CEN 4010 Principles of Software Engineering

Milestone 3: Team Project Proposal and Description

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1. **Executive Summary**

It's been more than a year since the COVID-19 pandemic began. Since then, governments around the world have issues lockdowns, quarantines, and for the safety of all, connecting with others has become much more difficult. Although social media today still helps in keeping touch with others, many social media platforms have their own way of doing things, or some are only meant for texting/sending pictures instead of spreading good information.

To solve this problem, we are introducing a new platform where users can share anything they'd like, whether it be a link to an article on how to keep up a good routine during a lockdown, or just about anything they'd like to share with other users who are having a difficult time during the pandemic. This platform's main target audience are users who would like to connect with others with the purpose of sharing good content to foster better at-home tasks, self-care, or simply to motivate others. Many social media platforms today are simply used for entertainment, whereas our platform encourages users to share helpful content to focus on the positives and how we can continue to foster positive perspectives during a difficult time in all our lives.

Often, social media tends to only share the bad news or the negative events that are occurring around us. We'd like to change that. With our platform, we want to change the playing field to sharing the good news and the positive events that are occurring amid a worldwide pandemic.

2. **Competitive Analysis**

	Our Platform	Facebook
Content	Specific content relating to pandemic resources	Broad range of targeted groups
Positivity	Posts & comments to motivate & help users	Open discussion that can be negative
News	Specific news relating to the status of the pandemic	News about everything

Account Page	Full flexibility to the colors on their page/ featured images to express themselves	Few modifications can be made

Our proposed project has the same concept as the popular social media platform Facebook but with the plan of making it centered around positivity and motivation through the difficult times of the pandemic. Our platform has the ability to create posts, comments and share images, videos and links the same way that Facebook does but we are putting an emphasis on these posts being positive and motivating.

3. **Data Definition**

Name	**Meaning**	**Usage**	**Comment**
User	Actor	Use case	A person that uses the app
Member	Actor	use case	a user with an account
Non-member	Actor	use case	A user without an account
Pictures & Videos	Service	Site user service	Users can post images and videos
Log in	Service	Site user service	Give the users the ability to follow other users, leave comments, and create posts
Main page	User interface	User interface	The home page of the app where users can see posts from the people whom they follow
Account creation page	User interface	User interface	The page where users can create an account or login if they already have an account
News page	User interface	User interface	The page where users can see news articles
System	Platform hardware and services	Use case	React.js for frontend framework, L.A.M.P server and firebase for the backend
Firebase	Platform hardware and services	Use case	Our backend service to handle the user

			authentication, cloud storage, real-time database, security, and other features

4. **Overview, Scenarios and Use Cases**

The overview of this project is the intention to provide people with a positive form of social media to aid them through the difficult times of the pandemic. This project aims to achieve this goal by giving user the space to share positive messages, images, and links to motivate other users on the platform.

A typical scenario of the usage of this platform involves when the user has time during their day, logging onto our program and checking their feed of the recent activities created by the people they follow. The user may like or comment on the posts made by the people they are following or may click on a post and be redirected to another website to view what the person they are following included in their post. While in our software, the user may choose to update their specific profile, make their own post to share with their followers, check trending news stories relating to the pandemic or find new followers that are suggested based on the contacts in their phone, mutual friends, and people tagged in posts made by people the users follow. Based on the popularity of other social media apps with a similar purpose, users may spend between 1-2 hours per day using our software. Users will need very minimal technical skills to be able to use our software since everything that they will be using they will be guided through on the fundamentals of our software.

5. **List of High-Level Functional Requirements**

- Account creation page: When the user opens the app or software for the first time, they will be prompted to either sign in or create an account. If they choose the option to stay signed in, they will automatically be signed in the next time they open it. If not, then they will have to sign in using their credentials.
- Main page: This is where people would make posts. They can post about what they want, and other people can reply to those posts. On this page, we would also have all the posts from the people this user follows. Users can post text, pictures, links, and videos
- News page: Have a news page with information about what's currently happening. We can use an API for the news with a search bar so the user can search for the city they are interested in.
- Account page: This would be the user's account page where they can see all the posts they have created. They would be able to edit their profile by changing their profile picture, adding a bio, etc. They can also see a list of their followers and they can view and manage who they follow.

