2020-2021 SPRING SEMESTER

CS319 - Object Oriented Software Engineering

Peereview Final Report

Group 1B Members

Abdul Razak Daher Khatib	21801340
Muhammad Salman Akhtar Soomro	21701446
Ege Moroğlu	21401240
Utku Gökçen	21703746
Yiğit Dinç	21704275

1. Introduction

The current state of the implementation is near complete. All of the major features of the system were implemented, from creation of the courses, groups, and projects, to the grading and evaluation. The visualization, however, has not made much progress and the User Interface could be improved if the time allows. We implemented the system as intended and reported using the practices and design patterns that we learnt in class, and successfully finished the web application. We had to learn and implement the .NET framework and start implementation as soon as we submitted our second iteration of the reports. During this we made use of GitHub and different IDEs with various tools in them. We had to distribute the work between the five of us even though none of us had experience with the framework and learn it, we were able to do that and the distribution was successful with every member implementing their work. We cooperated and helped each other in different aspects of the program despite the lack of experience and because of this team work we could do it. Additionally, throughout the semester we were open for new ideas and kept our ears open for any idea, and then we added it to the project. Overall, the experience was a success with us learning the tools from the internet and each other, and cooperating to overcome any difficulty.

2. Lessons Learnt

Early stages of project development was mainly focusing on how a project is built, thus, we had the chance to describe our goals in terms of project management, planning, and controlling. After a while, the flow of the course led us to consider an application as a solution to a given problem base. In that sense, working with different people in the same problem is not something that is easily adaptable. Moreover, different ideas bring different challenges which is actually a part of working with different people. Then, this process changed us to be more adaptive, reflexive, and supportive that is the basis for a healthy team relationship. Since we did not know each other before the project we needed to get used to each other before we started working, which we did very fast. Weekly Zoom meetings and continuous report writing were our silent supporters in terms of the project development. During the design reports we had to design the application, discuss it, refine the ideas and then visualize them using the UML diagrams that we learned. This was very time consuming to say the least and required a great amount of communication and cooperation. For the coding part, we have started quite early with the help of GitHub, a tool that allowed us to work continuously on discrete times. The application is a C# web application, which we implemented using ASP.NET framework. That was a problem since none of us ha experience with C# and the name framework. Hence, in addition to GitHub, we had to work very well using C#. This was not the only challenge, since we wanted to prepare a web application, we should know how a web application works, how to maintain a server and how to connect it to a database, which is

a completely another level of problems. In the end, because of our wants and aims we are also required to learn HTML, CSS, DataBases in addition to C#, ASP.NET, and GitHub tools. In summary, we faced a lot of challenges and had to learn a lot to implement the project. We worked together as a group with mutual respect and without a leader to give everyone's opinion equal weight.

3. User's Guide

After a simple login process, the user is taken to the main page where all the important information is displayed.

For the students, it's the assignments, courses, evaluations, and the evaluate button. There is a multi-purpose navigation bar which can be used to search in the website, go to the home page, display notifications or use the dropdown menu. The dropdown menu can be used to access

- Profile
- Courses
- Evaluation
- Assignment
- Groups
- Grades
- Signout

While for instructors, only the assignments and courses are displayed on the main page and the navigation bar has the same functionalities except the dropdown menu which displays the following:

- Profile
- Courses
- Assignment
- Signout

3.1 Log in

When users first open the app, they must choose whether he is a student, instructor or teaching assistant. Then, after entering the necessary information to register for the application, they can log into the application from the login page.

