

Mobile Devices

CSCI-4100U

Project Proposal

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Date: October 1, 2024

Overview of Project

Our project is a notes app, called *BrainWave* for Android using Flutter. The app will allow users to create, edit, and organize notes in the folders they create. It includes features such as time-based reminders, AI-powered suggestions, user authentication, camera compatibility, and file attachment options such as screenshots. Data will be stored locally using SQLite for offline access and synced to the cloud via Firebase Firestore for online storage.

List of Group Members and Responsibilities

1. **Harsh (100820984):** Responsible for implementing note-taking functionality, including folder creation, editing, saving, and also for reminder features. Will also assist Andres with SQLite and Firebase.
2. **Mirisan (100818162):** Responsible for front-end and back-end development of AI features, including suggestions, integration, and chats. Will also assist Andres with overall front-end development.
3. **Andres (100826914):** Responsible for the overall frontend development, including UI/UX design, navigation between multiple screens, and implementing folder structure UI and will work on SQLite and Firebase for data storage.

List of Features

Core features:

- Folder structure: to organize notes within
- Note editor: to create and edit existing notes
- Reminders: used to set both time-based and location-based (geolocation) reminders for their notes
- File attachments: can attach files, like screenshots to their notes
- AI suggestions: will offer suggestions to improve notes (e.g., summarize the content)
- Authentication: secure login using Firebase authentication, with notes stored and synced

- Local/cloud storage: data will be stored with SQLite locally and synced to Firestore when the user is online

Where features will be used:

- Folder creation: on the main screen, users can organize the structure on the left-hand side
- Note editor: users can add and edit notes within the folders
- Reminders: users can set these on a different screen on notes of their selection
- File attachments: inside the note editor, users can tap on the attach images button to use it
- AI: users can tap on the AI suggestion button within the note editor which will take them to a new screen to summarize and provide suggestions

Code Design

The UML diagrams are placed in the “design” folder, with both the UML for the database and the UML for the application functionality.

Mock-up of UI

The UI mock-ups are placed in the “mock-up” folder, with images of the login screen, notes folder structure, notes edit, AI suggestions, settings screen, and features like voice-to-text.