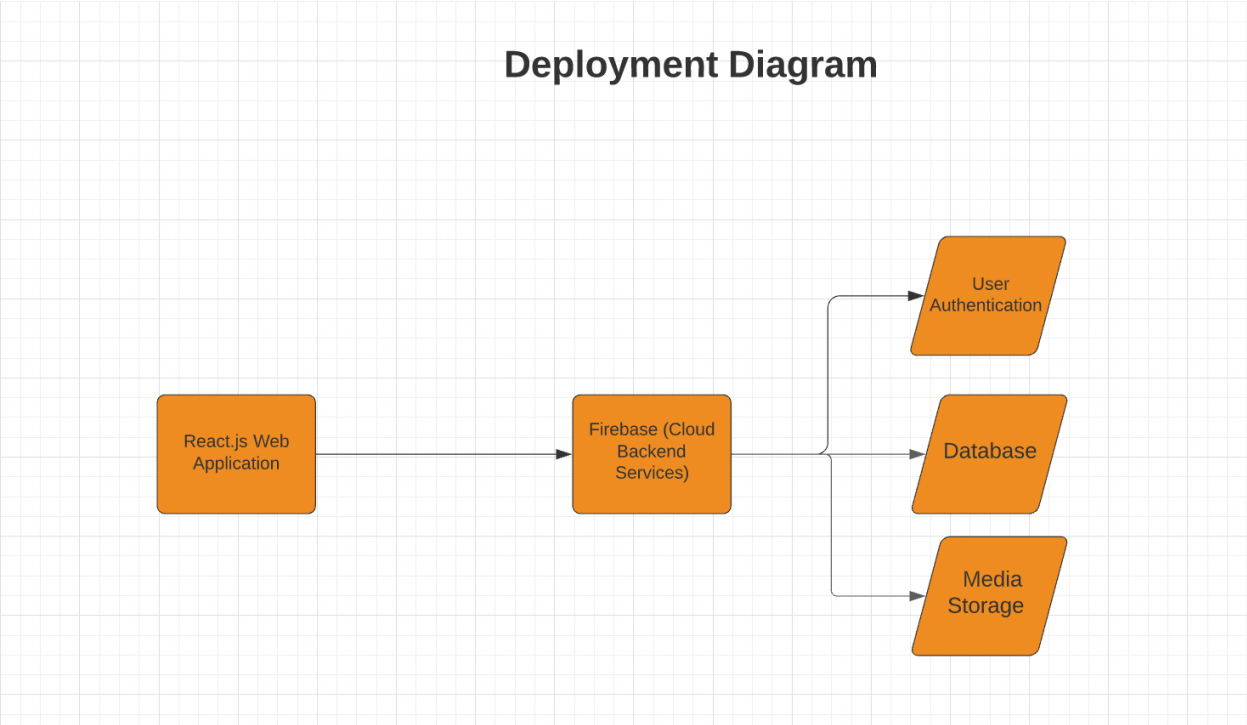
6. **List of non-functional requirements**