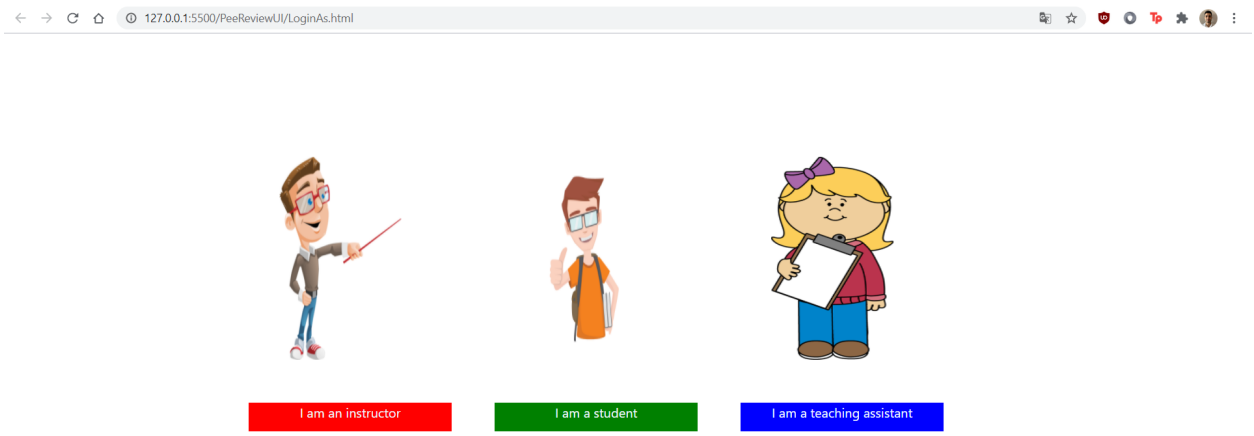

Figure 3.1.1 Login As Page

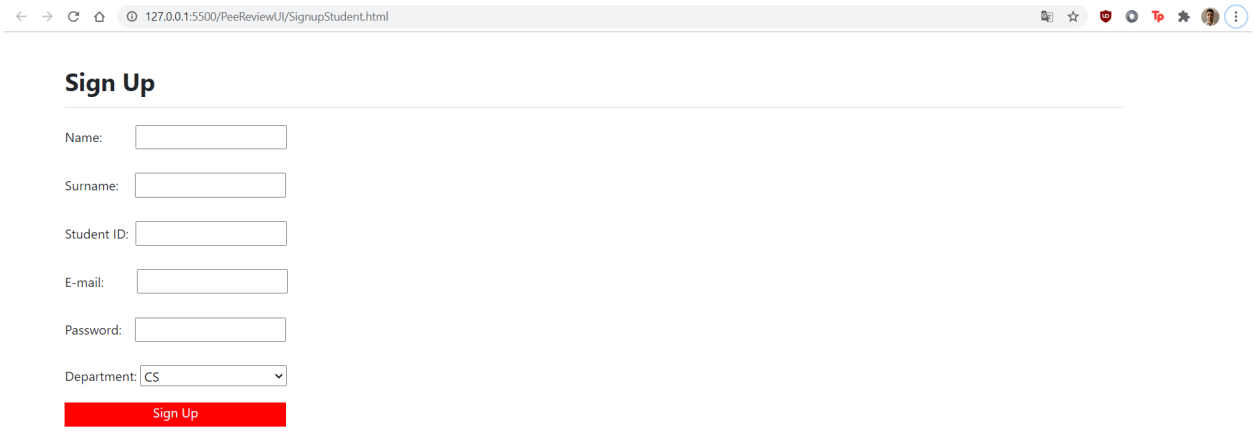

Figure 3.1.2 Sign Up Page For Students

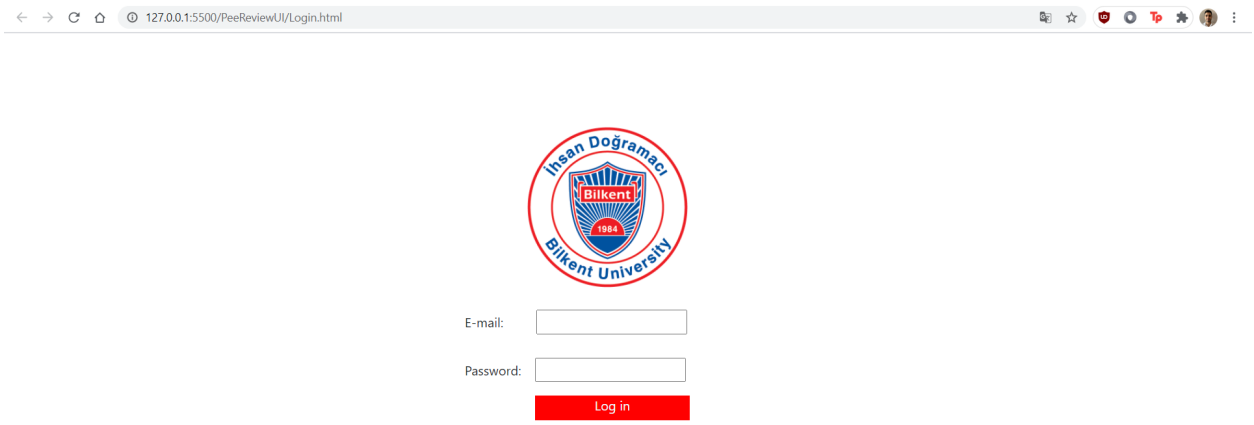

Figure 3.1.3 Login Page

3.2 Main Page

On the home page, if the user is an instructor or teaching assistant, they can view their courses and assignments. They can also access their profile in addition to courses and assignments by clicking the "My Profile" tab after clicking the menu icon in the upper left corner. If the user is a student, they can see their evaluations different from instructors and teaching assistants in Figure 3.1.1. They can also access their group pages and grades pages from the menu in the upper left corner.

