CMPE 352
Fundamentals of Software Engineering

SPRING'22 / GROUP 6 - MILESTONE REPORT 1

Ali Kaan Biber
Alp Eren İnceoğlu
Aral Dörtoğul
Artun Akdoğan
Bedirhan Pamukçuoğlu
Berfin Şimşek
Beyza İrem Urhan
Hakan Balık
Hatice Erk
Mustafa Berk Turgut
Yasir Dikbaş
Yusuf Erdem Nacar

Table Of Contents

1. Executive Summary

The project we are working on is an online platform/app mainly composed of a forum where the users can share their medical experiences, get in touch with doctors and ask for advice on many different medical topics.

The platform will have various features such as semantic search, a chatbot, and a labeling system that will help the users to find what they are looking for with ease. In addition to the forum, the users will be able to communicate and share in a more discrete and direct manner via messaging if they choose to do so.

1.1. Summary of the Project Status

The development of the project started with determining the requirements and creating the software requirements specification document. After the initial requirement elicitation, the document was updated regularly in accordance with the feedback from the customer meetings.

Following the requirement specification, three scenarios for its uses were created. In order to convey an idea about how the project will work on different platforms, two web application mockups and one mobile application mockup were prepared. Even if the requirement elicitation part was done, the acceptance criteria of the scenarios were updated as soon as a change was made to the related items.

For the next step of the project, the use case, class, and sequence diagrams were designed. Since in the earlier steps what needs to be done and how they should function in the real world were defined clearly, the design process was unproblematic. The diagrams generally received positive feedback. In the process of creating the use case and class diagrams, the tasks which were splittable were distributed among the team members to enable working in parallel. However, daily meetings were held in order to combine and overview the individual tasks and distributed parts without diverging too much. The daily meetings also helped all team members to have a firm grasp on how the overall design of the project is conveyed. After the use case and class diagrams were completed, the tasks for the sequence diagrams were distributed with each task being reviewed by multiple members, multiple times and were done in time.

Subsequently, the work on the milestone report was distributed. Since the work on every step of the project was coordinated in a similar manner where the tasks were distributed but done collaboratively with lots of communication and reviewing, each team member had a great understanding of the design and status of the project. This led to a quick and straightforward preparation of the milestone report.

In summary, all of the deliverables were completed in time with great individual and collaborative effort, communication, planning, and revision and the project is in a state where it is mostly ready to be implemented.

1.2. Plans for Moving Forward

In the future, we will be forming subgroups within the team to work on different parts of the project which are frontend, backend, and mobile. The backend team will be working on the server-side, API integration, and data storage. The frontend team will be responsible for the client-side, the GUI, and how the data is taken from the users. Lastly, the mobile team will be implementing the mobile app of the project. Since the design part of the project is mostly done, we are ready to implement the project.

2. List and Status of Deliverables

2.1. D1- Project Repository

Includes: Up to date wiki pages (as usual constant gardening), issue tracking.

Status

From the beginning of the project to this day, we made use of issues in the best possible way to document our journey as well as meeting notes. After each meeting, we assigned our tasks to the responsible ones and opened related issues right away. While opening issues we always abide by the rules stated in our Issue Creation Guide. Moreover, every member of the group filled their wiki pages with brief information about themselves, contact info, and their weekly efforts. In short, this deliverable is in a good state and ready to be reviewed.

2.2. D2- Requirements

Includes Software Requirement Specification, Scenarios, and Mockups

Status

We were firstly divided into subgroups for completing our own parts in the software requirements page. After the first draft was complete almost each group member took part in reviewing our requirements page separately. As this part is needed to be kept up to date, we made the required adjustments after some client and internal meetings. Just in the same way, our subgroups handled 3 distinct Scenarios and related mock-ups. We made all necessary adjustments to the requirements and it is now completely ready for the checking process.

2.3. D3- Software design documents in UML

Includes Use case, class, and sequence diagrams.