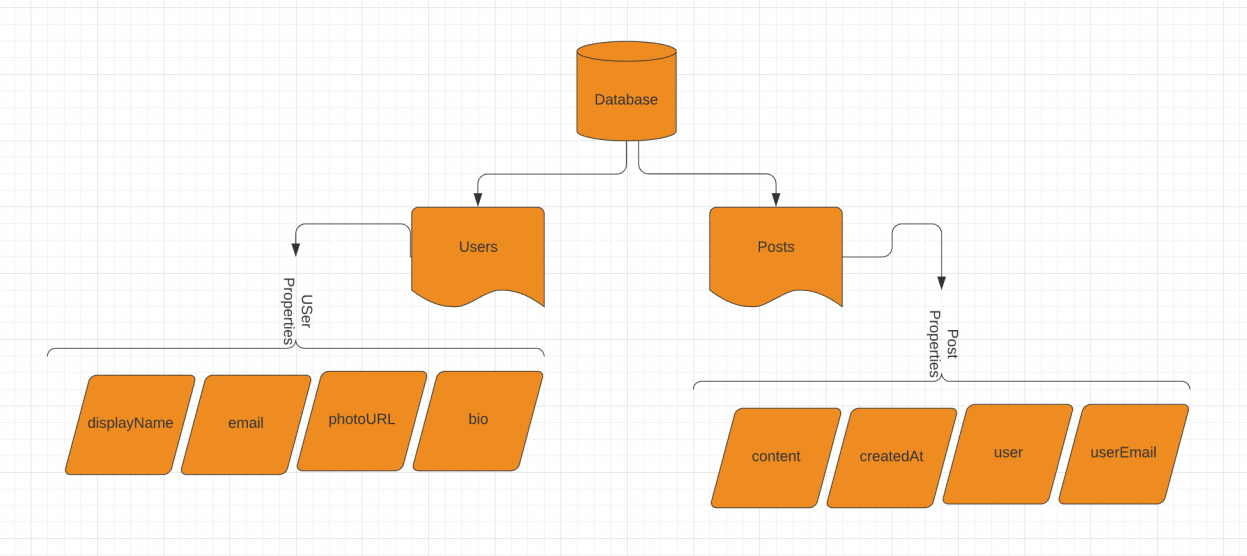
- The app needs to run on the 2 latest versions of all major web browsers.
- Data storage on a database in the server
- User privacy should be protected, and privacy policies should be communicated to the user
- Language of the app should be English
- Intuitive, easy to use site
- Attractive and with lots of information
- Registration and login for security
- Make the site easily searchable on major search engines
- Performance of the app, the goal is to have minimal load time for posts.
- The app should be easily accessible to users and the registration and login process should be simple yet secure.
- Password requirements should ensure that the users use a strong password.

