INFS3200 Individual Project Proposal

Introduction

The main goal of this project is to design an online learning discussion platform, allowing students to ask questions in forum style and allowing instructors to moderate discussions and endorsing or improving the accuracy of answers. This platform will allow users to ask questions and other students and/or supervisors to answer these questions. The primary aim of this project is to ensure that students can clear up problems that they have without the need to approach supervisors/tutors in person, saving time. The platform also encourages students to answer questions themselves to strengthen their knowledge. This platform will attempt to retrieve the positive aspects of pre-existing solutions like Edstem or Reddit to optimise the student learning experience.

Objectives

The project will develop both front-end (using HTML/CSS/JavaScript) and back-end (using PHP with the CodeIgniter framework). The project will also use MySQL as the database system.

For the front-end, the most common front-end technology of HTML/CSS/JS was chosen because, with the addition of the BootStrap framework, will provide a fast way of creating a beautiful and interactive design, meaning that more time can be spent focusing on features done in the back-end of the website. The chosen back-end language, PHP, also allows for HTML, CSS and JS to be implemented directly within the source files, allowing for seamless implementation.

The website will use an MVC design pattern architecture with a model, viewer and controller, this will be done with PHP using the CodeIgniter framework. MVC was chosen as the platform's architecture as it produces easily maintainable and modifiable applications when compared to the traditional architecture of placing everything into one file. This reduces the risk of bugs and errors. The independence of the presentation and data means that if the presentation does not pass through successfully, the data will not be directly affected. The MVC model also allows reusability and repurposing simply by changing just the viewer (to create a new appearance) and/or changing just the model, allowing for a different database system etc., or changing the controller completely, to a different language. This flexibility is not displayed in traditional models.

To create the most optimal learning experience for students, the platform will implement the following features:

The following features will allow for an effective login and user creation system: A login and registration page will be present when first accessing the website. Once logged in, users can access their profile page, in which they can change/update their details i.e. name, password etc.

After logging in, the website should retain the user's login details after session expires allowing for seamless website access. Email verification will be implemented to increase the security of the website, this will involve verification after registration, which could use a verification code and users can check verification status on their profile page. Once an email is verified, users who forget their password can send reset tokens to their email.

The following features will allow for an effective question and answering experience: Users should be able to post questions. All questions from a specific course will be displayed on the homepage after login. These questions can be ordered based on the rating, time posted, pinned questions (by user). Questions will have a rating (affected by upvoting and downvoting)
Users will be able to write comments and answers. Supervisors can "endorse questions", this will put them at the top of all answers of a question. Ratings also affects order of questions
Users will be able to upload photos to clarify questions. (Users should be able to upload multiple files and also drag and drop files directly into the website. This should further clarify questions.)
The platform will also attempt to gamify the answering experience by rewarding students with "experience" to level up to the next level every time they answer a question correctly (endorsed by the supervisor). A leaderboard with the best students will be displayed. This should incentivise students to answer questions, enabling peer education.

The following features will allow users to navigate the platform easier: Users should be able to search keywords in a search bar to find related questions. When writing new questions, related questions should also pop up to ensure that the student does not need to ask an already asked question. The search box will provide suggested questions (autocompletion) while they search, so they won't need to write the full question. More threads (questions) will continue to load when scrolling and scroll position will be remembered when the session ends, this will provide a more seamless navigation experience.

To support our website for future development, an online donation box will be available for students with a kind heart.

