

# Reflection Report for Product-Based Assignments



Link to website: [CourseRater](#)

Link to video demonstration: [YouTube-video](#)

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Group Number: 24

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# 1. Introduction

Being a student is hard. Organizing school, jobs, social life, sports, personal time and sleep can be a constant struggle that will drain anyone. As students at NTNU ourselves, we understand this all too well, and we wanted to help make life easier. We recognized a common problem faced by many of our peers each semester; Choosing courses. When a student at NTNU picks his courses for the semester, he is presented with university provided guides. Limited filtration and unintuitive course codes makes these guides difficult to navigate. They also provide no information from students that have previously taken the course, and instead prioritizes praising words from the course's lecturers. Especially exchange students often lack the social connections to attain student provided information about courses. Maybe the system had some room for improvement?

Our idea was to supplement the strenuous university provided systems, with a more user friendly and informative one. This would be done by developing an app that could assist students through the utilization of a rating system. The rating would cover the overall satisfaction of a course, and would be provided by previous attendants. By taking advantage of the insights and experience of past students, new students can save time and effort on a task that is way more demanding than it should be. The app would make valuable information available to everyone, completely free, and provided by the common good.

We named the app “CourseRater”.

## **2. Reflection on the project management effort**

Throughout the course of a project it is important to reflect upon the project management efforts. This is to identify what went well, and what didn't. The project group will evaluate their own efforts in group organization, risk management, communication, and success criteria.

### **2.1 Roles and organization**

While organizing the project group, the team was focused on collaboration and equal distribution of responsibilities. The lack of hierarchy in the group is viewed as one of the team's strengths since it encouraged collaboration and cooperation between team members. Everyone was assigned the primary role of developer, and got a secondary role as either quality evaluator, social manager, meeting coordinator, referent, or scrum master. This helped each team member commit to their responsibilities and to ensure that the project progressed smoothly.

Another strength was that these secondary roles were mostly chosen based on the individual team members preference. By allowing each member their preferred area of management, it helped boost team productivity and morale.

Although the lack of hierarchy made collaboration between group members easier, it also made the decision-making process difficult to handle. The social manager was responsible for resolving conflicts related to the team, but in the case of project-related conflicts, no one had the final say in the decision-making. In one case regarding the user interface, the team was split between two layouts. The discussion dragged on before it ended in a compromise, which left some of the team members unsatisfied. Consequently, the team will implement a clear conflict resolution process early on in future projects.

## Distribution of roles

Team member	Role
10214	Developer, Quality evaluator
10042	Developer, Social manager
10146	Developer, Meeting Coordinator
10039	Developer, Referent
10020	Developer, Scrum master
10236	Developer, Coordinator
10234	Developer, Quality Evaluator
10048	Developer, Meeting coordinator
10200	Developer, Social manager

## 2.2 Risk management plan

The risk management plan was an effective and crucial part of the project, since we outlined the potential risks associated with the project and how to mitigate them. Here is an analysis of the successes and challenges encountered, along with potential explanations.

- **Spending too much time developing parts of the application:** When starting the project, we managed to break the product development into user stories with time estimations. These user stories were prioritized according to the team's interests. Minor setbacks occurred during the project's development, such as creating the log-in functionality. We didn't like the outcome, so we worked on the task until we obtained a better result that featured email services and a more user-friendly UI. The process was well monitored by the team and the delay was minor.
- **Gaining enough user data to provide value to students:** By conducting user testing, our course database grew to an acceptable level. However, the user data collected may not represent all study programs. The fact that all team members hail from the same study program, hindered our ability to connect with students from other programs, resulting in less variety of courses and reviews available in the app.

- **Efficient communication between group members during the development phase:**  
Having frequent meetings contributed to a structured work environment and facilitated communication among team members, with help from digital tools like Github and Messenger. In some instances, communication was unclear, causing misunderstandings and misinterpretations of wanted outcomes. There were cases where too much traffic in the messenger chat led to people missing critical information.

Overall, the risk management plan was effective at addressing potential risks. There were challenges that occurred during the process, such as easter vacation and a field trip, that we did not account for. This resulted in reduced communication and progress for a while. In the future we would like to adjust time estimates according to progress, establish a more suited method to gather unbiased user data, and utilize a communications channel more fitting to a development project.

## 2.3 Communication plan

Our communication plan proved to be effective in many ways: We had two meetings per week to help the team maintain a consistent workflow and address any concerns at a timely manner. However, some tools were implemented during the project development phase, and the implementations are discussed in the following paragraphs.

The team agreed early on to use Scrum as an agile project management tool. This provided the team with a structured project approach that facilitated clear communication and efficient progress tracking. The creation of user stories ensured fair delegation of tasks, and accurate progress tracking during the project. The use of Google Drive for data sharing ensured that all team members had access to up-to-date information. Github was used for storing and sharing the application code, by creating a repository available to all group members. Github also kept track of what everyone was working on. Messenger by Meta was utilized to update team members with urgent and important information through a group chat.