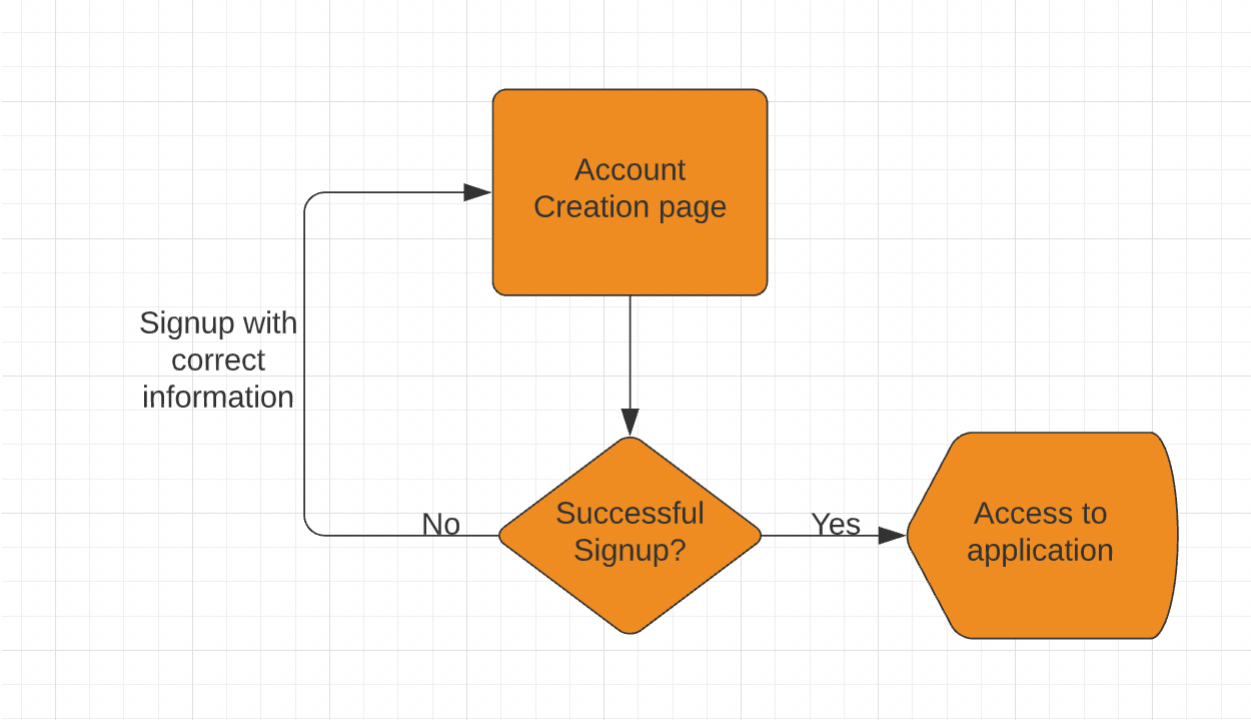
7. **High-level system architecture**

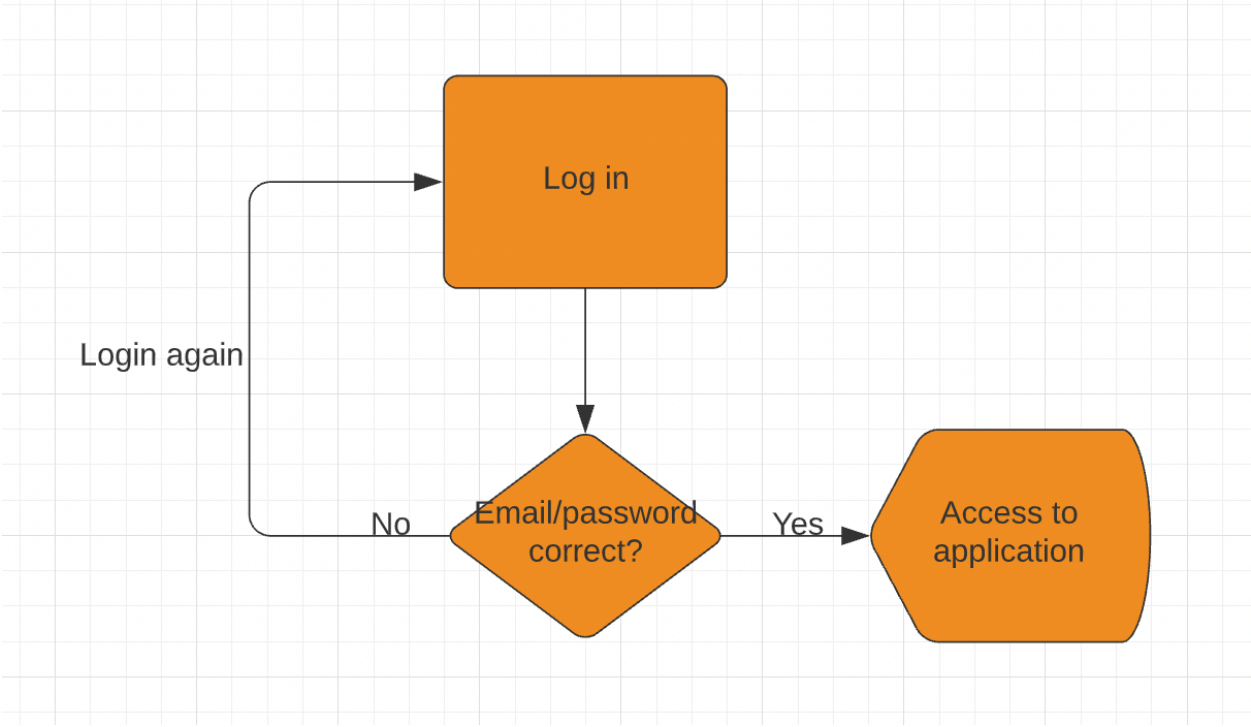
    a. **Frontend:** For the frontend of our site, we will use the React.js framework. This framework is very popular and will serve as an excellent way to develop the frontend of our site.
    b. **Backend:** For the backend of our project, we shall use the lamp server and Firebase, Google's BaaS (Backend as a Service). Firebase will handle the user authentication, cloud storage, real-time database, security, and other features necessary for the development of this project. All data will be held in the cloud through Firebase which also offers all the necessary security, since the data is held on private servers on Google's most secure data centers.
    c. **Communication:** Jira will be used to distribute the work between our group members, as well as to coordinate tasks and to communicate on the tasks for further clarification. GitHub will be used for version control and to make sure all changes are kept up to date across team members.
    d. **Development:** Visual Studio Code will be used for development, as this editor provides all the necessary tools for development and is also the most popular development editor for React.js. The languages used will be JavaScript, with components being designed in HTML and CSS. Custom components with React might be used as well for design purposes.