Status

We designed our UML diagrams by making use of Lucidcharts. The process of learning how to use the necessary tools took quite some time but after getting used to the platform we demonstrated perfect work. Rechecking everything with group members more than once was also done in order to prevent any mistakes. All complete and detailed diagrams can be found on our GitHub page as well as on Lucidchart. This deliverable is in a perfect state and ready to be reviewed.

2.4. D4- Project plan & RAM & Communication plan

Status

As we effectively used meeting notes and issues, most of our project plan and responsibilities were already implicitly documented. Thus, the creation of RAM and Project Plan was handled with great precision. RAM represents the detailed contributions of each group member and the type of work they've done while contributing. Our communication plan was already created on the 8th of March (#13). We used each communication method listed in (the communication plan) according to our needs and our group members' availability. In conclusion, D4 is also complete and can be reviewed.

2.5. D5- Milestone Report

Status

Our milestone report is a perfect summary of the progress we've made so far and the group effort demonstrated while making the progress. The report includes details about the project status, future plans, tools we used, and individual work done by each group member. As well as this, a list of deliverables and their status is also included in the report. Last but not the least, necessary links embedded into words were utilized wherever possible for making the report more effective in terms of readability. Everything is well documented and ready to be checked.

3. Evaluation of Impact of Deliverables On Project Plan

Without a doubt, one of the most important aspects of project development is predictability. This can only be achieved through having a great vision, plan, and more importantly well-documented files which enable us to foresee future steps of the project. As far as our project is concerned, the list and status of deliverables are listed above and they are a great example of clean documentation of progress. Starting from requirements to the milestone report, each deliverable is completed by means of great endeavor demonstrated by all group members. Thus, completion of the project plan regarding what we did in the past was achieved with great precision as each contribution is documented on GitHub. On the other hand, as this gave us a great idea of how we manage time and handle various tasks as a team, we could easily plan steps that will be taken even 8 months later. As we were preparing deliverables we got to know each other even better which enabled us to distribute roles as lead, contributor, etc. for software development phase subgroups. What's more, software requirements and design documents are completely ready, meaning that for the coding stage there won't be any hardships to be faced during the theoretical phase and subgroups will focus solely on coding. This way, we assume the software development phase will be efficient and everything will be completed on time as shown in the Project Plan. As a result, having carefully prepared deliverables makes the project's future foreseeable while acting as a catalyst to the process and contributing to the creation of the project plan.

4. Evaluation of the Tools and Processes We Have Used

4.1. GitHub

GitHub is by far the most popular Git repository hosting service. It offers a wide variety of features to keep your shared workspace manageable with a very sweet UI. For our project, we used GitHub's issue and wiki system very frequently. Thanks to GitHub, assigning and tracking individual tasks were easily managed. Additionally, the wiki system enabled us to display our work in a way that is easily accessible, comprehensible, and presentable.

4.2. Google Meet

Google meet was perfect for us because it is easy and quick to set up a meeting, it requires no licensing and it does not have a time limit on the meeting duration. The fact that google meet is easily integrated into the google calendar made the scheduling of the meetings amazingly effective. An insignificant downside of google meet is that it does not allow multiple people to share their screens at the same time. Overall it was great for a group of size 10 - 15 like us.

4.3. Google Docs/Sheets

Google workspace offers a high level of integration between its products and allows the users to work on documents collaboratively very easily. We used docs and sheets to prepare our milestone report. These products allow multiple people to work on the same file at the same time, which is perfect for preparing a project report. This way we did not need to send or receive the most up-to-date version of the file to produce a single report. Although they may lack some features when compared to their office counterparts, when working with a team they are better.

4.4. Slack

Slack is a workplace communication tool widely used in business. It was one of the key tools for the communication part of our project. It is user-friendly and has a simple UI. It allows the users to organize their communication in a wide variety of ways such as creating channels, discussing in threads, etc. The role Slack played in our project was that it enabled us to communicate with the teaching staff very effectively. Although we used other channels for communication between the group members, those channels were not available for communicating with the teaching staff. It allowed us to organize the discussions with its thread feature. Since Slack is used by all of the students, tracking the public discussions was vital, which is why the thread structure of Slack is very useful. The answers to the questions we asked can be seen directly under those questions, which makes it easier to keep track of what's going on.