## 2.4 Success criteria

On-Time completion was the most important success criteria for our team during development. Making sure that projects are delivered within the agreed-upon timeline, requires well-structured project-plans and effective communication among team members. Another success criteria was the project's completeness at delivery. Delivering a non-finished product indicates poor planning. Utilizing Scrum allowed us to break down complex tasks into smaller, manageable user stories. Based on previous experience, Scrum has proven to be very effective at ensuring deadlines are met, and helping the team prioritize key-features during product development.

The team feels the project management has been mostly successful. We managed to organize, communicate, and develop plans according to how we wanted the project to develop. Our biggest flaw concerning the project management effort, was related to the communication between the team and potential stakeholders. It was the responsibility of the coordinator to follow up on stakeholders, but not until the team had decided who to contact. This was never done and resulted in less input from interested parties than we would have preferred. We therefore evaluate the project management effort at “Agree” and not “Strongly Agree”.

### **We evaluate our project management effort as successful:**

Scale	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Your response				X	

### **3. Evaluation of the impact**

In evaluating CourseRater's impact, it is essential to focus on the target audience and the quality of the final product. Our findings are based on user feedback and testing, which highlight the platform's areas of improvement to ensure user satisfaction.

#### **3.1 Target audience**

As a digital platform designed to offer a comprehensive overview of academic courses, CourseRater caters primarily to a target audience of students. CourseRater helps students find courses that match their academic goals and interests, while giving them an idea of the quality of different courses before they enroll. This knowledge is particularly useful for exchange students and other new students that don't have the required network or contacts to obtain an honest assessment of a course. Another potential audience could be professors or university administrators interested in obtaining anonymous feedback on their courses, as well as education researchers who could use the data to study trends in course quality.

#### **3.2 Quality of final product**

To assess the quality and feasibility of this platform, we conducted a digital survey. We provided access to the website to a sample of university students and requested feedback on various aspects of the platform.

Our study indicates that CourseRater is a practical and effective tool for students who wish to make well-informed academic decisions. The results showed that a significant proportion of respondents, over 80 percent, recognized the importance of grading history. The majority of participants also found the features provided by CourseRater to be highly advantageous in selecting courses. In particular, more than 70 percent of the respondents acknowledged that the presented ratings had an impact on their decision-making process.

Moreover, our survey demonstrated that CourseRater is a timely and necessary solution for providing up-to-date information about both course history and quality. By enabling students to access and contribute to this platform for course rating, CourseRater empowers students to make informed decisions that better align with their academic goals and preferences. The collective



findings lead us to conclude that the product exhibits satisfactory quality, thus defining it as a success. The complete results from the survey can be found in section 9.3.1.

Additionally, we conducted user tests to evaluate the usability and effectiveness of the platform. These tests involved presenting users with various tasks to complete on the platform and observing their behavior and collecting their feedback. The results were generally aligned to the results obtained from the survey, and can be found in section 9.3.2. All given feedback has been noted and will be taken into consideration in future development.

Conducting a digital survey has its advantages, but also its disadvantages. On the positive side, surveys can provide valuable insight into the experiences and perceptions of a representative sample of students. This data can be used to improve the platform by helping identify the platform's strengths and weaknesses, which can guide decision-making and resource allocation for future development. However, there are some disadvantages to consider. Self-reported data from surveys might be biased and inaccurate. Furthermore, because not all users opt to engage in surveys, they may not capture the full spectrum of user experiences or viewpoints. As a result, while surveys may be a valuable tool in assessing platforms like CourseRater, they should be interpreted with caution. This concern was a contributing factor in our choice to incorporate user-testing as well.

Reflecting on our experience, having two surveys—one before and one after CourseRater's implementation—would have provided more accurate insights into users' needs and the platform's effectiveness. A pre-implementation survey would have helped tailor the platform to the users expectations, while a post-implementation survey would have evaluated its performance. Comparing the results of both surveys would have identified discrepancies and informed improvements, ensuring the platform better met the target audience's needs. As such, we only somewhat agree with the claim below.

**We evaluate the quality of our final results as outstanding:**

Scale	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Your response				X	

## **4. Factors that have contributed to success**

Reflecting on the factors that have contributed to the success or failure of a project is an essential aspect of the learning process. It provides an opportunity to identify strengths and weaknesses, and to understand how different factors have influenced the outcome of the project. By delving deeper into the project management and process, we can deduce the success factors that have impacted our project. When reflecting on these factors, we will hopefully gain a deeper understanding of what went well and what didn't, so that we can use this knowledge to influence future projects.