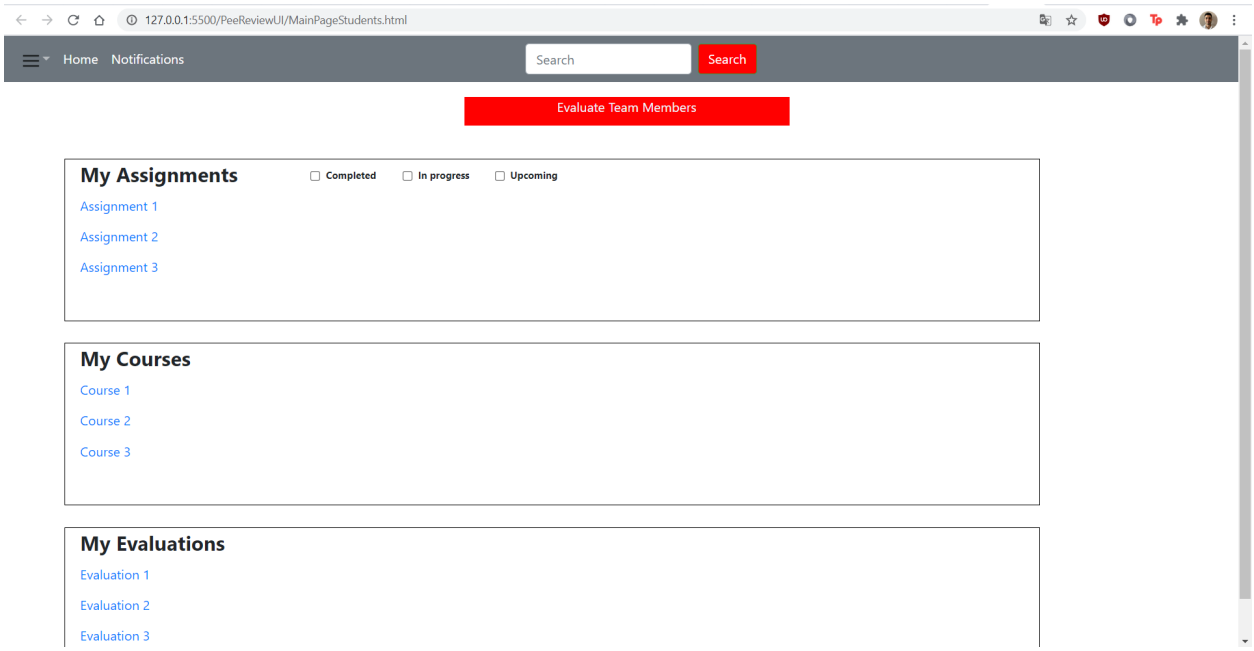

Figure 3.2.1 Main Page for Students

3.3 Evaluate

3.3.1 Evaluate Team Members

Students click on the "Evaluate Team Members" button in the Figure 3.2.1 and go to Figure 3.3.1.2 where they will select the assignment they want to evaluate. Afterwards, they select the assignment they want to evaluate and go to Figure 3.3.1.3. On this page, there are evaluation criteria for assignments and students can give points to their teammates based on these criteria, write a note about the relevant criteria and click the "Evaluate" button to finish the evaluation process. In addition, if the assignment is completed, students can access the page where they can evaluate their team members by clicking the "Evaluate Team Members" button in the Figure 3.2.1.