4.5. LucidChart

Lucidchart is an online diagram creation platform where users can share their work with multiple people. The sharing system of Lucidchart is very similar to that of google docs/ sheets. We used it to create diagrams collaboratively, work on them at the same time during the meetings, and share them with one another for reviews. It also provides many assets for preparing UML diagrams. On the downside, some features are locked behind a licensing system. Although it was great for the use case and class diagrams, it was a bit hard to use for sequence diagrams because of how the arrows behave. For the sequence diagrams, there may be better alternatives such as PlantText.

4.6. Canva

Canva is an online graphic design tool that has a huge library of assets that people can use for a large array of purposes. It allows you to share designs with other people. We used Canva to create the mockups for our scenarios. Since we were able to share our designs, the mockups were easy to make consistent. However, like Lucidchart, there is a licensing issue. Most of the high-quality assets are locked behind a paywall and the free ones were not that diverse. Additionally, most of the designs on Canva are focused on documents like CVs, certificates, or presentations. This is why Canva may not be the best choice for creating mockups. There are definitely better alternatives out there tailored to create mockups like Miro or MockFlow.

5. Table of Work Done

Team Member	Contribution
Ali Kaan Biber	• Attended all group and customer meetings. • Learned the basics of Markdown language. • Created my personal wiki page. #3 • Researched GitHub to find a repository for the repository research page. #12 • Made research about W3C, created a wiki page for it, and filled it with basic information related to W3C and its standards. #19 • Listed the non-functional requirements for Reliability. #28 • Reviewed Scenario #2 for Using Chatbot and worked on its mockup. #35 • Reviewed Scenario #1 and Scenario #3 and made small notifications for consistency. • Updated Scenario #2 so that it follows the updated requirements. #48 • Worked on the Use Case Diagram collaboratively with all team members. • Reviewed the Class Diagram of Searchbar. #59 • Designed the Class Diagram of Label. #60 • Reviewed the Sequence Diagram of Report Content. #71 • Created the Sequence Diagram of Admin Label Creation. #75 • Prepared the Requirements, Scenarios, and Mockups part of the Milestone Report. • Reviewed RAM and filled my work.
Alp Eren İnceoğlu	• Attended all group and customer meetings. • Created own personal wiki page #3 • Researched and added a repository to the research page. #12 • Created the communication plan. #13 • Took meeting notes #3 • Did research about W3C #19 • Listed the user types in requirements like a glossary #31 • Co-created the User Scenario 1 #34 • Updated the user types and moved them under 1.1 User Requirements #37 • Reviewed the requirements and made minor consistency changes #42 • Reviewed the updated User Scenario #1 #47 • Worked on the Use Case Diagram collaboratively with all team members. • Created the Chat Class Diagram #62

	• Reviewed the Report Class Diagram #63 • Reviewed the Report Sequence Diagram #77 • Reviewed RAM and filled my work. #82 • Filled my summary of work into the milestone document #86 • Created the Message Sequence Diagram #88 • Uploaded Deliverable #1 to the wiki. #89 • Created and designed the Deliverables part of the sidebar #91
Aral Dörtoğul	• Attended all group and customer meetings except meetings 1 and 6. • Created own personal wiki page. #3 • Added the link to his personal wiki page to the Wiki's main page and sidebar. #4 #5 • Added a repository to the repository research page #12 • Did research about Chatbot #17 • Listed the functional requirements for interactions between users and the forum. • Created user scenario & mockup #1: Sharing a post #34 • Updated User Scenario 3 acceptance criteria in accordance with the updated requirements. #41 • Reviewed the mock-up drawings in all scenarios. Meeting #11 • Class Diagram: Chat class reviewed. #62 • Class Diagram: Created the Post Preview Class #64 • Use case diagram: Carried out integrity checks of all the use case scenarios. #85 • Sequence diagram: Created the sequence diagram for Voting a Post/Comment. #79 • Sequence Diagram: Post Edit reviewed. #76 • Reviewed RAM & Project Plan Design. #82 • Prepared the summary of the work done by each member in Milestone Report I. #86
Artun Akdoğan	• Attended all group and customer meetings. • Wrote my time tracking in weekly periods. • Created and commented on issues for my work. • Studied Markdown syntax. • Refreshed my knowledge of Git. • Created my personal Wiki page. (#3) • Worked on the Home Wiki page. (#4)