### **4.1 A thorough pre-work assessment.**

Before embarking on this project we had to make sure that all the team members were on the same page when it came to project objectives, internal roles and process. Therefore, we postponed the development of the project to make time for creating a framework of how we wanted our service to work. Agreeing on ways of communication, setting weekly meetings, and giving the team members different roles have ensured that misunderstandings are kept to a minimum. This has also prevented the progression from slowing down. In the pre-work assessment we defined expectations within the team to prevent friction between team members, and to ensure that one should feel like they are doing more work than others. The only time we deviated from the agreed upon plan was during the field trip and easter holiday where team members were spread across Europe. This made the weekly meetings hard to coordinate, but as the preparatory work was so good everyone knew their role and could work remotely on their assigned tasks. The team agrees that sacrificing initial progress to set these guidelines have been a key factor in the progress and success of the product.

### **4.2 Understanding of market and user base**

Understanding the market and user base is crucial when developing a product as it helps to ensure that the product meets the needs of its intended audience. As the team is a part of the potential user base of the product, we have insight into the market and understand the target user's wants and needs. This ensures that developers can design a product that is more likely to be successful. Understanding this has enabled us to guide decisions around product features and

user interface design. Having a clear vision of what we want to achieve with this product is essential for progress. Obtaining insight regarding the market and user base provides the team with a common path towards the end goals.

### 4.3 Flat structure and subgroups

In the pre-work assessment the group made a conscious choice not to include a rigid hierarchy structure. This means that although everyone in the team had different roles, no one had more say in the decision process than others. This ensures that everyone gets heard and that all the decisions are backed by the majority of the team. This flat structure is made possible by the fact that the group consists of only nine team members and the fact that the communication within the team was good. We also decided to divide the team into subgroups. The subgroups were based on different elements of the programming task at hand. Dividing the team enabled a much faster workflow and provided the team members with a deeper understanding of their individual tasks. On the other hand this structure demands good communication between subgroups, but due to the number of teams we found this easy to coordinate.

### 4.4 Skilled team members

The project team should be composed of members with the necessary skills and expertise to carry out the project tasks. As all of the team members have experience with web development projects either through school subjects or side projects, we all had an understanding of what was required. Not every member of the group possesses the same level of expertise, but we all have the same fundamental knowledge. Exchanging knowledge between team members saved a lot of time, which furthered development.

When we look at the success factors listed in the textbook we see that many of the principles coincide with the ones we have listed. Our team spent a considerable amount of time formulating a common understanding of what we want to achieve and how we would work to achieve this. Especially through the pre-work assessment and the understanding of the market we built loyalty and respect between team members which are values listed in the textbook as fundamental for motivation, creativity and cooperation. (Hussein, 2016, s. 74)

## **5. Most important lessons from your project**

The choice of idea can be crucial for the success of a group project. All team members need to understand the problem and perceive the solution as viable. Lack of belief or investment in the solution can lead to demotivation and subpar outcomes of the project. CourseRater emerged from a shared struggle to navigate subjects and choose which to attend. This common struggle fostered shared ownership, commitment, and motivation within the team. Belief in the idea helps overcome challenges and setbacks. Our advice to students is to spend time finding an idea that resonates with the team while still considering end-user needs. This can involve brainstorming, researching existing solutions, and discussing potential ideas among the team members.

When starting a group project, it is important to establish a framework that is specialized for product development. Frameworks provide a set of guidelines and best practices that help ensure that the project is executed efficiently and effectively. They are designed to aid communication and improve the project process as a whole. By agreeing on a framework, the team can establish a shared understanding of how the project will be managed, how decisions will be made, and how progress will be tracked.

Our team found that using a framework was particularly useful in avoiding misunderstandings and other elements that can slow down progress. When everyone is working from the same playbook, it is easier to stay aligned and avoid conflicts or confusion. The framework we chose helped us to establish clear roles and responsibilities for each team member, set timelines and deadlines, and establish a system for feedback and decision-making. This helped us stay on track and make progress towards our goals.

## 6. Reflection on learning and unlearning

Upon reflecting on the entire process of our project assignment, we have identified various aspects of project work that we have had to learn, as well as some that we had to unlearn. This was necessary to effectively address the emergent needs and challenges that arose during the course of the project. Below is a list of knowledge, practices and attitudes that have been gained during our work.

### 6.1 Communication skills

Due to the lack of hierarchy within the group the layout of the application was not formed by one person but by all members. As mentioned in *section 2.1*, during the development of CourseRater, the challenges that occurred were usually related to the design and functionality of the application. Therefore, in order to reach an understanding between all the members, being able to express our own desires while also taking time to consider other suggestions and points of view was important. Good and effective communication led to fewer conflicts later on and was crucial in ensuring that the development process proceeded smoothly.

### 6.2 Technical skills

The members of the group are fairly competent when it comes to developing web pages and applications. However these can be created by using many various programming languages. Some aspects regarding the technology stack that was used in order to create CourseRater were unfamiliar. An example of a new type of programming tool we had to learn is Firebase. Firebase stores the data regarding both users and ratings and is necessary in order to make the application work properly. In conclusion it was necessary for the team to obtain more knowledge on how to use unfamiliar technologies.

