

# **Software Engineering Fall 2023-2024**

## **Valuni Requirements Specification**

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## **Project Description**

VALUNI is a platform where students have the opportunity to share their experiences and exchange knowledge and feedback regarding both professors and courses. It would play a vital role in helping students hold sufficient knowledge that could ease up the process of choosing classes and preparing for exams. Our objective is to create a safe, dependable and organized environment that allows students to express their opinions in an honest and respectful way. We aim to motivate students when rating or writing their reviews through anonymity, and at the same time having certain guidelines that must be followed when using VALUNI. This will not only assist study but also the overall University community including diverse facilities and professors.

## **1 Product Backlog**

### **1.1 Functional Requirements**

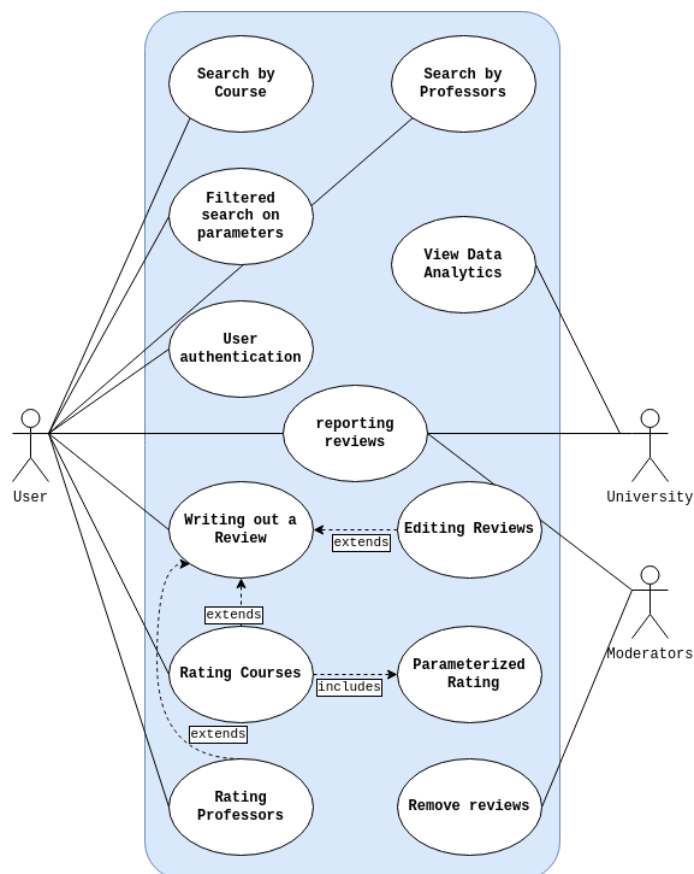
- User authentication
  - User login and verification that user is a university student
- Rating Courses
- Rating Professors
- Writing out a review with Rating
  - When reviewing students have the option to write a review with the parameterized rating parameterized rating
  - Rating of professors and courses on different parameters such as workload and leniency
- Filtered Search on parameters
  - Students can filter out result or search for courses and professors based on parameters reporting reviews
- Editing Reviews Admin ( university ) access to review data
  - University can access critical semester review analytics as well as overall analytics
- Search for courses
- Search for professors

## 1.2 Non Functional Requirements

- Fluid, Simple UI:
  - Description: The user interface (UI) should be intuitive, easy to navigate, and responsive across various devices and screen sizes.
  - Key Considerations: Minimalistic design, clear navigation, responsive layout, and consistent user experience.
- Secure:
  - Description: The website must ensure the security and privacy of user data, preventing unauthorized access or data breaches.
  - Key Considerations: Use of HTTPS, encryption of sensitive data, secure authentication mechanisms, and regular security audits.
- Auto-Removing Profanity on Reviews:
  - Description: Implement a mechanism to automatically detect and filter out inappropriate language or profanity from user reviews.
  - Key Considerations: Use of profanity filters, machine learning algorithms, or predefined keyword lists to identify and remove offensive content.
- Prevent Review Bombing:
  - Description: Implement measures to prevent or mitigate mass coordinated efforts to manipulate ratings, known as review bombing.
  - Key Considerations: Monitoring patterns of reviews, rate limiting, and implementing algorithms to detect and mitigate suspicious activities.
- Reviewer Anonymity:
  - Description: Allow users to submit reviews anonymously to encourage honest feedback without fear of repercussions.
  - Key Considerations: User account options for anonymous reviews, clear privacy policies, and secure handling of anonymous data.
- Customer Service (for Universities):
  - Description: Provide a support system for universities to address any concerns, disputes, or inquiries related to the professor rating platform.
  - Key Considerations: Dedicated customer support channels, responsive communication, and a system for resolving issues.

- Performance:
  - Description: Ensure the website performs efficiently under normal and peak loads, providing a seamless user experience.
  - Key Considerations: Load testing, performance optimization, content delivery network (CDN) usage, and efficient server-side processing.
- Scalability:
  - Description: Design the system to handle growth in terms of users, data, and transactions without a significant loss in performance.
  - Key Considerations: Scalable architecture, cloud-based infrastructure, and load balancing to distribute traffic.