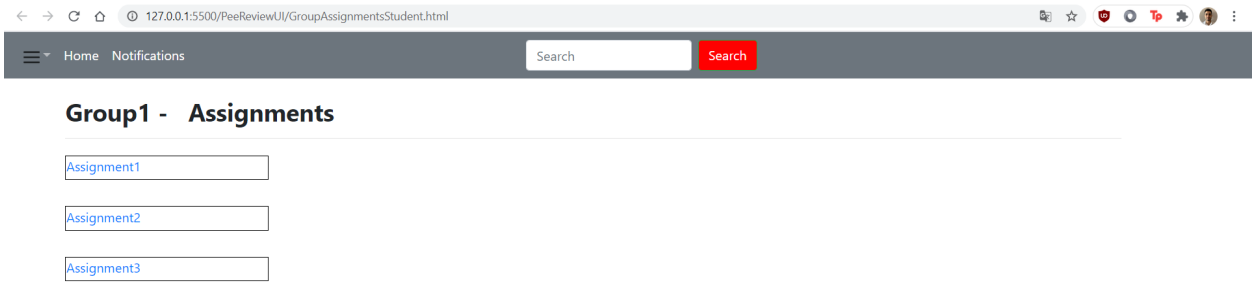

Figure 3.3.1.1 Group Assignments Page

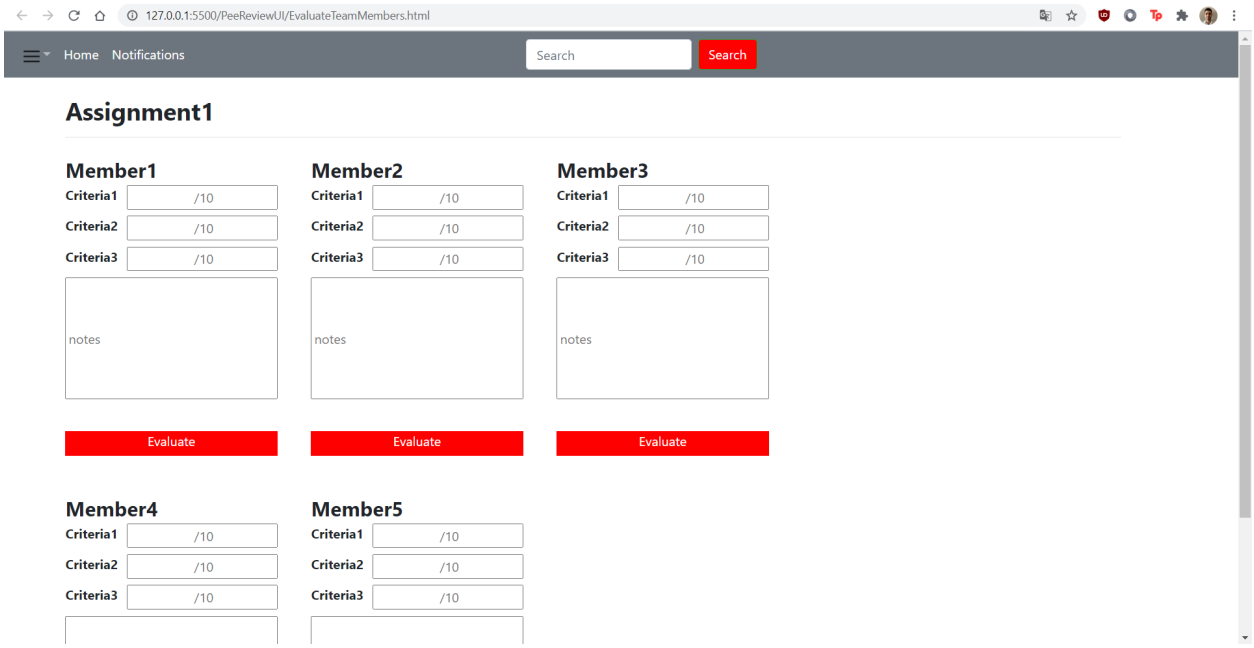

Figure 3.3.1.2 Evaluate Team Members Page

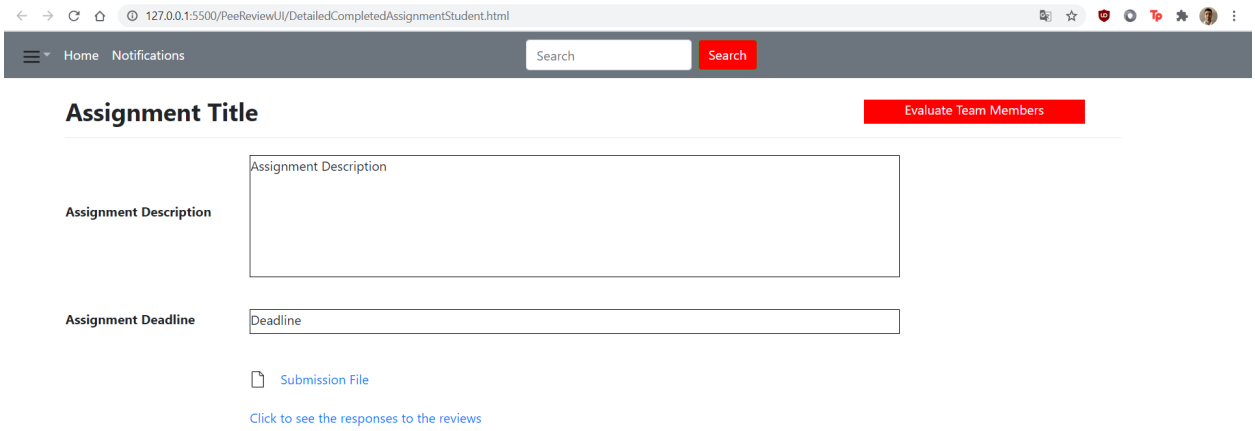

Figure 3.3.1.3 Completed Assignment Page For Students

3.3.2 Evaluate Other Groups

In order to go to the page where students can evaluate other groups, they should first go to the course page of the relevant group, click on the group's name and click on the "Evaluate" button on the selected group page. An alternative way would be from the main pages where the students see their projects and can click on them and then visit the groups page from there. Students can see the description of the relevant assignment, submission file and related criteria on the evaluation page. They give points to other groups based on these criteria, write a note

and press the "Submit" button to finish the evaluation process. In addition, by clicking the "See responses to the reviews" button on this page, they can see the responses to their evaluations, respond to these answers, and also discuss this issue on Slack by clicking the "Discuss in Slack" button. Afterwards, the instructor is capable of viewing every evaluation and its author, while students won't be able to do so.