### 6.3 Effective work methodology

In order to ensure that the CourseRater application ended up the way it was intended, the group decided to work in accordance with the Scrum framework. However the group members found it difficult to arrange daily meetings throughout the project because of differences in time schedules. As a result, longer weekly meetings were arranged instead. The shift to longer weekly

meetings forced the group to develop strategies to maximize the productivity of each meeting. This experience taught the group members the importance of effective time management in project development. The group also learned that adapting to already established work methodology is a vital aspect of project management.

#### 6.4 Availability of source material

In order to be able to add courses to the webpage, our group decided to use public source material from an open API (application programming interface). In other words we had to rely on material produced by someone else. During the final phases of the project work this material suddenly became unavailable. As a result we had to come up with a different solution in order to be able to apply the desired functionality to the webpage. From this we learned that in order to maintain control over the project we have to be certain that the source material we use will be available in the foreseeable future.

#### 6.5 Collaborative thinking

During our project, we had to unlearn certain attitudes and practices that were no longer helpful for the team's efficiency. One common belief that we needed to discard was the idea that our own experiences and perspectives were always the most valid. This can lead to group members being blinded by their own ideas. Instead, we found greater success by adopting the scrum methodology, which emphasizes the importance of considering diverse viewpoints. This approach required all team members to be open to alternative perspectives and work collaboratively to find the best solution to emergent issues and challenges that arose during the project. By doing so, we were able to overcome obstacles and achieve our goals more effectively.

#### 6.6 Teamwork

Another attitude that we had to unlearn during the project was the belief that we could handle every challenge on our own. Instead, we recognized the importance of working collaboratively as part of a team. By doing so, we were able to utilize each other's strengths and overcome challenges that would have been much more difficult to tackle on our own. It is important to have the capability and confidence to handle tasks individually. However, we found that

conducting thorough research and analysis on our own, followed by coming together as a team to discuss and refine our ideas was the best approach to maintain an efficient workflow. By balancing individual work and teamwork, we were able to utilize each other's strengths and achieve our project goals more efficiently.

## 7. Acknowledgments

We would like to thank our team members and survey participants for their valuable contributions to this project. Through collaboration and feedback, we gained valuable experience in project management, web design, and data analysis. Thank you for making this a rewarding learning experience for us all.

## 8. References

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## 9. Appendix

### 9.1 Appendix 1:

#### 9.1.2 Project Assignment: Product-based

##### Deliverable 1:

The group has chosen to develop an online rating platform for the different courses at NTNU. It will contain a login to minimize misuse of the program. A user-friendly interface will make users able to interact with the different features of the application. It will be connected to a database where all the ratings are stored and can be collected.

The product is expected to help students choose their subjects, by letting them see other students' ratings of the subjects. In this way the student can see if other students think the subject is good or bad. This will make the decision process easier for the students.

In addition to helping students choose their subjects, the rating system can also benefit the lecturer's and NTNU. By getting information on what the students think about the subject, changes can be made to improve the subject if the rating is bad.

#### Potential stakeholders

		Interest	
		Small	Large
Influence	Critical	G2: The contribution of this group is critical, but initially they do not have significant expectations to the project.	G1: the project is critically dependent on this group. This group have also significant expectations to the project or to its outcome.
	Marginal	G4: this group contains stakeholders who expect little and has marginal influence on the project.	G3. this group includes stakeholders who have marginal influence on the project, but they have significant expectations.

Group 2 - Students: In our project the contribution of students is critical because students represent the biggest group of users. They contribute by providing information regarding the design of the web page. As a result it is important to satisfy the demands of the students as much as possible. This group can be involved by using surveys before the page is created.

Group 4 - Teachers: Although the target group for this project is students this page can also be a useful tool for teachers. Teachers will be able to see the ratings connected to their courses. The rating indicates whether the lectures should be changed or not. This group does not have much influence regarding the development of this product, but if necessary it can be involved using surveys.

Group 4: The university/administration. If a teacher is responsible for several courses and each one of these courses have gotten negative reviews the university may want to talk to the teacher. Therefore this page can be of use for the universities. If the project had been funded by the university it would have been necessary to give updates regarding the status of the project on a regular basis. This could have been done through weekly or monthly reports.

## **Project risk assessment plan**

A project risk assessment plan is a crucial document that outlines the potential risks associated with a project, and the measures that can be taken to mitigate them. The following table below will present primary project risks.

We will use a 3x3 Risk matrix to evaluate probability and impact of each risk.

Identified risk	Analyze				
	Probability of occuring	Impact		Plan to deal with	Monitoring
Spending too much time over-developing the application	Medium	Medium		Time estimates each task, and split all parts of the development process into user stories with time estimation.	Follow up on each user story in each sprint.
Gain enough user data to provide value to students	Medium	High		Promote the application, and give every group member responsibility to provide at least one response from a student each.	Follow up on the amount of answers in each study, and focus on ones that need more attention
Efficient communication between group members during development phase	Low	Medium		Different Group roles, deadlines, following communication plan	Follow up with meetings every week to catch up with progress.