	• Added a repository to the repository research page. (#6) • Researched chatbot. • Researched other repositories for an example requirements page. • Wrote Forum Requirements on the Requirements page. (#24) • Worked on scenario page for Chatbox Usage and worked on its mockup with the team on Scenario #2: Using Chatbot. (#35) • Reviewed and fixed minor errors on the requirements page. (#42) • Worked on use case diagram for Report User Operations. • Documented and uploaded notes for Meeting #9. (#54) • Created class diagram for Searchbar class. Added some functions to PostPreview class. (#59) • Reviewed class diagram for Message. (#56) • Created sequence diagram for Searchbar. (#70) • Reviewed and fixed minor errors on the Chatbot Research page. (#17) • Reviewed sequence diagram for Message. (#88) • Reviewed RAM and filled my work. (#82)
Berfin Şimşek	• Attended all group and customer meetings. • Researched Markdown language. • Investigated previous years' repositories. • Created my personal wiki page. • Updated my personal wiki page adding weekly efforts. • Researched GitHub repositories. • Created a template for Meeting Notes. • Researched DBpedia for the project. • Listed security and response requirements of the project. • Reviewed the updated Requirements. • Created Scenario #3. • Reviewed Scenario #1 and Scenario #2. • Added 1.1.1.3.11 & 1.1.1.3.12 requirements under editing the information in an account. • Improved post and comment operations in the Use Case Diagram. #53 • Designed the Use Case Diagram with colorizing and adding new arrows. #55 • Created a class for Post operation for the class diagram. #57 • Updated Scenario #3 after the changes in requirements. • Reviewed class diagram of Account. #67 • Created the sequence diagram of Create Comment on a Post. #72 • Reviewed the sequence diagram of Label edit. #69 • Reviewed the sequence diagram of Create Post. #73

	• Created Project Plan & RAM for Milestone Report #1. #82
Beyza İrem Urhan	• Learned about markdown language • Attended group and customer meetings except Meeting 13 • Created own personal wiki page #3 • Added the link to her personal wiki page to the Wiki's main page #4 • Investigated previous years' repositories. • Reviewed the mock-up drawings in all scenarios <Meeting #11> • Added a repository to the repository research page #12 • Did research about Privacy Policy #16 • Searched example texts to use in privacy policy #29 • Listed the non-functional requirements for privacy policy #30 • Created user scenario & mockup #2: Using Chatbot #35 • Reviewed user Scenario #1 and user Scenario #3 • Reviewed the requirements and checked whether other participants reviewed #42 • Filling Post and Comment Operations Related Use Cases in the Use Case Diagram #53 • Organized the arrows in the middle part of the use case diagram • Class Diagram: Comment Class reviewed #66 • Class Diagram: Account Class created #67 • Sequence diagram: Reviewed the sequence for Searchbar #70 • Sequence diagram: Created the sequence for Account Edit #81 • Updated her personal wiki page adding weekly efforts • Reviewed and updated RAM, also filled my column. (#82)
Hakan Balık	• Attended all internal and customer meetings except for Meeting 11. • Revised markdown language. • Created README page with Berk. (#2) • Created the Repository Research page. (#6) • Researched GitHub repositories. (#12) • Created a custom footer for our wiki page. (#11) • Created my personal wiki page. (#3) • Introduced 4 new labels: State Approved / Blocked / In-Progress / Completed. (#9) • Edited sidebar to keep it up to date. • Opened the Requirements page and created a template. (#15) • Created the research page for Chatbot and filled it. (#17) • Edited wiki home page to keep it up to date. • Filled in the Account Management of User Requirements. (#23)