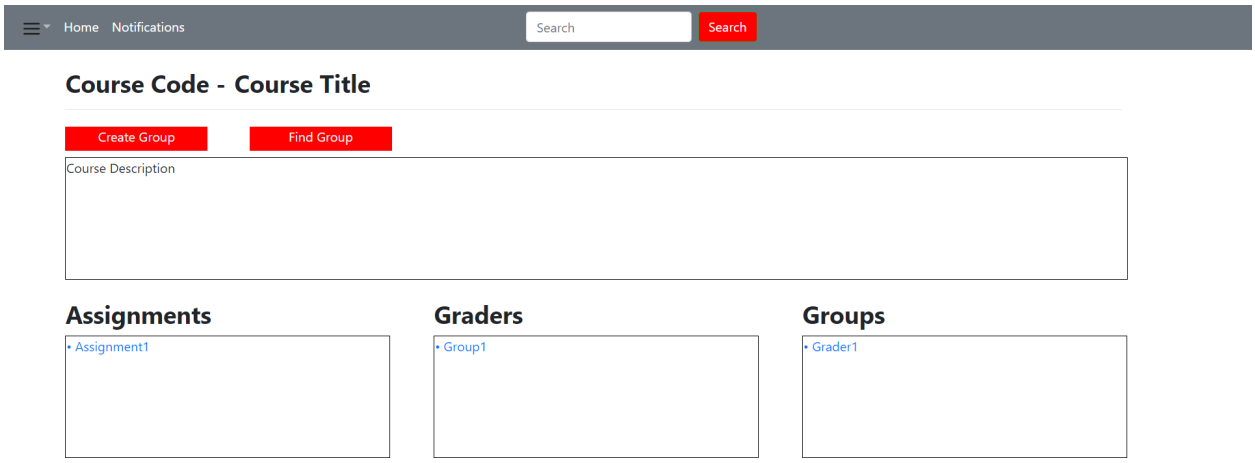

Figure 3.3.2.1 Course Page

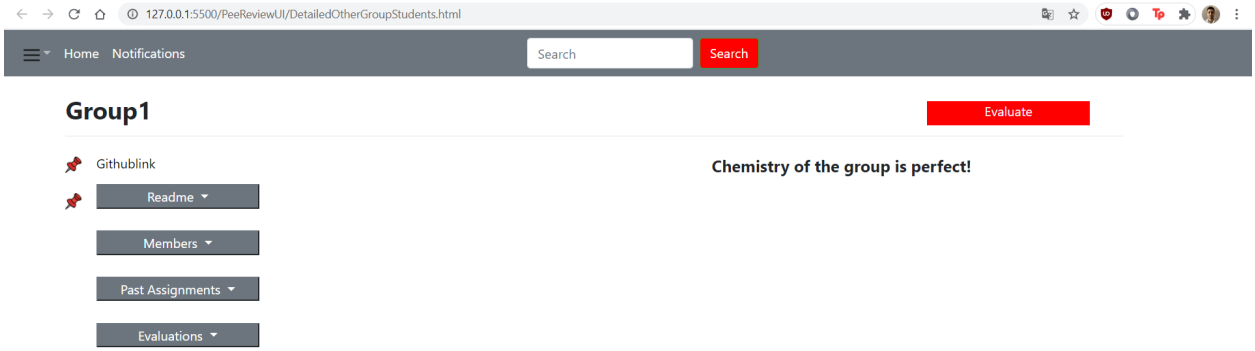

Figure 3.3.2.2 Other Groups Page

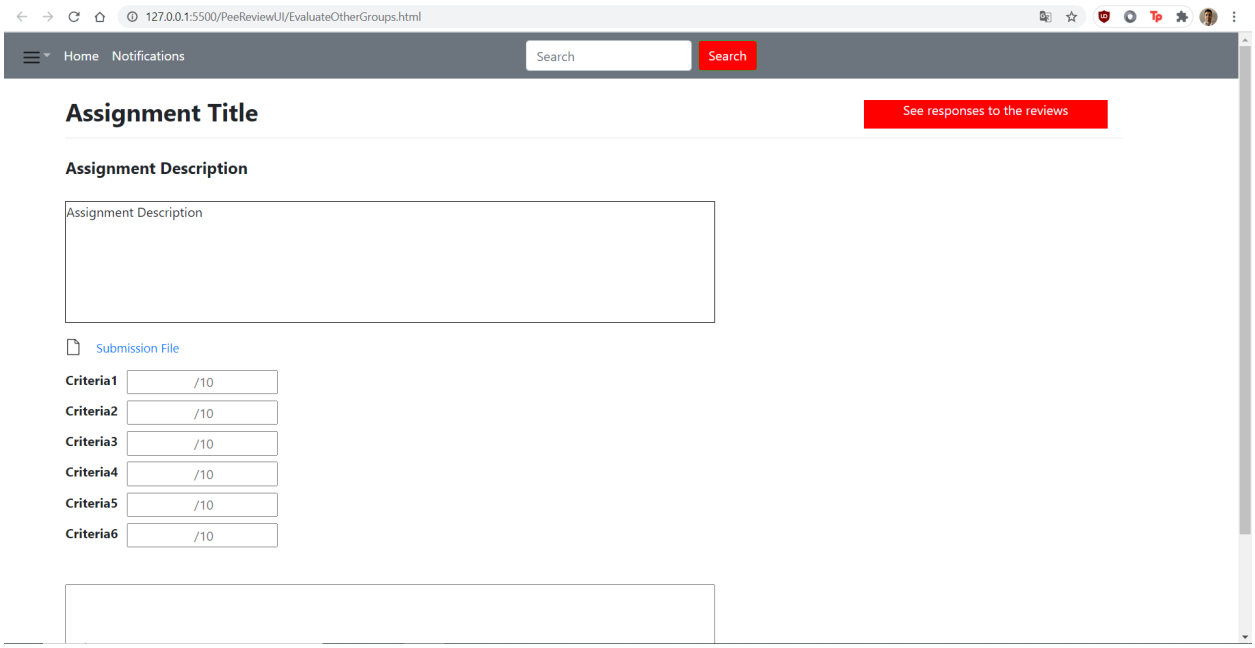

Figure 3.3.2.3 Evaluate Other Groups Page

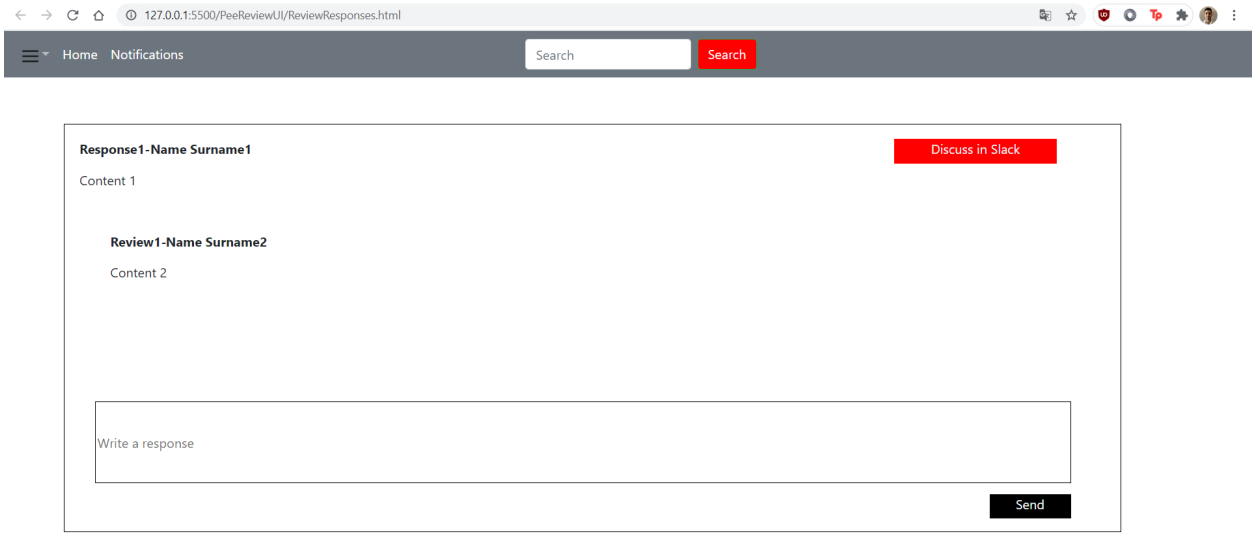

Figure 3.3.2.4 Review Responses Page

3.4 Assignments

3.4.1 Submit Assignment

In order to submit an assignment, students first access the Figure 3.4.1.1 which is the relevant assignment's page. Then they upload the assignment they want to submit by dragging

and dropping or using the file browser. Then click the "Submit" button to finish the submission process.