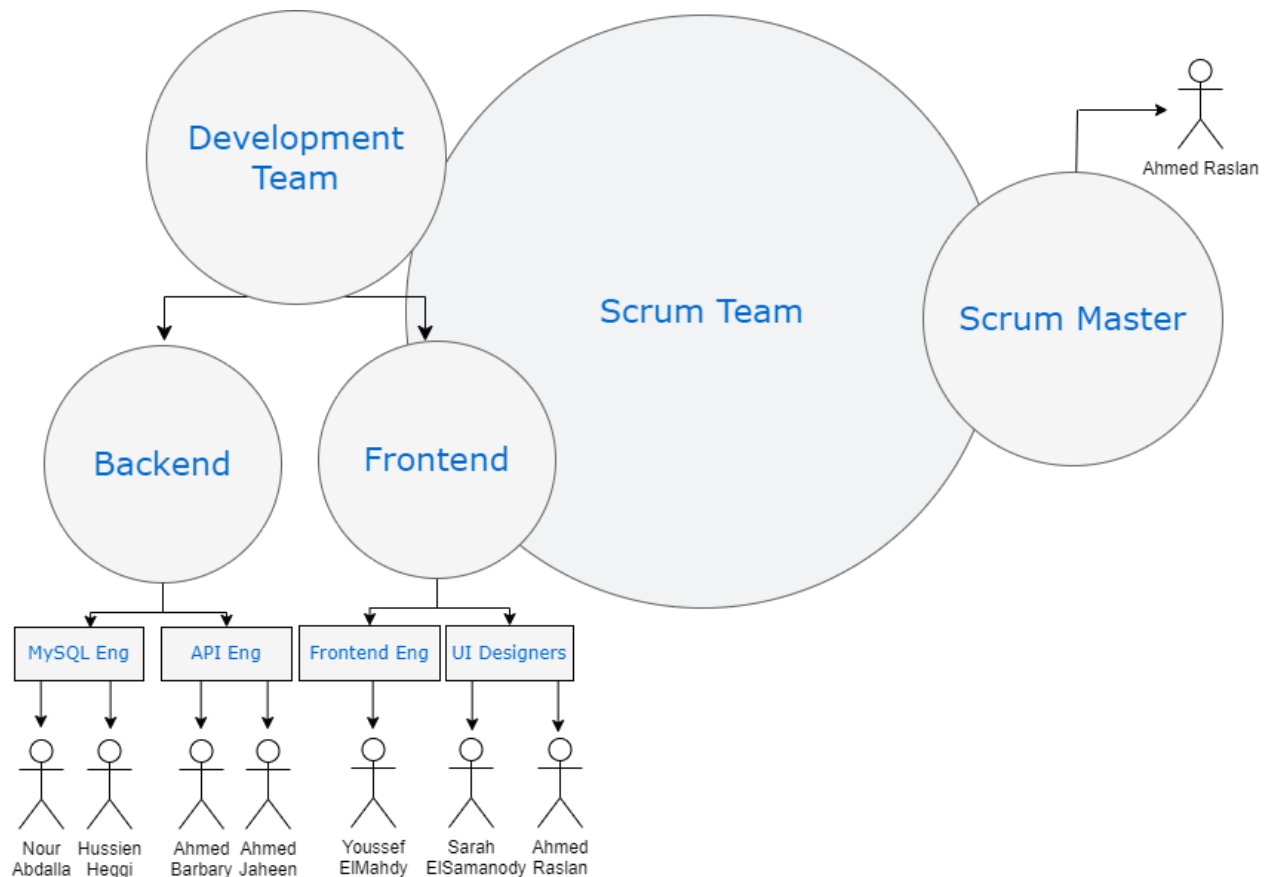
## 2 User Interface



Rating professors involves providing both a numerical score and an optional written review, each serving a distinct purpose. The numerical score, such as 3/5, offers a quick, quantitative summary of the overall experience.

In contrast, the written review provides a qualitative, detailed account of a student's personal experiences, offering insights such as the professor's teaching style and communication. Additionally, parameterized rating further refines the evaluation by allowing users to rate professors on specific criteria like clarity, flexibility, and engagement.

### 3 Scrum Team



In the development of Valuni, the team was divided into two parts: frontend and backend. When each team started working on their tasks, it was decided that the teams should be further divided to implement the idea of pair programming, working in a more effective and efficient way. Each sub-team had their own tasks and responsibilities which were all merged together at the end of the sprint. The scrum master, Ahmed Raslan, continuously communicated with both ends of the team to ensure that everything was in place.