To produce this product the group needs to acquire a certain skill level in programming, specifically in Firebase for the backend and React for the front end. We also need to know how to work agile. Every team member is familiar with scrum from previous courses. Additionally, the team will need to learn how to design and develop user interfaces that are intuitive and easy to navigate. In terms of soft skills, effective communication and collaboration within the group will be critical to ensure the project's success. Project management skills, such as planning and organizing tasks, monitoring progress, and resolving issues, will also be essential. Finally, the ability to collect and analyze user feedback to continuously improve the platform will be an important skill to acquire.

## **Project breakdown structure (PBS):**

### **1. The development phase**

#### 1.1 Architecture

1.1.1 Create workflow for use experience

1.1.2 Choose technologies

1.1.3 Design the application's architecture

#### 1.2. Design

1.2.1 Create a mockup of the application

#### 1.3. Backend

1.3.1 Create endpoint for adding rating

1.3.2 Testing for quality assurance

1.3.3 Setup the database

1.3.4 Design the database

1.3.5 Add user authentication

1.3.6 Create endpoint for deleting rating

1.3.7 Create endpoint for listing ratings

1.3.8 Write documentation for API

#### 1.4. Deployment

1.4.1 Deploy the whole application

#### 1.5. Frontend

1.5.1 Generate rating-page

1.5.2 Loading page

1.5.3 Profile page

1.5.4 Login page

1.5.5 List of ratings page

1.5.6 Implement third-party API for collecting average grades

#### 1.6. Security

1.6.1 Pen test the application

#### 1.7. Quality assurance

1.7.1 Test the complete application

## **2. Marketing and post-release**

#### 2.1 Evaluation

2.1.1 Creation of a employee performance evaluation system

2.1.2 Carry through the evaluations

## 2.2. Planning and investigating

### 2.2.1 Unfold overall idea

### 2.2.2 Research the market

### 2.2.3 Prepare marketing campaign

## 2.3 Release

### 2.3.1 Release the application and enact eventual marketing

## 2.4 Operate

### 2.4.1 Maintain the application

## Project schedule (SCRUM breakdown)

Story			Belonging tasks		
Story ID	Story	Time	Task ID	Task	Time estimate
1	(Architecture) As a developer i need to create a spec for the rating app	12	1	Create workflow for user experience	2
			2	Choose technologies	2
			3	Design webapp architecture	8
2	(Design) As a developer i need to design the user interface for the webapp	8	4	Create mockup	8
3	(Backend) As a developer i need to create API endpoints for the webapp	16	5	Create endpoint for adding rating	1
			6	Testing for quality assurance	3
			7	Setup db	1
			8	Database design	1
			9	User authentication	4
			10	Create endpoint for delete rating	1
			11	Create enpoint for listing ratings	1
			12	Write documentation for API	4
4	(Deployment) Deploy whole application	8	13	Deploy	8
5	(Frontend) As a developer i need to implement our UX and grapichal design and connect it to our backend	18	14	Generate rating page	3
			15	Ladning page	3
			16	Profile page	3
			17	Login page	3
			18	Rating list page	3
			19	Implement third-party api for average score in subjects	3
6	(Security) As a developer i need to ensuring the security of the backend by pen testing it	3	20	Pen test the application	3
7	(Quality Assurance) As a developer I need to ensure that the application is as free for errors, and as functional as possible	3	21	Test the complete application throughly by reviewing all parts of the code and then conducting plenty of testing.	3
8	(Plannig, investigating) As a team we need to have a agreem we are going to create	5	22	Unfold overall idea	2
			23	Research the market	3

## Network diagram analysis

Activity	Depends on	Time estimate	Early start	Early finish	Late start	Late Finish
Planning, investgate (#7)		5	0	5	0	5
Architecture (#1)	#7	12	5	17	5	17
Design (#2)	#1	8	17	25	17	25
Backend (#3)	#1	16	17	33	27	43
Frontend (#5)	#1, #2	18	25	43	25	53
Security (#6)	#3, #5	3	43	46	43	46
Deployment (#4)	#3, #5, #6	8	46	54	46	54

## Success factors

A success factor is a set of criterias the project has to follow to increase the chance of creating a well-made product. There are lots of factors that could affect the product positively, but the most important ones are:

- **Collective understanding of the product**

All team-members have a complete understanding of the product and its applications. Clear ambitions will reduce misunderstandings and waste of time and resources.

- **Creating success criteria early**

This way it's easier to regularly check if the product is moving in the right direction or if it's off-track. It's also motivating for the team to have clear goals.

- **Well made plans and time estimates**

The team consists of nine people. There is a time limit for the project and we have to respect this going into the planning phase. Regular product development requirements help the team stay motivated and not burn out.

- **Communication with users and stakeholders**

Feedback is important. As the product develops, problems and opportunities will surface and user-testing is a useful tool for tracking them down. Stakeholders are important supporters of your product and their happiness is crucial to a successful project.