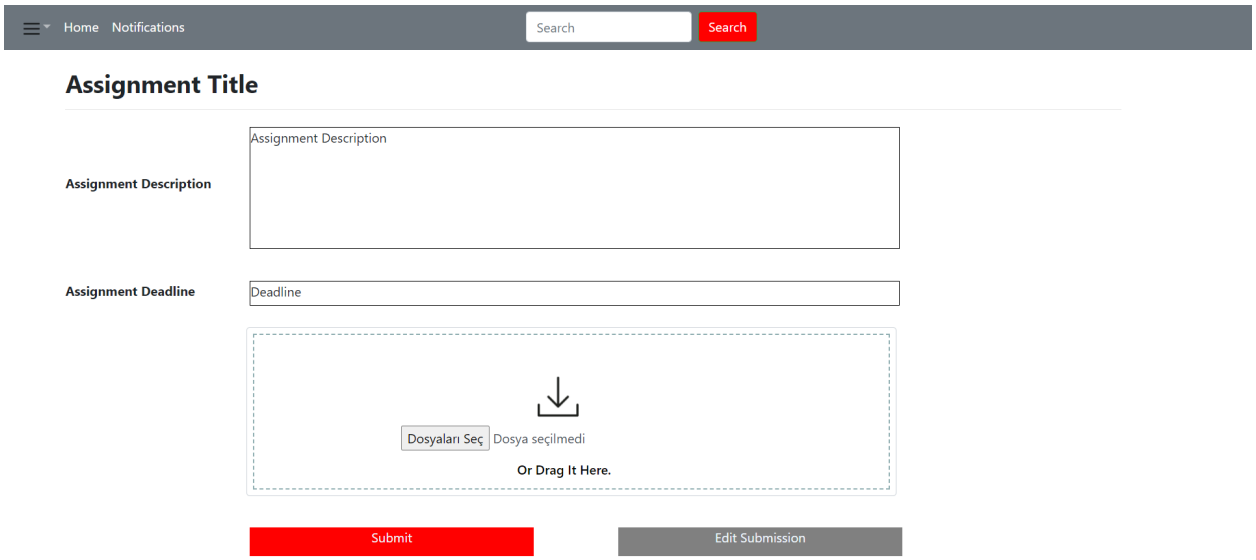

Figure 3.4.1.1 In Progress Assignment Page

3.4.2 Grade Assignment

After the assignment is open and submitted, the TAs and Instructors can grade the assignments according to different criteria and can leave their notes for the students to learn from them. We also attach the next iterations to the first one which help the students see the change of their grades. For graders, more than one of them can garde a submission and then the average is calculated if this way of grading is chosen.