## 4 MVP Requirements (Requirements to be Implemented)

- User Authentication (Login, etc.):
  - Description: Users should be able to create accounts, log in, and log out to access personalized features and ensure the security of their data.
  - Key Considerations: Secure password storage, email verification, and options for social media logins.
- User Data Encryption:
  - Description: Implement encryption mechanisms to protect sensitive user data, such as passwords and personal information.
  - Key Considerations: Use of HTTPS, encryption standards like SSL/TLS, and secure storage practices.
- Rating Courses:
  - Description: Users should have the ability to provide ratings for specific courses, reflecting their experiences with the course content.
  - Key Considerations: Course database, user-friendly rating interface, and averaging/ranking system.
- Rating Professors:
  - Description: Allow users to rate individual professors based on their teaching style, communication, and overall effectiveness.
  - Key Considerations: Professor database, clear rating criteria, and the ability to view aggregated ratings.
- Writing Out a Review with Rating:
  - Description: Enable users to write detailed reviews along with their ratings, providing more context to their evaluations.
  - Key Considerations: User-friendly review input form, character limits, and content moderation.
- Parameterized Rating:
  - Description: Provide users with the ability to rate professors and courses based on specific parameters, such as clarity, engagement, and grading.
  - Key Considerations: Parameterized rating system, customizable rating criteria, and clear guidance for users.

- Filtered Search on Parameters:
  - Description: Implement a search feature that allows users to filter and find professors or courses based on specific parameters and criteria.
  - Key Considerations: Advanced search functionality, parameterized filters, and an intuitive user interface.
- Editing Reviews:
  - Description: Allow users to edit or update their reviews and ratings, providing flexibility for users to adjust their feedback.
  - Key Considerations: Edit functionality, version control for reviews, and moderation for updated content.

## 5 Sprint Board

Title	URL	Assignees	Status
create project template	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/1">https://github.com/Ahmed-Waseem77/valuni/issues/1</a>	Ahmed-Waseem77, elbarbary, Hussein-Heggi, nouryasser1, Samanodylr	Done
Dark Mode initial design	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/9">https://github.com/Ahmed-Waseem77/valuni/issues/9</a>	Ahmed-Waseem77, Samanodylr	Done
login email and password prompts	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/16">https://github.com/Ahmed-Waseem77/valuni/issues/16</a>	Samanodylr	Done
Login page	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/10">https://github.com/Ahmed-Waseem77/valuni/issues/10</a>	Ahmed-Waseem77, Samanodylr, youssef-S-Elmahdy	Done
Setup for a functional user authentication (Firebase)	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/11">https://github.com/Ahmed-Waseem77/valuni/issues/11</a>	elbarbary, mego74	Done
Light Mode initial design	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/6">https://github.com/Ahmed-Waseem77/valuni/issues/6</a>	Ahmed-Waseem77, Samanodylr	Done
Brand Manual	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/5">https://github.com/Ahmed-Waseem77/valuni/issues/5</a>	Ahmed-Waseem77, Samanodylr	Done
Homepage course list	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/29">https://github.com/Ahmed-Waseem77/valuni/issues/29</a>	Samanodylr	Done
Homepage topbar	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/28">https://github.com/Ahmed-Waseem77/valuni/issues/28</a>	youssef-S-Elmahdy	Done
login page background, splash screen	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/20">https://github.com/Ahmed-Waseem77/valuni/issues/20</a>	Ahmed-Waseem77	Done
login buttons	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/17">https://github.com/Ahmed-Waseem77/valuni/issues/17</a>	youssef-S-Elmahdy	Done
Connect the application to the local server database	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/4">https://github.com/Ahmed-Waseem77/valuni/issues/4</a>	Hussein-Heggi, nouryasser1	Done
Masking firebase API keys	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/25">https://github.com/Ahmed-Waseem77/valuni/issues/25</a>	elbarbary, mego74	In Progress
Valuni Presentation	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/7">https://github.com/Ahmed-Waseem77/valuni/issues/7</a>	nouryasser1, Samanodylr	In Progress
Integrating authentication to the frontend	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/12">https://github.com/Ahmed-Waseem77/valuni/issues/12</a>	elbarbary, youssef-S-Elmahdy	In Progress
Documentation Diagrams for various methodologies	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/27">https://github.com/Ahmed-Waseem77/valuni/issues/27</a>	nouryasser1	In Progress
Creating the SQL Database on the local server	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/22">https://github.com/Ahmed-Waseem77/valuni/issues/22</a>	Hussein-Heggi, nouryasser1	Done
Database schema design	<a href="https://github.com/Ahmed-Waseem77/valuni/issues/8">https://github.com/Ahmed-Waseem77/valuni/issues/8</a>	elbarbary, Hussein-Heggi, mego74, nouryasser1	Done
Home Page/ Landing page			Todo
Editing reviews			Todo
Storing Parameterized Reviews			Todo
Adding Parameterized Reviews prompt			Todo
Fetching queries for Home page			Todo
Fetching queries for Professor review pages			Todo
Fetching queries for Course review pages			Todo
professor review page			Todo
Course review page			Todo
Search dropdown menu			Todo
Searching algorithm on both professors and courses			Todo
Fetching queries that depend on the implemented searching algorithm			Todo
A Settings drop down menu			Todo
Refactoring our CSS into Style-sheets for cross platform compatibility			Todo
Merging Backed functionalities and resolving resulting conflicts	<a href="https://github.com/Ahmed-Waseem77/valuni/pull/30">https://github.com/Ahmed-Waseem77/valuni/pull/30</a>	Ahmed-Waseem77	Done

This is the individual sprint log which shows the name of the tasks, how the tasks were divided, and who it was assigned to along with its current status.