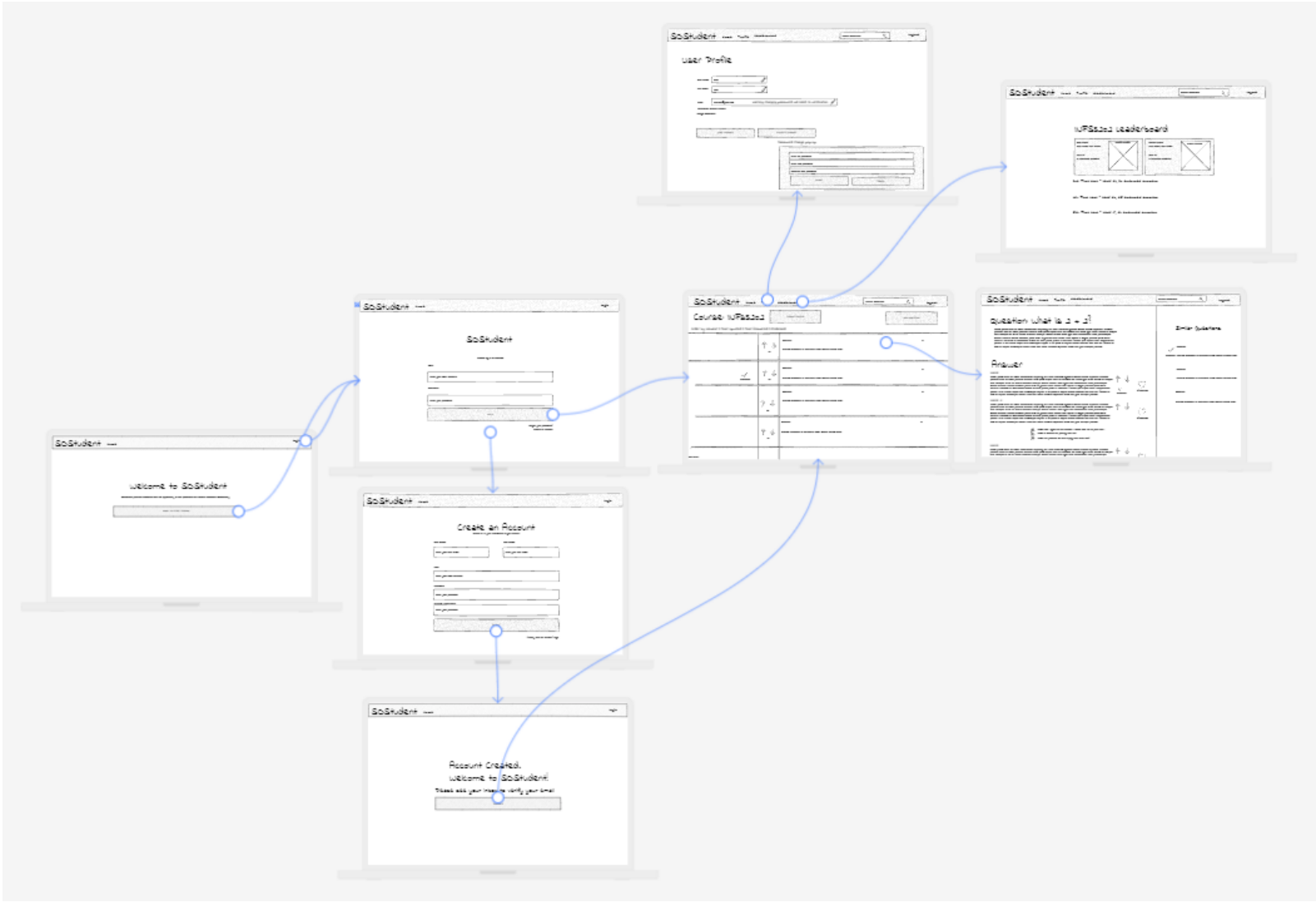
UI/UX Design

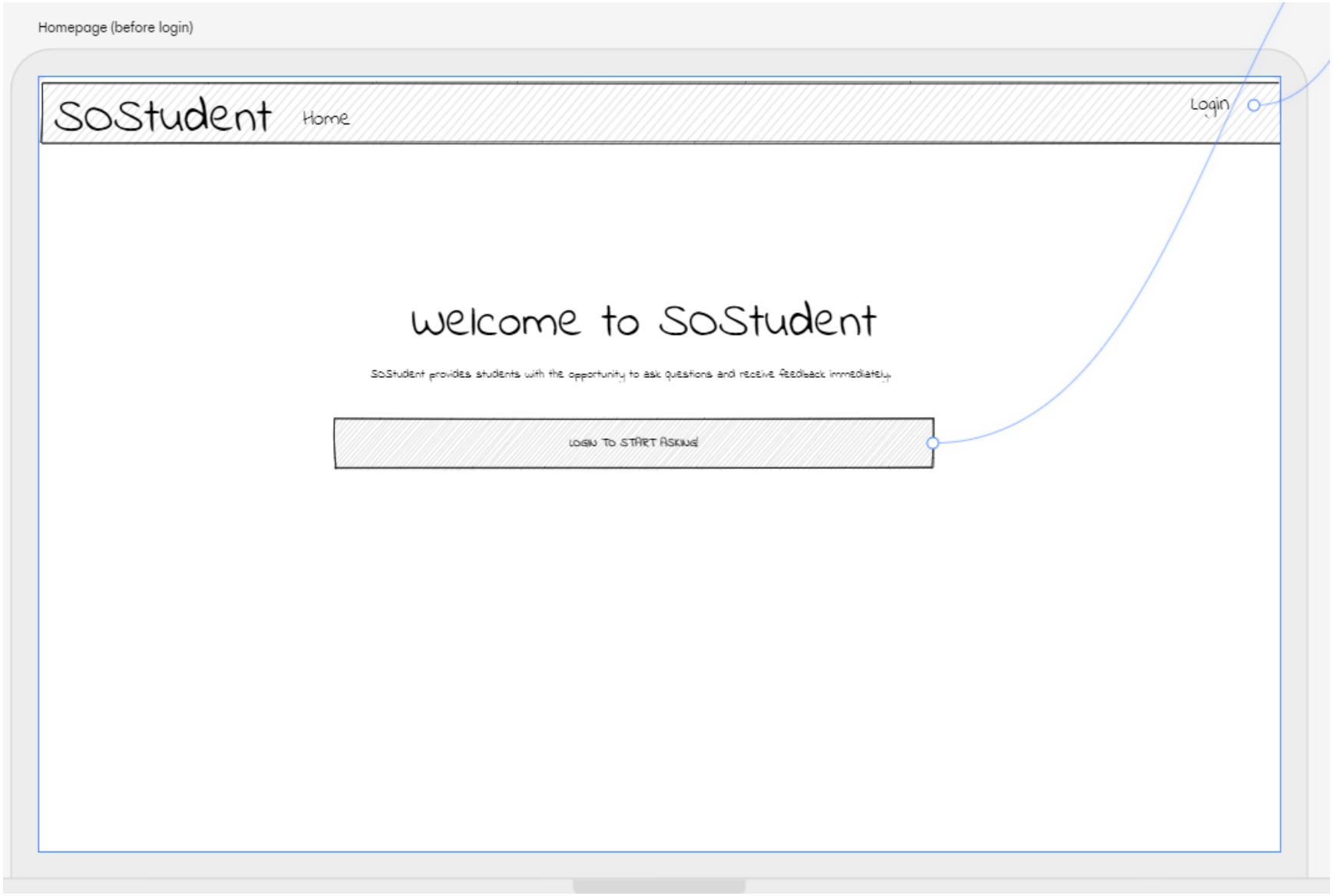
See Appendix A for wireframe designs.
These wireframe designs are low-fidelity and highly subject to change. This was done to quickly develop a design that is susceptible to feedback and to allow more focus on the back-end.

