Project Proposal - TeemNaem

Project Description

Our project is a note sharing "social media" app, similar to an Instagram/Twitter clone but specialized for sharing notes. It is for students who would like to help or get help from other students. Students may want to prepare for future classes or miss classes due to illness, being able to easily share notes helps overcome these issues. Users will use this app to view and store their notes and share them with others. Images and text data will be stored for a user to view and share with other users. A nice feature to add would be phone integration so users can take pictures of their notes with their phone camera and have them uploaded and processed directly on the app. Additional features that would be good to add would be a text-to-speech function or a handwriting-to-text functionality using available online libraries.

Minimal Requirements

- Have a login page.
- Users can upload pictures of their handwritten notes or typed notes and edit/share them:
    - Users should be able to upload images to their account.
    - Users should be able to tag notes with specific topics (i.e. CPSC 221, lambda calculus, macroeconomics, etc)
    - Users should be able to determine if a note can be shared or should be private
    - Users should be able to add additional notes/annotations/description to their notes
    - Users should be able to share specific notes with no one, individuals, or everyone
- Users can store their notes in folders
    - Users can create folders to keep their notes organized
    - Users can select a folder when they initially upload their note
    - Users can move notes from one folder to another
    - A user can put a link to another user's note in a specific folder.

User profiles that say what subject of notes you generally will have and an about you page. We can have a search function so you can find other people with notes you want. Could even break it down by UBC class (i.e CPSC 221, 320, etc). Users can search for pre-defined subjects, not for anything.

Additional Requirements

- Add an authentication system for logging in (hashed passwords, cookie/JWT to visit only authorized pages)
- Add stripe integration so users can monetize their note sharing.
- Have functionality whereby a user can take a photo of their notes and they will be digitized.
- Users can "follow" other users and get updates when they post new public notes. These users can be on a "friends list".
- Users will be able to download notes so they can access them offline.
- Have a text-to-speech function so notes can be read back and listened to.
- Handwriting to text functionality (using computer vision and AI library) to turn images of handwritten notes to text.
- Have a "feed" where users can see recently published notes by their friends.

Stretch requirements

- Dockerize the project so that anyone can use it easily
- Add typescript to keep things more organized.
- Add a chat functionality so two users can direct message each other
- Add the ability for a mobile user to directly upload their notes from their phone via their taking a picture.

Preliminary Sketches