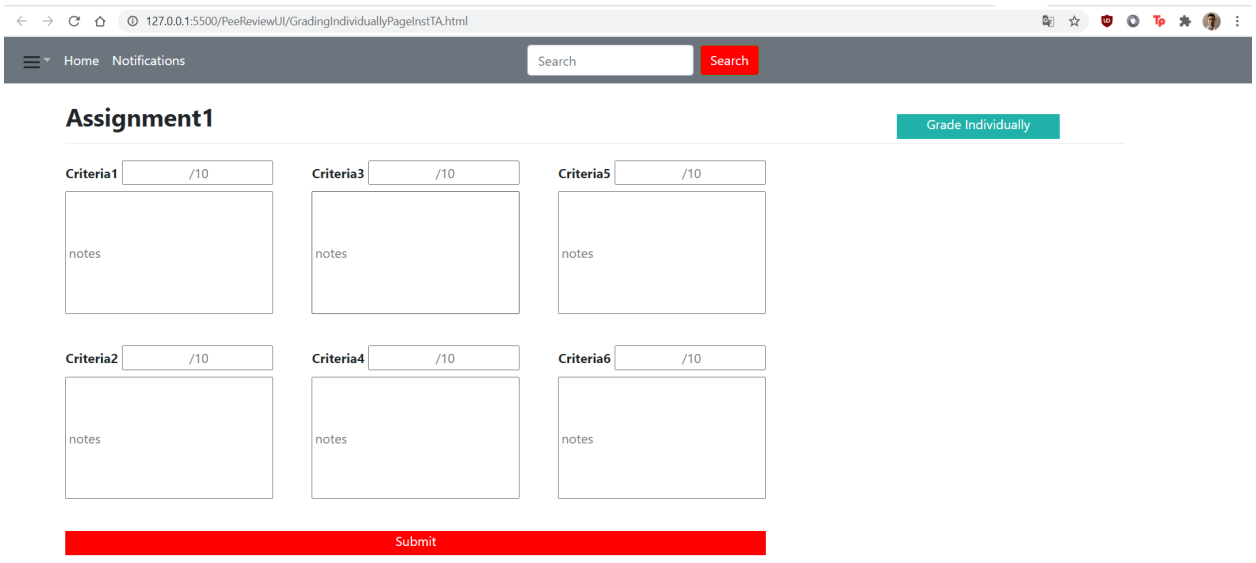

Figure 3.4.2.1 Grade Group Page

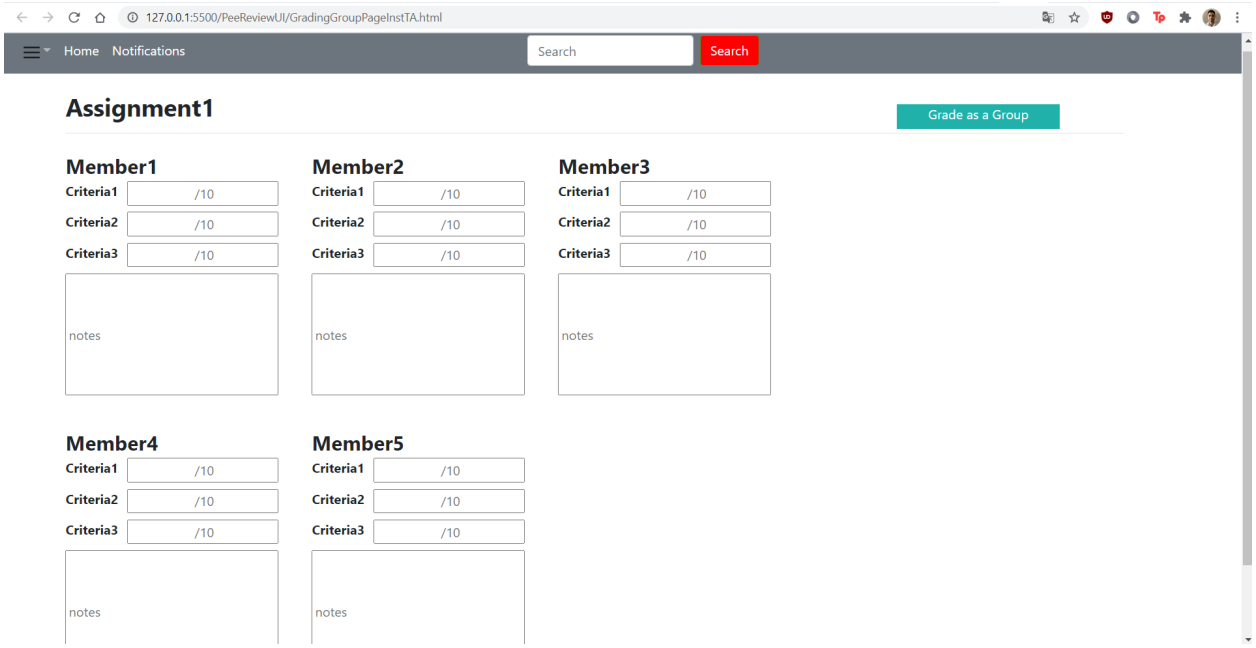

Figure 3.4.2.2 Grade Individually Page

4.1 System Requirements

- Since this is a web application any computer can run the application.
- The computer needs to have windows/linux type of software system.
- The computer should be able to connect to the internet and have a web browser.

4.2 How to Install

4.1.1 Clone from Github

- Project repository can be accessed through the link: https://github.com/egemoroglu/CS319_Project
- Clone the project via command line, bash or download the zip file.
- Open the project on an C# IDE with a compiler.

- Install required packages, MongoDB.Bson, MongoDB.Driver, .NET v4.8.
- To access the server credentials are needed.
- Run the solution

4.1.2 Connect Using the webpage

- User may use the application via navigating to the URL: http://www.peereview.xyz/

4. Work Allocation

Yiğit Dinç: Made Class diagrams for reports. Coded the missing parts in the program. Prepared the website, and database. Wrote the connection between database and application.

Abdul Razak Daher Khatib: Mainly: Code architecture and design, UI sketches design, Sequence, State, and Activity Diagrams, coding the models and controllers. And partially, like everyone else, reports writing and editing and helping in various aspects of the coding.

Muhammad Salman Akhtar Soomro: Made the State and Activity diagrams for the reports. Worked on UI using html and wrote the reports with everyone else.

Ege Moroğlu: Designed the Use Case diagram, help on UI of the project, help on database of the project, writing the reports as everyone

Utku Gökçen: Designed the UI of the project, coded the UI of the project, designed the Component Diagram and Subsystem Services, helped to make State and Activity Diagrams, helped to coding models and wrote the reports as everyone.