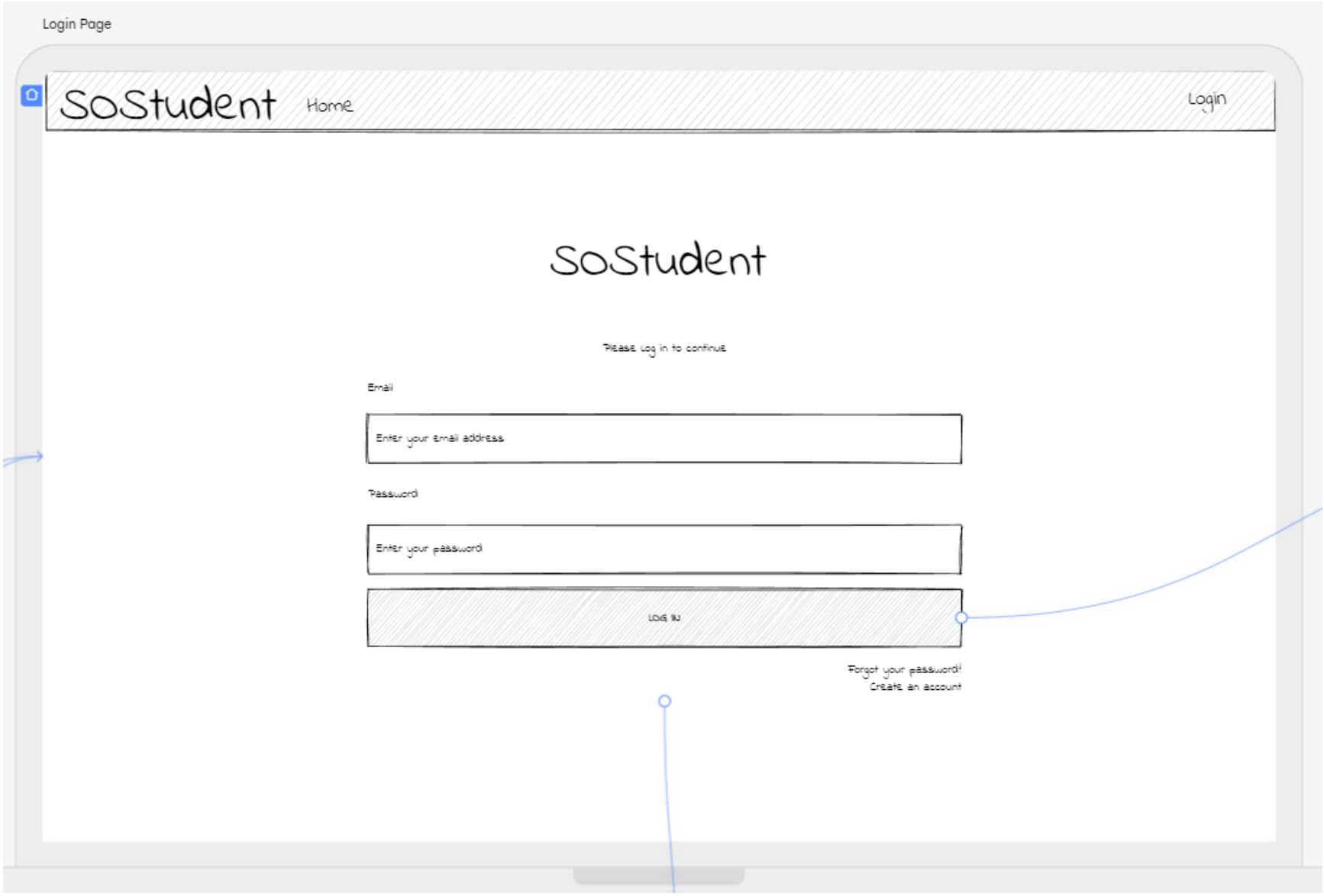
Timeline

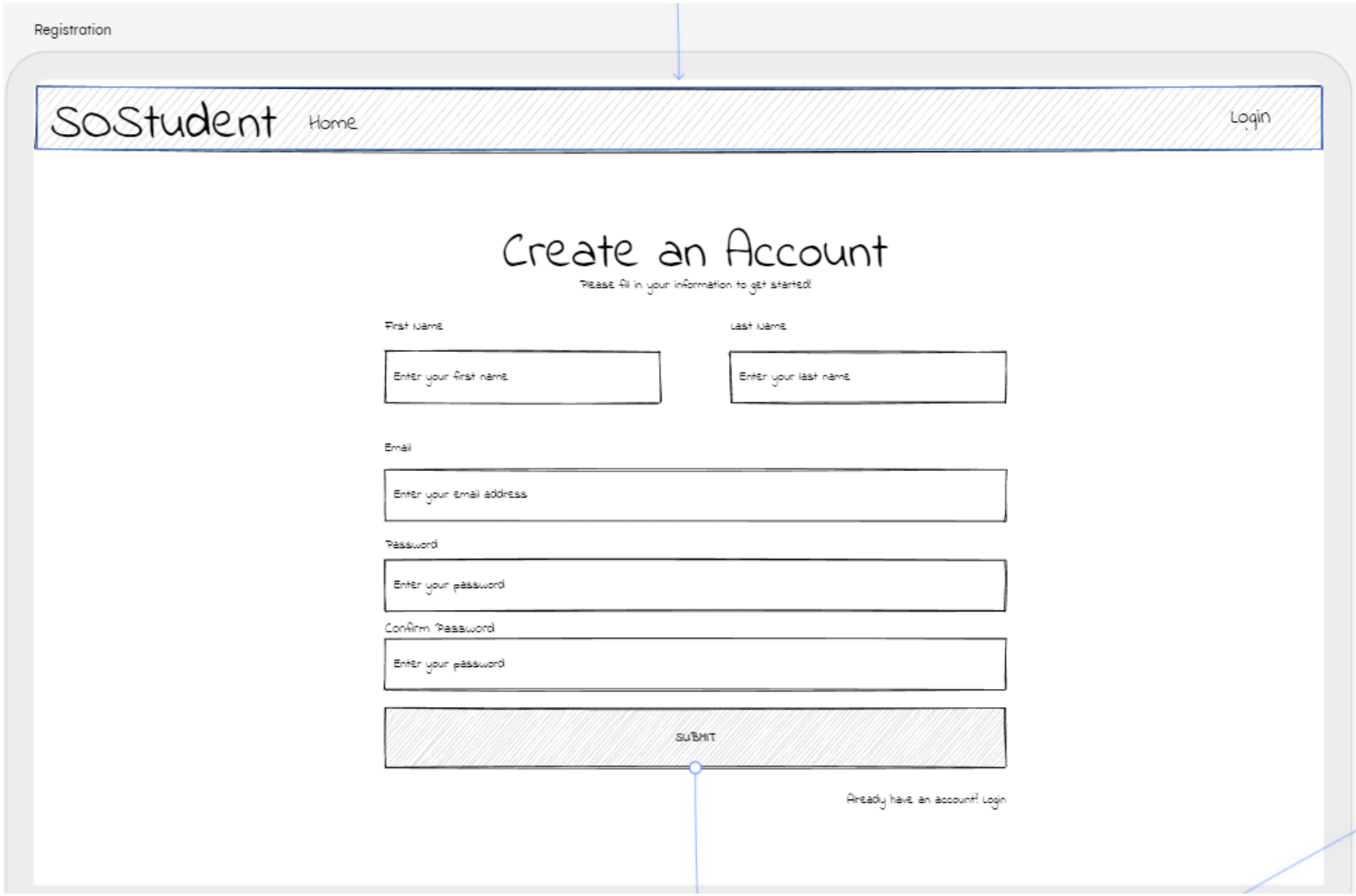
See Appendix B for the project timeline. The project timeline is heavily subject to change due to deadlines or idea changes.
Features have been split into 4 categories: Account, QnA, Navigation, Misc.