## Roles and responsibilities

The whole team is acting as a prototype developer. The team has, with small deviations, the same competence. Therefore the roles internally in the team are the same. Each member functions as a developer, and each member has the same responsibility for the project. The structure is therefore leveled, and not a hierarchical structure. To ensure that the project goes according to plan, some additional roles have been determined to secure the progress of the project. The project has decided to use scrum as a developing technique and therefore, some roles are connected to this technique.

The additional roles to developer are:

**Scrum master:** Responsible for each “sprint”/period in the developing process. Ensures that the team reaches the goals for each period.

**Meeting coordinator:** Responsible for setting the time, date and location for each meeting. Also leading the meeting, ensuring no waste of time and following up the agenda for the meeting.

**Referent:** Responsible for writing down ideas, key takeaways and other important subjects from the meeting. Making sure the whole group is well informed after the meeting on the status of the project and the result of the meeting.

**Quality evaluator:** responsible for checking the quality of the work that has been done, and the quality of the product.

**Coordinator:** Communication between the team and people outside the team. Student assistants/lecturer if the group has any questions, and the stakeholders to the project.

**Social manager:** Responsible for solving conflicts in the group, and also ensuring that every member of the group is included, satisfied and has work to do.

Distribution of roles:



Team member	Role
10214	Developer, Quality evaluator
10042	Developer, Social manager
10146	Developer, Meeting Coordinator
10039	Developer, Referent
10020	Developer, Scrum master
10236	Developer, Coordinator
10234	Developer, Quality Evaluator
10048	Developer, Meeting coordinator
10200	Developer, Social manager

## Communication plan

For this project, our team will follow Scrum principles by holding two meetings per week. These meetings will include a daily standup and other essential Scrum methodology elements. If no physical meeting rooms are available, we will hold our meetings at our university or virtually. We will use Google Drive to facilitate data sharing, with 10146 in charge of managing these documents. We will communicate primarily via email with stakeholders or course coordinators, and our social managers will communicate with course assistants and teachers during exercise classes at our university.

We hope to achieve smooth and efficient collaboration throughout the project by implementing this communication plan, which will aid in our efforts to develop a robust rating system for our university courses.

## 9.2 Appendix 2.

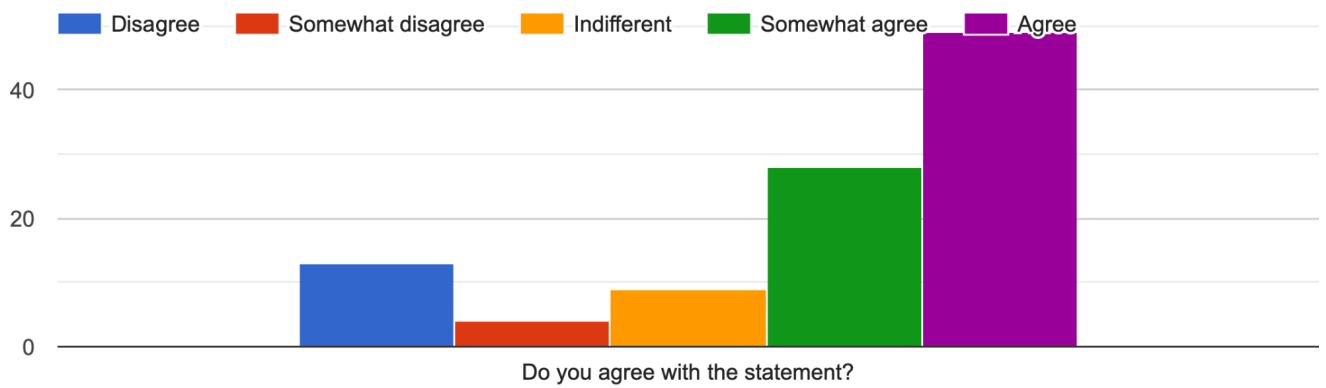
### 9.2.1 Link to website

<https://kongbong-develop.firebaseio.com/>

## 9.3 Appendix 3.

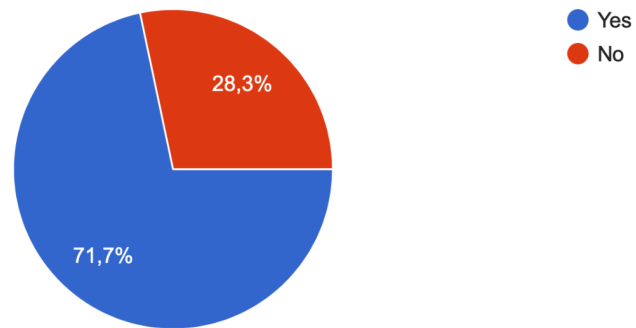
### 9.3.1 Results from survey

Grading history matter when choosing a course.