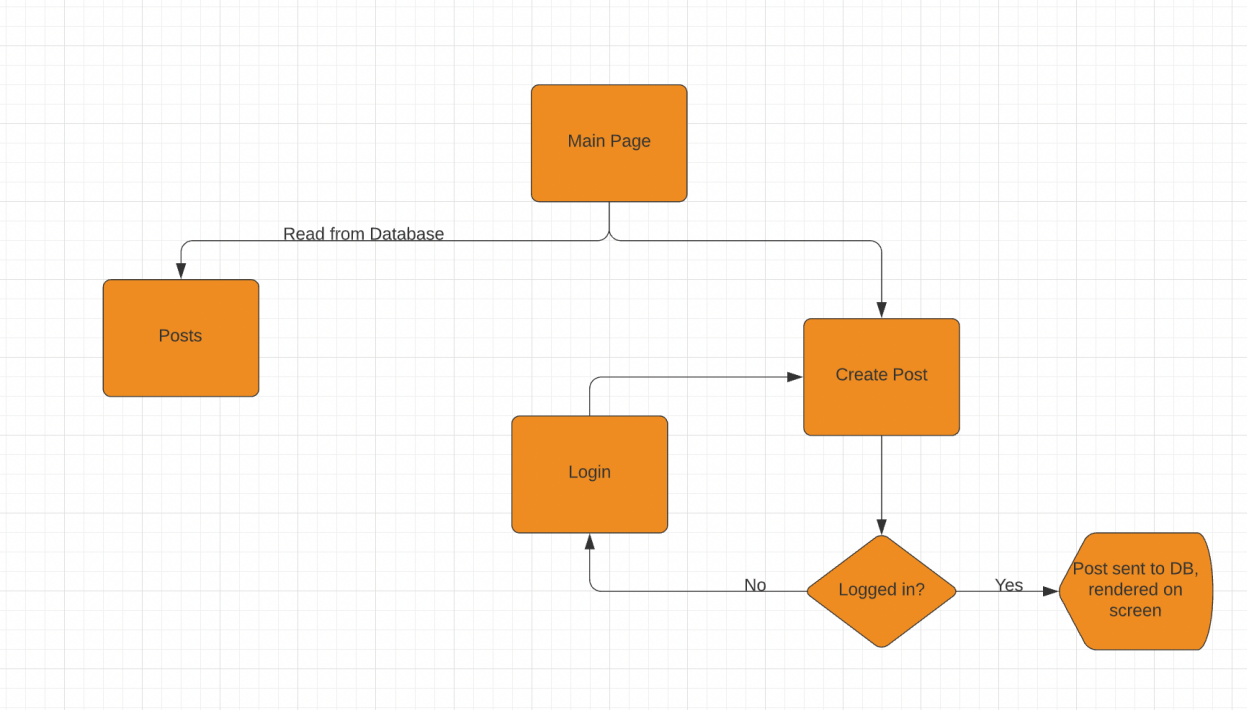
8. **High-Level UML Diagrams**

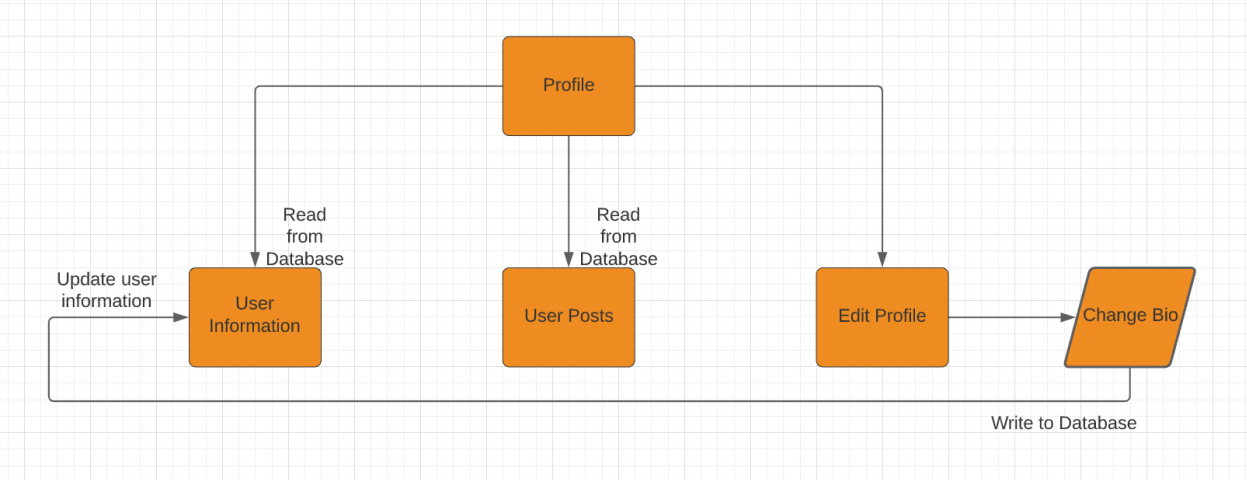





Account Creation page
Signup with correct information
Successful Signup?
No
Yes
Access to application