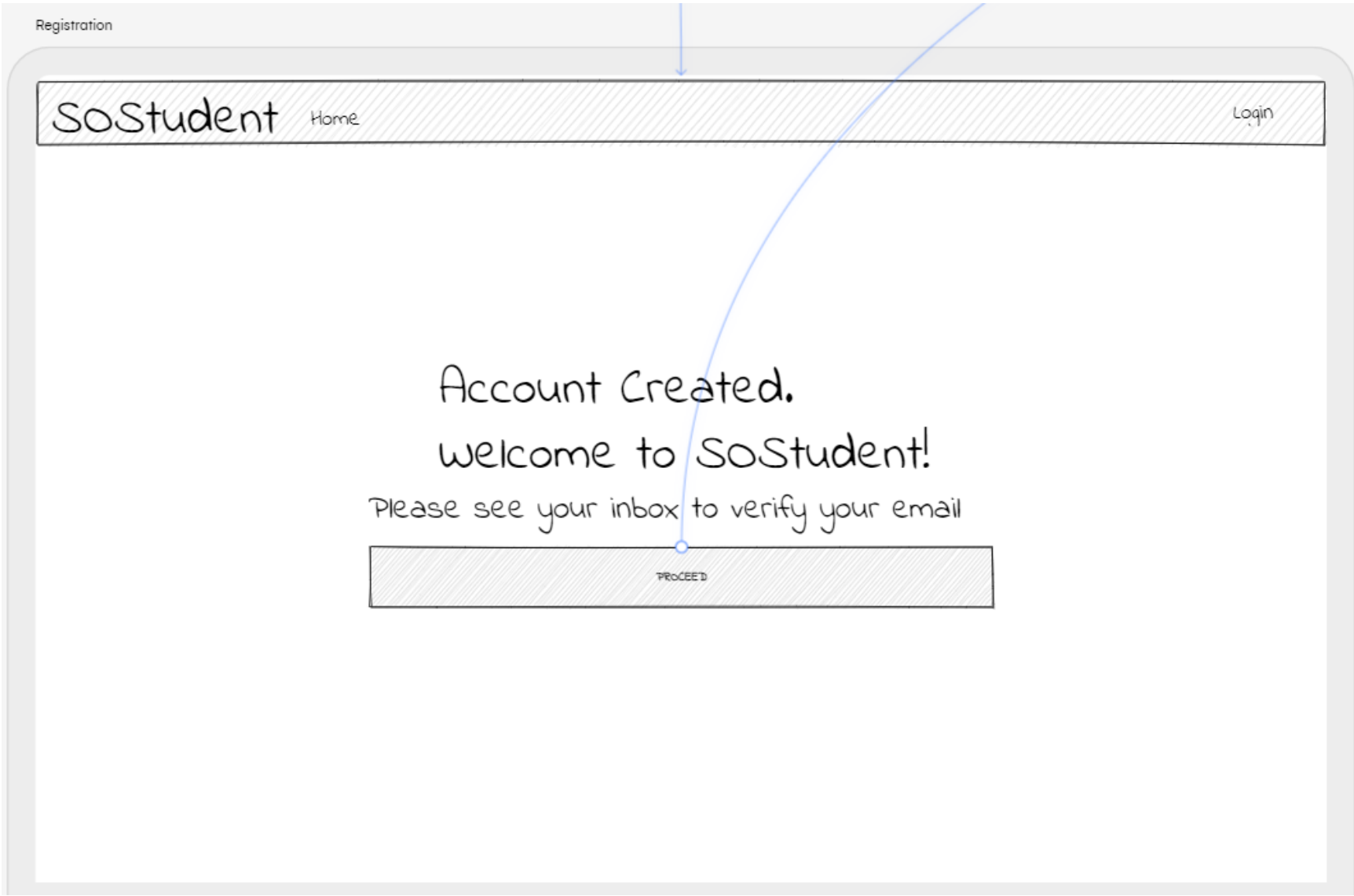
Appendix A: Wireframe Design

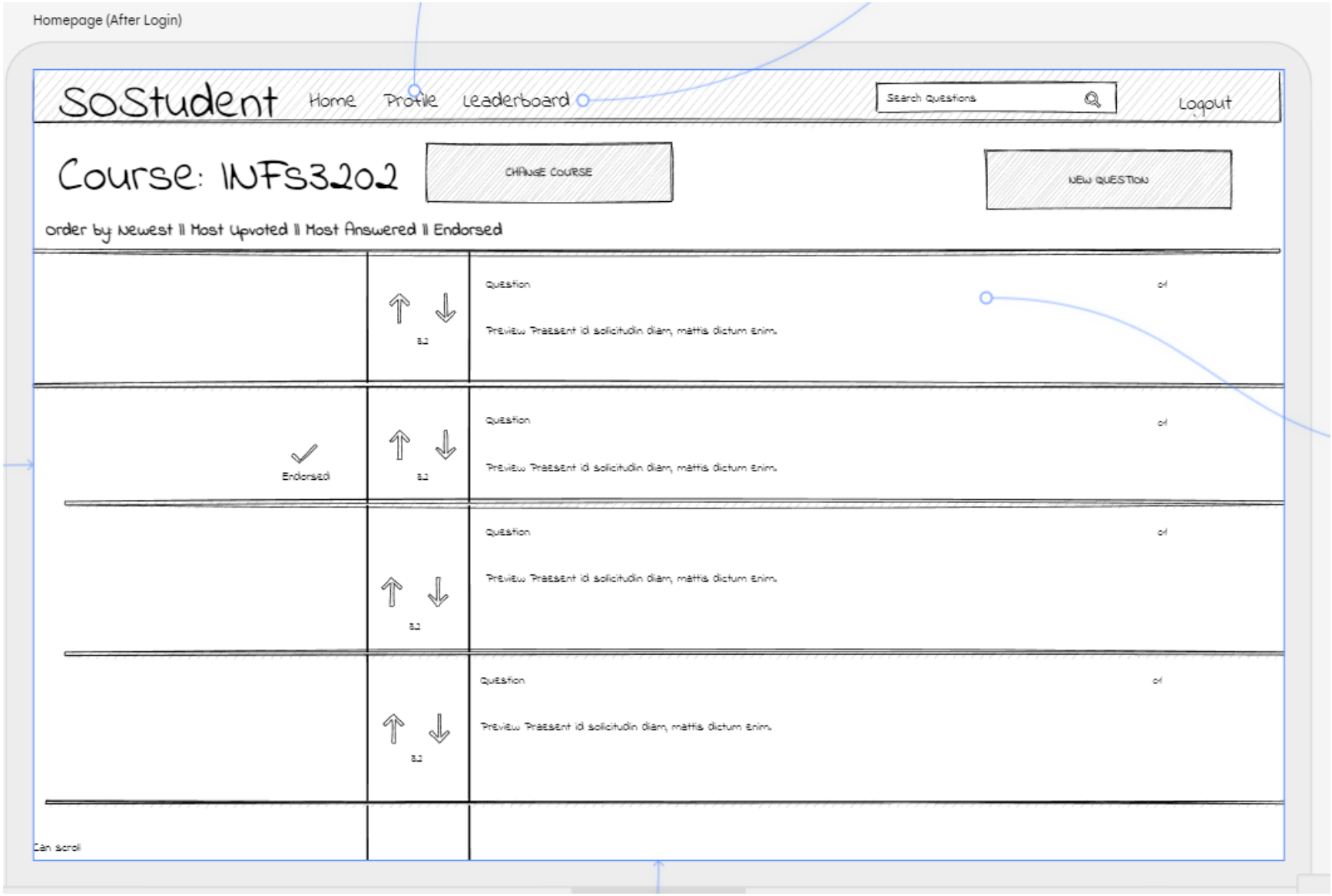


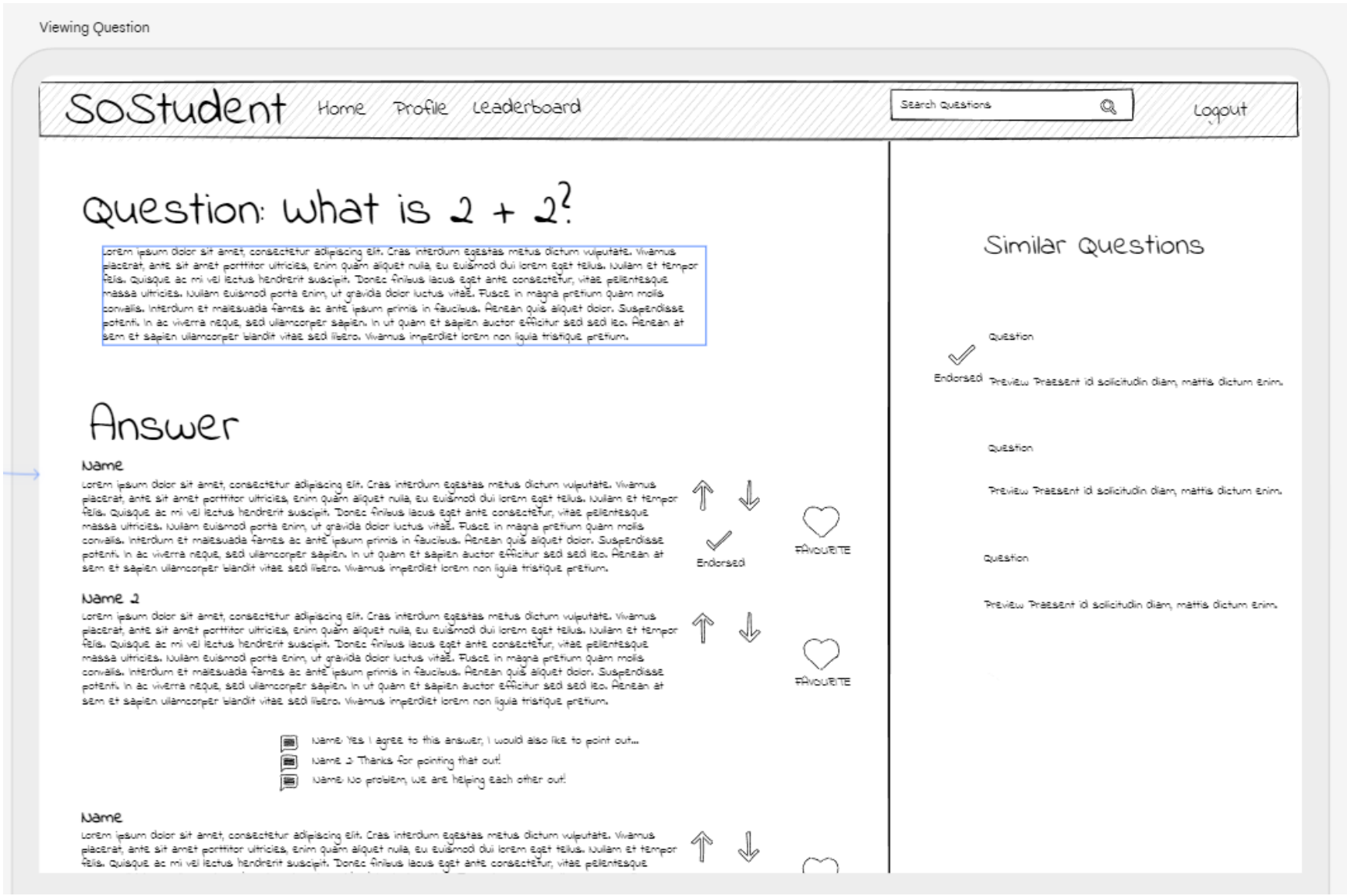

Homepage (before login)
SoStudent
Home
Login
welcome to SoStudent
SoStudent provides students with the opportunity to ask questions and receive feedback immediately.
LOGIN TO START ASKING!


Login Page
SoStudent
Home
Login
SoStudent
Please Log in to continue
Email
Enter your email address
Password
Enter your password
Log in
Forgot your password?
Create an account


Registration
SoStudent
Home
Login
Create an Account
Please fill in your information to get started!
First name
Enter your first name
Last name
Enter your last name
Email
Enter your email address
Password
Enter your password
Confirm Password
Enter your password
SUBMIT
Already have an account? Login


Registration
SoStudent
Home
Login
Account Created.
welcome to SoStudent!
Please see your inbox to verify your email
PROCEED


Homepage (After Login)
SoStudent
Home
Profile
Leaderboard
Search questions
Logout
Course: INFS3202
CHANGE COURSE
NEW QUESTION
order by Newest || Most Upvoted || Most Answered || Endorsed
Question
Preview Praesent id sollicitudin diam, mattis dictum enim.
Endorsed
Can scroll