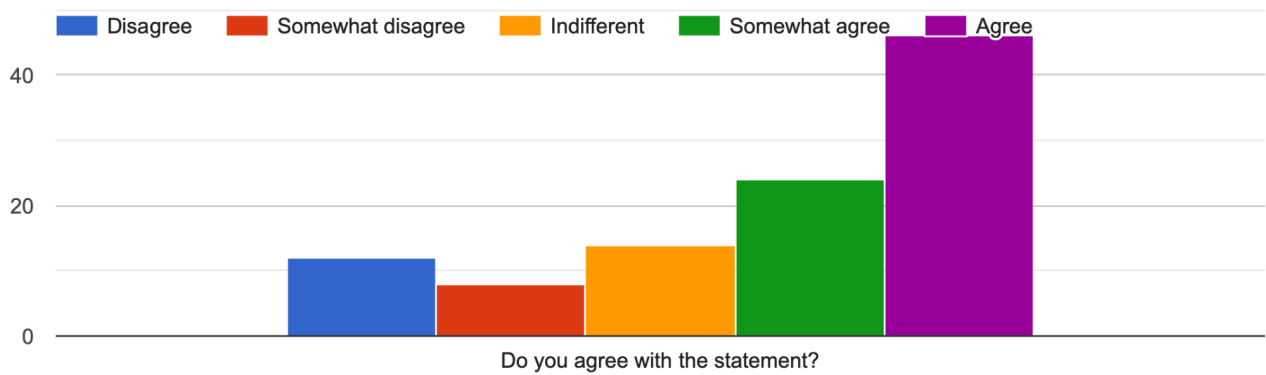


Have you ever NOT taken a course because of its grading history?

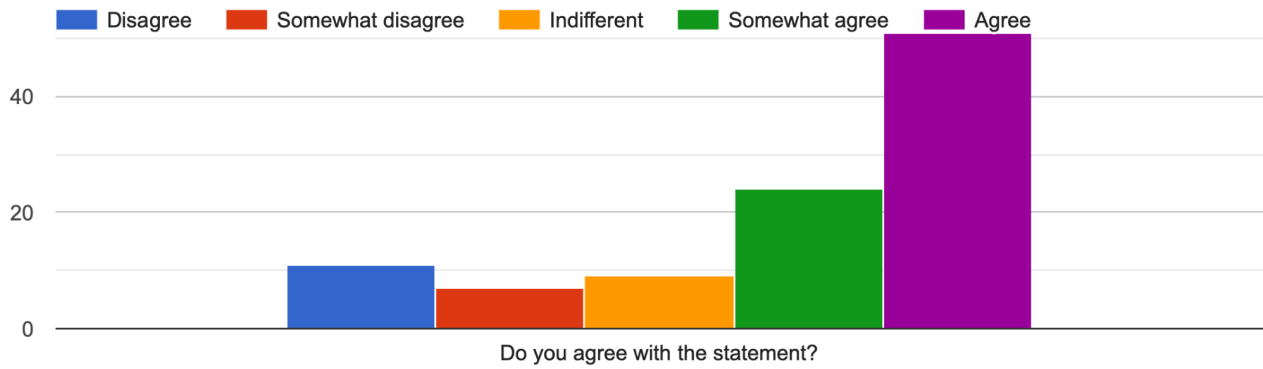
113 svar



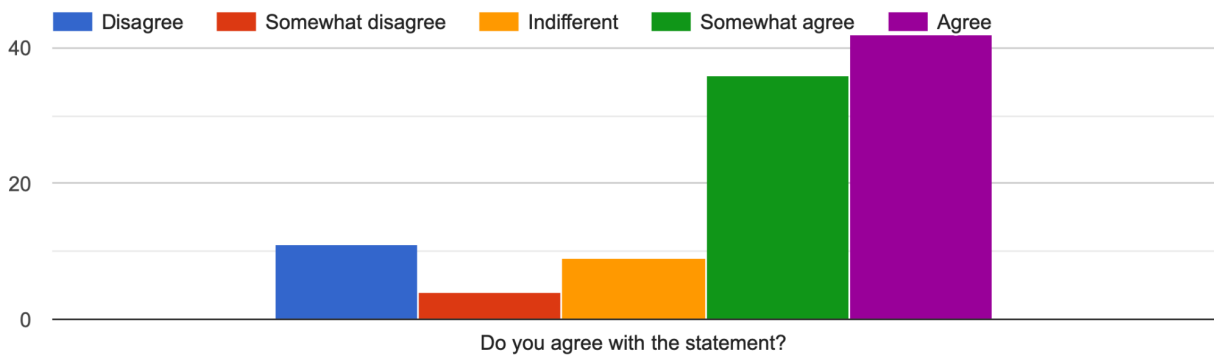
The site's general look is aesthetically appealing.