	• Reviewed the Chatbot Requirements. (#25, #43) • Created the scenario for Using Chatbot and reviewed the related mock-up. (#35, #48) • Restructured Scenarios & Mockups and informed necessary people. (#36) • Reviewed Scenario #1 and Scenario #3. (#34, #33) • Documented Customer Meeting Feedback of first 4 weeks with Yusuf. (#21, #45, #49) • Reviewed and updated Requirements based on customer feedback. (#42) • Worked on use cases depending on Account Operations and Chatbot. (#51) • Attended Meeting 9, where we finalized the Use-Case Diagram collaboratively, initiated Class Diagram studies altogether, and distributed ongoing work of Class Diagrams. • Organized the arrows in the middle part of the use case diagram. (#55) • Created the Class Diagram of Chatbot. (#58) • Reviewed the Class Diagram of Notifications. (#65) • Created Chatbot Usage diagram for sequence diagram. (#74) • Reviewed Editing Account diagram for sequence diagram. (#81) • Reviewed and updated RAM, and also filled my column. (#82) • Finalized sequence diagrams.(#92)
Hatice Erk	• Attended all group and customer meetings. • Researched Markdown language. • Created my personal wiki page. • Updated my personal wiki page adding weekly efforts. • Documented Meeting #1 and Meeting #6 notes. #7 & #39 • Researched Git repositories. • Investigated previous years' repositories. • Created priority labels; Priority: High / Medium / Low. #9 • Researched DBpedia. #18 • Edited Wiki home page and sidebar to keep it up to date. • Listed availability requirements. #27 • Created Scenario #1 for sharing a post. #34 • Created the first scenario's Mockup. • Reviewed Scenario #2 and Scenario #3. • Reviewed the updated requirements. #42 • Updated Scenario #1 after the changes in requirements. #47 • Improved Post and Comment operations in the Use Case Diagram. #53 • Created a class for Message in the Class Diagram. #56 • Designed the Use Case Diagram with colorizing and adding new arrows. #55

	• Reviewed the Class Diagram of Post. #57 • Researched UML sequence diagrams • Created the Label Edit Diagram as a Sequence Diagram. #69 • Reviewed the Create Post Diagram as a Sequence Diagram. #73 • Created Project Plan & RAM for Milestone Report #1. #82
Mustafa Berk Turgut	• Attended all group and customer meetings. • Researched Markdown language. • Examined previous years' repositories. • Created my personal wiki page. Updated my personal wiki page with my weekly efforts. • Researched GitHub repositories, and added TensorFlow to our Research page. • Co-created README.md with Hakan Balık. #2 • Took the meeting notes of meeting #4, the meeting held to realize Scenario #3, and meeting #13. • Listed requirements for 1.1.3: Interactions Between the Users for the project. #22 • Contributed to the creation of Scenario #3. #33 • Added the recent items and arranged the ordering of the Sidebar of our Wiki to make it more concrete. • Reviewed the updated Requirements. #42 • Introduced 1.2.5: Notifications and implemented multiple updates in the Requirements page after the meetings, diagrams, and customer feedback to keep it up-to-date. #50 • Held a 1h meeting with Erdem to review issue #52: the Home Feed class for the class diagram. #61 • Created the Notifications class for the class diagram. #65 • Reviewed the sequence diagram of chatbot usage. #74 • Created the sequence diagram of a notification induced by the creation of a post. #77 • Updated the naming convention of the titles of the meeting notes and therefore the links in the Main and the Home pages of our Wiki that direct to the meeting notes. #84 • Reviewed the Diagrams and implemented the changes mentioned in the issue. #85 • Listed and reviewed parts 4 and 5 of the Milestone Report with Yasir. #90
Bedirhan Pamukçuoğlu	• Attended all group and customer meetings. • Learned the basics of Markdown language.