Log in
Login again
Email/password correct?
No
Yes
Access to application





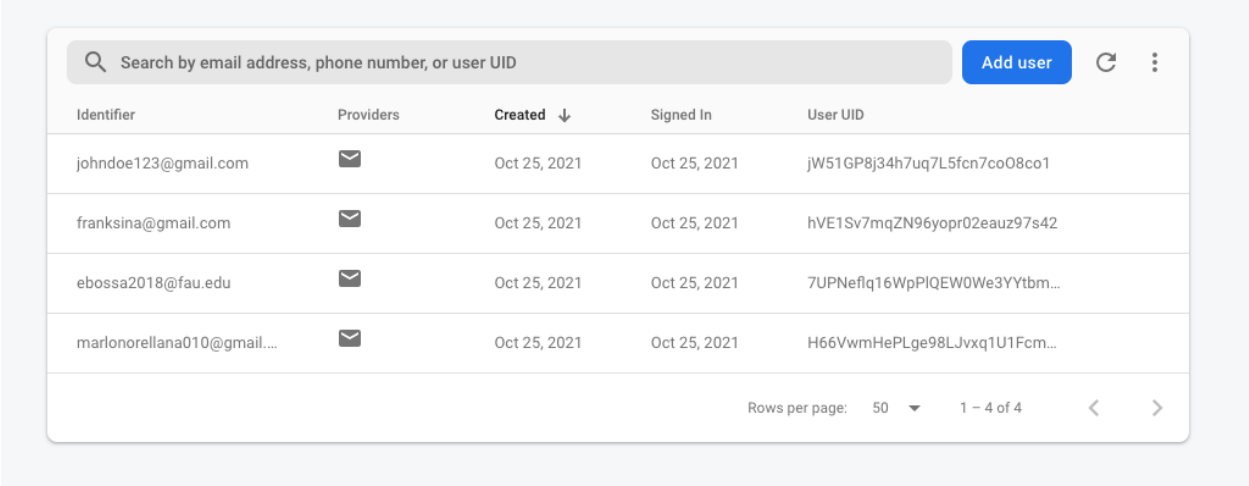
9. **Identifying risks and Actions**
    a. **Skills Risks:** Our team overall is on the same page with our skillset. Some members are more experienced in others in different areas, however. This is allowing the team to learn from each other and build on areas of weakness as we move through the assignment.
    b. **Schedule Risks:** Continuing on the track our team is working as well as using the resources our team has used to keep on track with the assignment, the team is in a good spot moving forward and does not see any setbacks.
    c. **Technical Risks:** Though the core functionality is implemented, as developers we want to improve the user experience and the user interface for a more pleasant experience for our users. We plan on adding better UI elements and to make