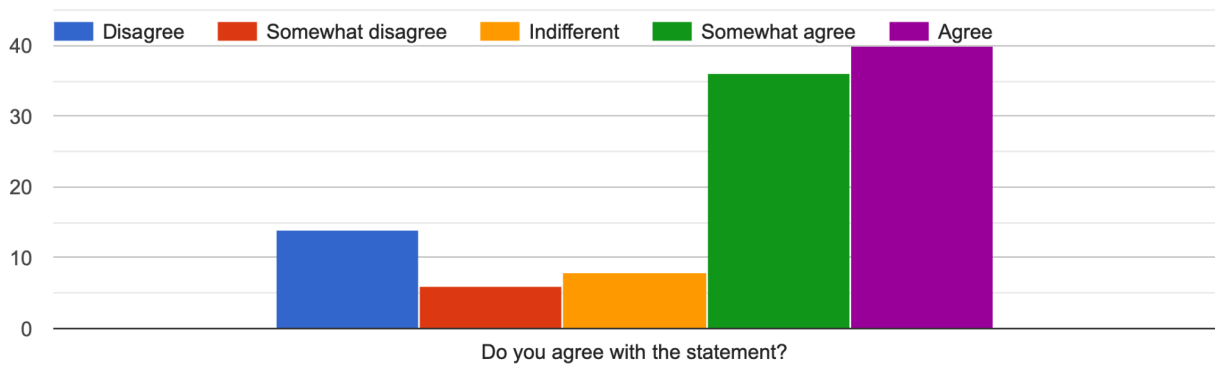
The login/signup -process was harmonious.



My general impression of the site was great.

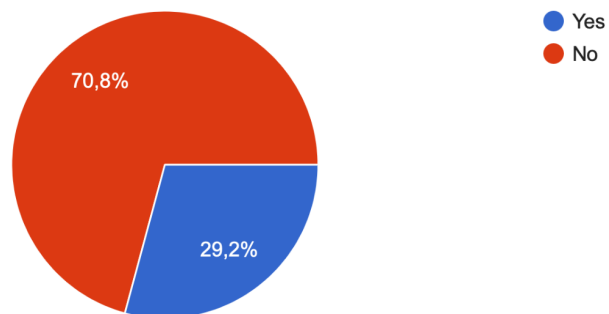


The course's rating affect my choice of course.

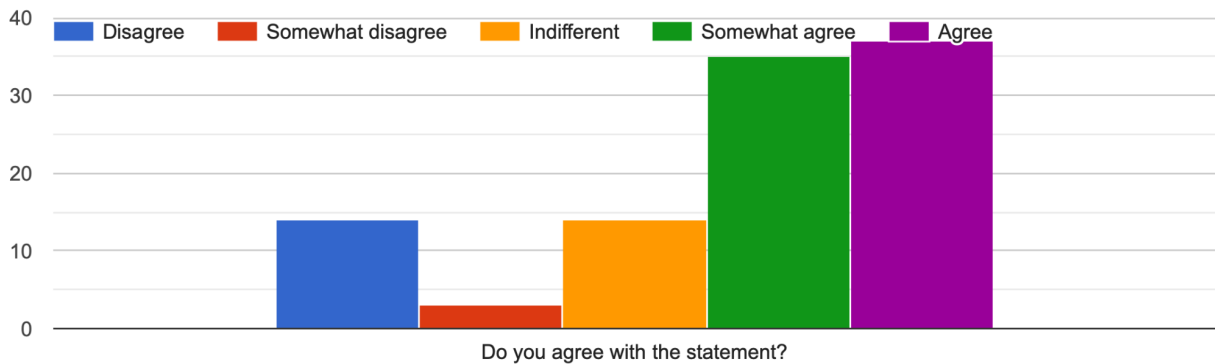


Did you encounter any bugs or other technical difficulties?

113 svar



I am going to use CourseRater in the future.



### 9.3.2 Results from user-tests

#### User test 1

Feedback from student:

“The site is easy to use and provides valuable information I can use when choosing subjects.”

#### User test 2

Feedback from student:

“Easy to use and understand. A good resource when choosing subjects.”

#### User test 3

Feedback from student:

“It would be even easier to pick a course if users were able to add comments.”

#### User test 4

Feedback from student:

“Should be able to add comments.”

#### User test 5

Feedback from student:

“I had a very good experience using the site. Although I did not care for the design, all the functionality was well implemented and easy to understand. This would help my decision process as the grade is one of the key factors when I choose subjects.”

#### **User test 6**

Feedback from student:

“Although the idea is great I miss some key elements like text following a review to provide clarity to the given review.”

#### **User test 7**

Feedback from student:

“Site looks great but as I do not take into consideration what other people think about the subject I have no use for this.”

#### **User test 8**

Feedback from student:

“I think the site looks alright but needs some improvements.”

#### **User test 9**

Feedback from student:

“Maybe you should remove the login feature. I understand that it's a measure of removing "trolls" but it makes rating a course a bit more time consuming.”

#### **User test 10**

Feedback from student:

“The site should improve its interface. It doesn't look like a course rating website.”