	• Created my personal wiki page. #3 • Researched GitHub to find a repository for the repository research page. #12 • Made research about W3C, created a wiki page for it, and filled it with basic information related to W3C and its standards. #19 • Listed the non-functional requirements for Reliability. #28 • Reviewed Scenario #2 for Using Chatbot and worked on its mockup. #35 • Reviewed Scenario #1 and Scenario #3 and made small notifications for consistency. • Updated Scenario #2 so that it follows the updated requirements. #48 • Worked on the Use Case Diagram collaboratively with all team members. • Reviewed the Class Diagram of Searchbar. #59 • Designed the Class Diagram of Label. #60 • Reviewed the Sequence Diagram of Report Content. #71 • Created the Sequence Diagram of Admin Label Creation. #75 • Prepared the Requirements, Scenarios, and Mockups part of the Milestone Report. • Reviewed RAM and filled my work.
Yasir Dikbaş	• Attended all internal and customer meetings except for Meeting 6. • Conducted research on markdown languages. • Created my personal wiki page (#4). • Researched popular repositories and summarized OpenCV Repository Research page (#12). • Took and uploaded our team's photo to our readme page. • Conducted research on privacy policy and presented a slide during the meeting. • Created a listing of interactions between users on the requirements page (#22). • Reviewed the Requirements page but especially interactions between users and forum. • Reviewed "reviewing a post on forum", Scenario #3. • Worked on mock-up about patient sharing a post Scenario #1 (#34). • Worked on use cases with my team and successfully created all of them. • Created the Class Diagram of Report (#63). • Reviewed the Class Diagram of Chatbot. (Meeting notes #9). • Reviewed organization.(Meeting Notes #8). • Created Post Edit diagram as a sequence diagram. (#76) • Reviewed Admin Label Creation diagram for sequence diagram(#75) • Filled my column on RAM and reviewed it.(#82) • Created Milestone Report's items 4&5(#90) • Tracked my weekly effort and documented it on my personal wiki page.
Yusuf Erdem Nacar	• Attended all group and customer meetings. • Took notes for meeting #7 and meeting #12. #46, #80

	• Researched Git. • Researched GitHub flavored markdown language. • Researched GitHub repositories. #6, #12 • Created personal wiki page. #3 • Updated weekly efforts table under the personal wiki page weekly. • Designed the sidebar of the wiki. #5 • Researched DBpedia. #18 • Created an issue creation guide. #20 • Listed the requirements for 1.2.2 Forum for the project. #24 • Added the Type labels: Documentation, Wiki, Research, Enhancement. #9 • Edited the labels to make them more distinguishable. #9 • Contributed to the creation of Scenario #3. #33 • Reviewed and updated the requirements for 1.2.3 Chatbot. #25, #43 • Contributed to the requirements for 1.2.5 Notifications. #50 • Added the requirements for 1.1.3.2 Reporting. #44 • Updated the whole requirements in accordance with the feedback. #40, #42, #52, #68 • Contributed to documenting customer meeting questions and answers. #45 • Contributed to the account operations cases in the use case diagram. #51 • Reviewed the use case diagram as a whole. Meeting • Created the home feed class for the class diagram. #61 • Reviewed the post preview class. #64 • Created the content class and contributed to the post and comment classes. Meeting • Contributed to the user classes for the class diagram. Meeting • Reviewed the class diagram as a whole. Meeting • Researched UML sequence diagrams. • Created the creating a post sequence diagram. #73 • Contributed to creating a comment sequence diagram. #72 • Contributed to reporting a content sequence diagram. #71 • Contributed to the notification sequence diagram. #77 • Reviewed all sequence diagrams. Meeting • Wrote the executive summary part for the milestone report. #83 • Wrote the evaluation of tools and processes part for the milestone report. #83 • Finalized sequence diagrams. #92