Viewing Question
SoStudent
Home
Profile
Leaderboard
Search Questions
Logout
Question: what is 2 + 2?
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras interdum egestas metus dictum vulputate. Vivamus placerat, ante sit amet porttitor ultricies, enim quam aliquet nulla, eu euismod dui lorem eget tellus. Nullam et tempor felis. Quisque ac mi vel lectus hendrerit suscipit. Donec finibus lacus eget ante consectetur, vitae pellentesque massa ultricies. Nullam euismod porta enim, ut gravida dolor luctus vitae. Fusce in magna pretium quam mollis convallis. Interdum et malesuada fames ac ante ipsum primis in faucibus. Aenean quis aliquet dolor. Suspendisse potenti. In ac viverra neque, sed ullamcorper sapien. In ut quam et sapien auctor efficitur sed sed leo. Aenean at sem et sapien ullamcorper blandit vitae sed libero. Vivamus imperdiet lorem non ligula tristique pretium.
Answer
Name
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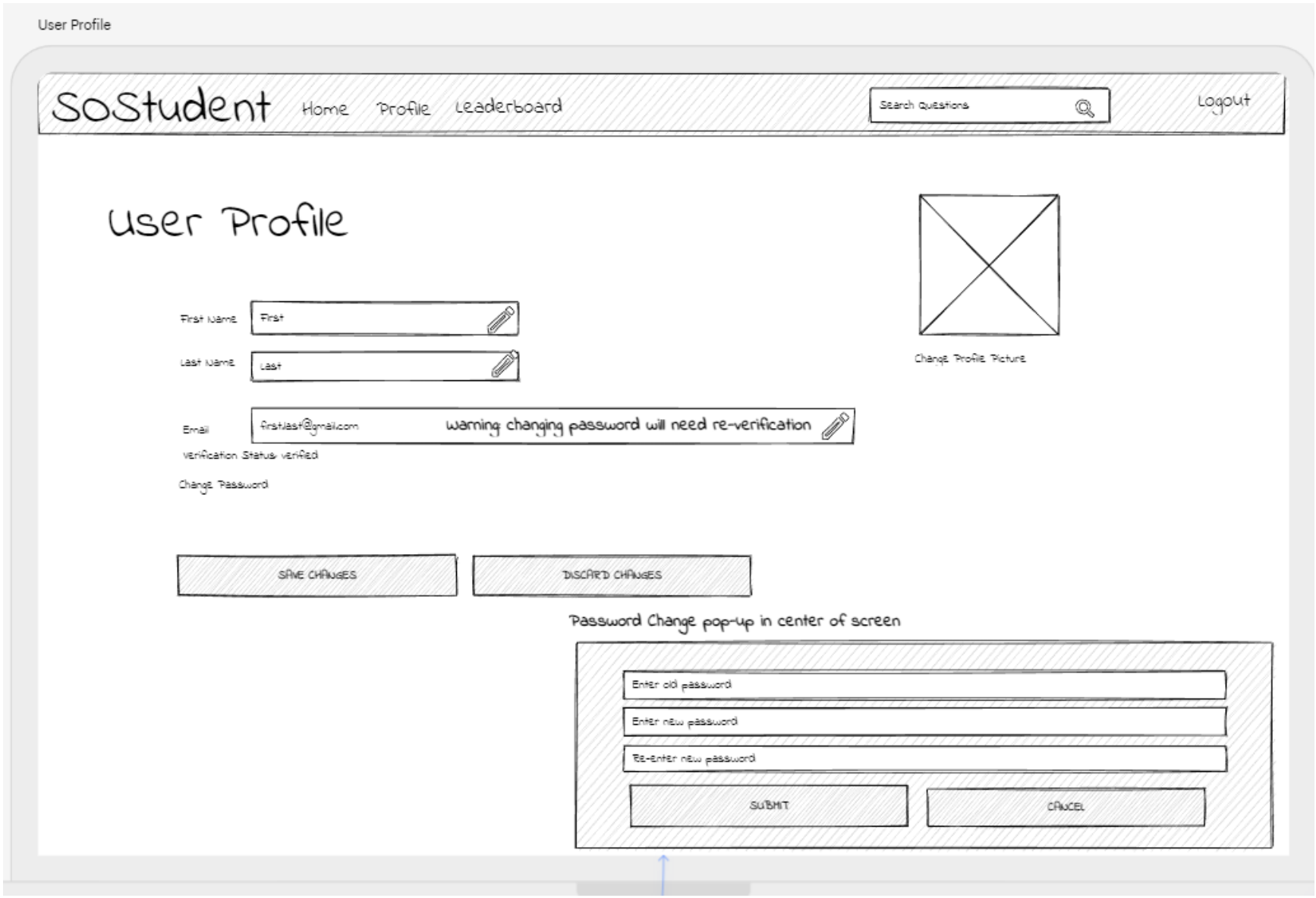
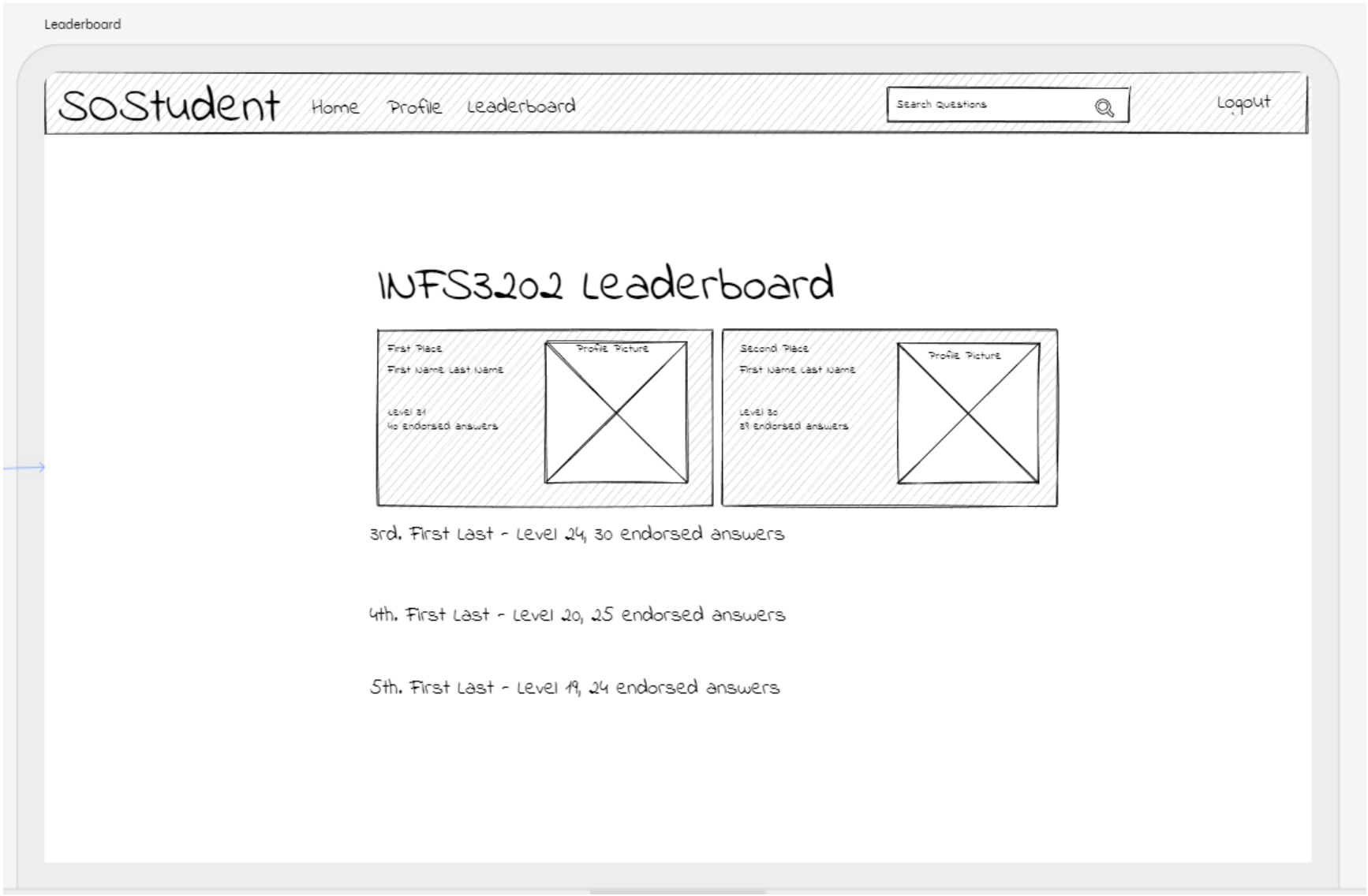
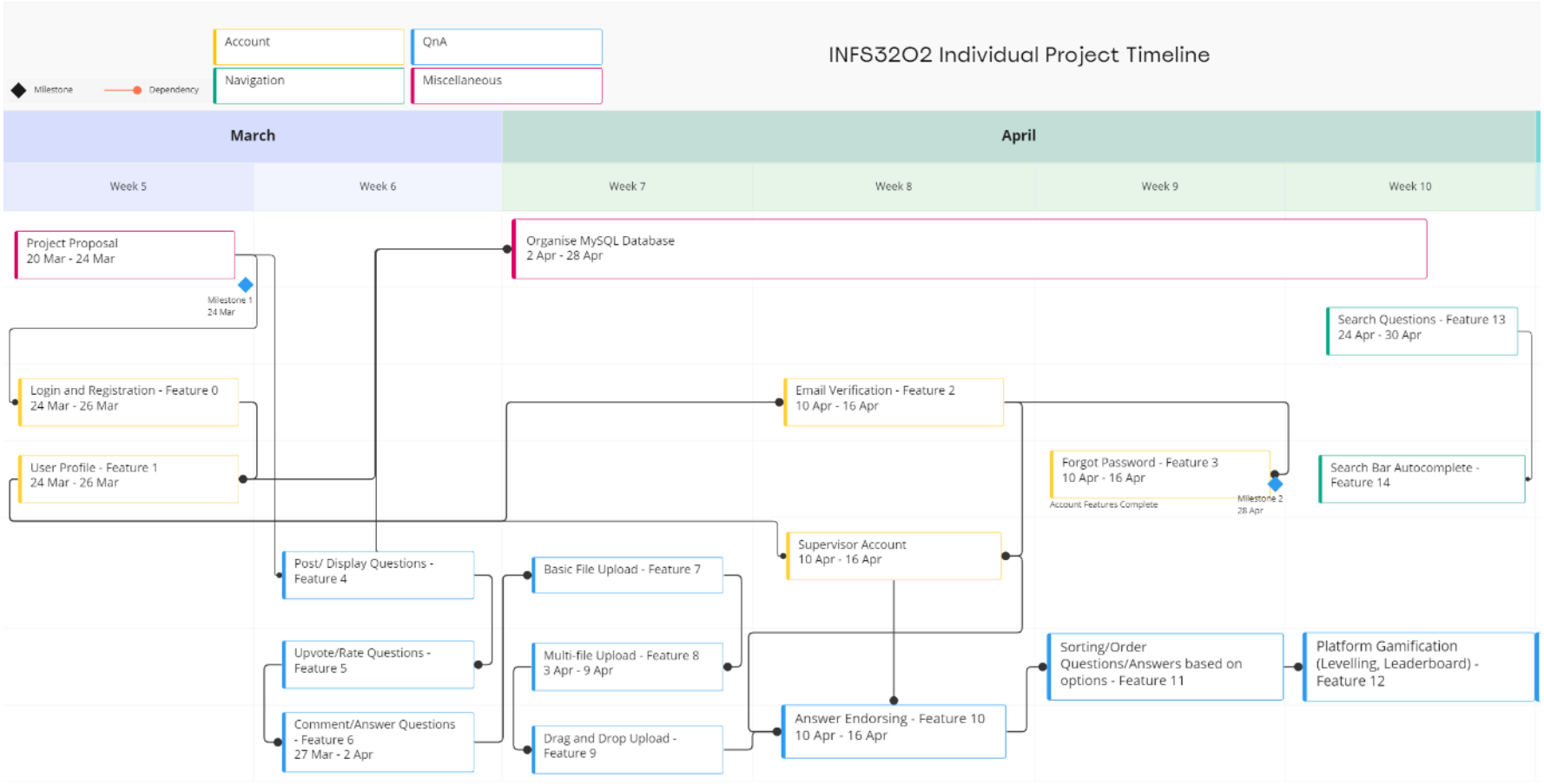
FAVOURITE
Name: Yes I agree to this answer, I would also like to point out...
Name 2: Thanks for pointing that out!
Name: No problem, we are helping each other out!
Name
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras interdum egestas metus dictum vulputate. Vivamus placerat, ante sit amet porttitor ultricies, enim quam aliquet nulla, eu euismod dui lorem eget tellus. Nullam et tempor felis. Quisque ac mi vel lectus hendrerit suscipit. Donec finibus lacus eget ante consectetur, vitae pellentesque
Similar Questions
Question
Endorsed
Preview Praesent id sollicitudin diam, mattis dictum enim.
Question
Preview Praesent id sollicitudin diam, mattis dictum enim.
Question
Preview Praesent id sollicitudin diam, mattis dictum enim.


