
Creating collabrative document for the report		C	C	N	N	L	N	N	C	C	N		
Item 1: Title page		C	C	C	N	C	N	C	N	N	N		
Item 2: Table of contents		C	L	N	N	N	N	N	N	N	N		
Item 3: Executive summary		N	L	N	N	N	N	N	N	N	N		
Item 4: List and status of deliverables		L	N	N	N	R	N	N	N	N	N		
Item 5: Evaluation of the status of deliverables		L	N	N	C	R	N	N	N	N	N		
Item 6: Evaluation of tools and processes		L	N	N	N	R	N	N	N	N	N		
Item 7: Summary of work done by each member		C	C	C	C	C	C	C	C	C	C		
Deliverable 1: Project Repository		N	N	N	N	N	N	N	L	C	C		
Deliverable 2: Requirements		R	L	N	N	N	N	N	N	N	N		
Deliverable 2: Scenarios and Mockups		L	N	N	N	N	N	N	N	N	N		
Deliverable 4: Software Design Documents in UML		R	N	N	L	N	N	N	N	R	N		
Deliverable 5: Project Plan		L	R	N	N	N	N	R	C	C	L		
Deliverable 6: RAM		N	N	L	N	N	N	L	R	R	N		
Deliverable 7: Communication Plan		L	N	N	N	L	N	N	N	N	N		
Uploading Report		C	L	N	N	N	N	N	N	N	N		