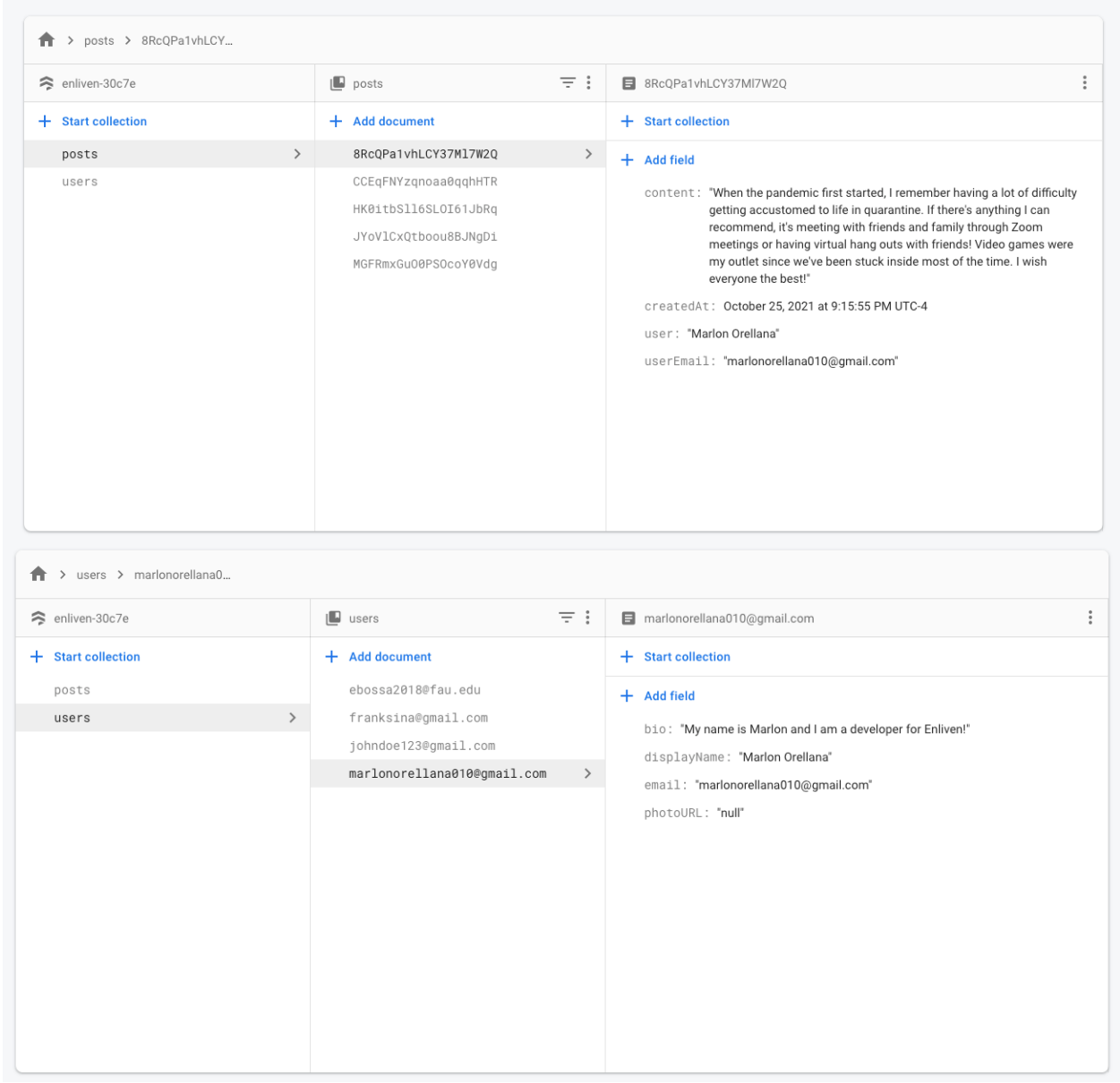
other changes in order to provide a good user experience. These technical risks might take some effort but we strive for good software.

d. **Teamwork Risks:** Our team does a great job communicating and making sure everyone is holding up their end of the project using their specific strengths and helping other members when needed. The only potential risk as a team is finding common availability to be able to go over aspects of this project.
e. **Legal/ Content Risks:** Our team does not have any copyright or legal aspects that would need special licensing or rights.

10. **Website Link:**
https://enliven-group21.github.io/enliven-project/

11. **Database Schema:** Here are screenshots of our user authentications and database schemas.

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Start collection
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JYoVlCxQtboou8BJNgDi
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Add field
content: "When the pandemic first started, I remember having a lot of difficulty getting accustomed to life in quarantine. If there's anything I can recommend, it's meeting with friends and family through Zoom meetings or having virtual hang outs with friends! Video games were my outlet since we've been stuck inside most of the time. I wish everyone the best!"
createdAt: October 25, 2021 at 9:15:55 PM UTC-4
user: "Marlon Orellana"
userEmail: "marlonorellana010@gmail.com"
users > marlonorellana0...
enliven-30c7e
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Start collection
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marlonorellana010@gmail.com
Add field
bio: "My name is Marlon and I am a developer for Enliven!"
displayName: "Marlon Orellana"
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