User Profile
SoStudent
Home
Profile
Leaderboard
Search Questions
Logout
User Profile
First Name
First
Last Name
Last
Email
firstlast@gmail.com
warning changing password will need re-verification
verification Status: verified
Change Password
Change Profile Picture
SAVE CHANGES
DISCARD CHANGES
Password Change pop-up in center of screen
Enter old password
Enter new password
Re-enter new password
SUBMIT
CANCEL


Leaderboard
SoStudent
Home
Profile
Leaderboard
Search Questions
Logout
INFS3202 Leaderboard
First Place
First Name Last Name
Level 31
40 Endorsed Answers
Profile Picture
Second Place
First Name Last Name
Level 30
39 Endorsed Answers
Profile Picture
3rd. First Last - Level 24, 30 endorsed answers
4th. First Last - Level 20, 25 endorsed answers
5th. First Last - Level 19, 24 endorsed answers

Appendix B: Project Timeline




May
Week 11
Week 12
Week 13
Other features/ Catch up
1 May - 19 May
Scroll Loading - Feature 15
1 May - 7 May
Donation Box - Feature 17
8 May - 14 May
Website Position Scroll Saving - Feature 16
1 May - 7 May
Navigation Features Complete
Platform Gamification (Levelling, Leaderboard) - Feature 12
QnA Features Complete
Advanced Front-end
miro
Milestone 3
19 May