**StudyBuddy**

**KDA Group**

**Proposal**

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# Overview:

Our group has decided to make a Study App named StudyBuddy. We decided on this app because as students ourselves we though this app would be incredibly useful. The primary goal of the app is to assist students in organizing their busy and chaotic school lives and give a central place to find their notes, upcoming projects, and homework and to prepare for exams with built in Study Schedules. These concepts are then enhanced by using the techniques taught in this class to send notifications to users based on location or time. Their information is stored both locally and, on the cloud, to allow for seamless movements between devices and to overall make a student’s life easier.

# Meet the Team:

Our small development team consists of Kishore Muralitharan, Alyssa Tian, and David Watt. For this project, we will all be taking active development roles in the project and working together to achieve all our feature goals. In this proposal, Alyssa Tian was the artist who created the mock-up images of our app which will be used to allow for quick design of our app’s visual architecture. David Watt oversaw the creation of the UML diagram which we will then use to begin framework development. Finally, Kishore Muralitharan oversaw creating a feature list and the drafting of this proposal. There are also parts and sections of this proposal that were generated with the assistance of ChatGPT to augment the work.

### Feature Assignment

Kishore M.:

High Priority Tasks:

* Backup/Sync
* Canvas API Calls (HTTP)
* Offline Access

Low Priority Tasks:

* Subject Notes and Resources
* Dark Mode and Theming

Alyssa T.:  
 High Priority Tasks:

* User Registration and Profile
* Progress Visualization
* Reminders and Notifications

Low Priority Tasks:

* Gamification
* Calander Integrations

David W.:

High Priority Tasks:

* Task Management
* Study Schedule
* Progress Tracking

Low Priority Tasks:

* Search Functionality
* Settings and Customization
* Goal Setting

# Features:

Tasks marked with an underline hold a higher priority then those that are not marked with an underline, these are tasks that are required to ensure that we meet basic functional requirements, and all remaining features are to be then added worked upon once the basic functional requirements are meet.

### High Priority Features:

**User Registration and Profiles:** User registration and login functionality are essential features for any task management app, ensuring secure access for users. Alongside this, the app provides a robust user profile management system. Users can add personal information and upload a profile picture, making the app more personalized. This customization helps users identify and connect with their tasks and study schedules more intimately.

**Task Management:** The app empowers users with comprehensive task management capabilities. Users can effortlessly add, edit, and delete tasks or assignments. The system allows tasks to be categorized based on various parameters such as subject, priority, due date, and type. Moreover, users can set deadlines and due dates, ensuring a structured approach to task completion. The app also sends automatic task reminders and notifications, keeping users informed and on track with their assignments.

**Study Schedule:** The app facilitates the creation of personalized study schedules, allowing users to allocate specific time slots to different subjects or topics. Users can customize study sessions by setting durations and breaks, tailoring their study routine to their preferences. Additionally, the app supports recurring study schedules, offering flexibility for daily or weekly study plans. This section of the app will meet the requirements for Dialogs and Pickers as we intend on using a calendar pop dialog to set some of these schedules.

**Progress Tracking:** Progress tracking features provide users with valuable insights into their study habits. Users can monitor completed tasks and assignments, enabling them to gauge their productivity. The app analyzes study progress over time, generating reports and statistics on completed tasks and study hours. These insights empower users to make informed decisions about their study strategies.

**Reminders and Notifications:** The app employs push notifications to remind users of upcoming tasks, deadlines, and study sessions. Users can customize their notification preferences, tailoring the app's reminders to suit their needs. Moreover, the app offers location-based notifications, reminding users to study when they are at home based on geolocation data. This meets the basic functional requirement of notifications.

**Offline Access:** Ensuring uninterrupted access to study plans and tasks, even without an internet connection, is a priority. The app allows users to work offline, syncing data seamlessly when the device reconnects to the internet. This feature guarantees users can stay productive regardless of their internet connectivity. When the user is offline a snack bar pops up with notify the user of this and inform them that sync is paused until connection is re-established. With another snack bar notification when they are back online, meeting the functional requirements of a snack bar.

**Progress Visualization:** Visualizing progress is crucial for motivation and self-assessment. The app employs visual progress bars and charts to track completion rates and study time. Furthermore, heatmaps identify peak study times, enabling users to optimize their study schedules based on their most productive hours.

**Backup and Sync:** Cloud storage integration ensures users' data is safe and accessible across multiple devices. The app provides cloud backup and synchronization features, allowing users to seamlessly switch between devices while retaining their study plans and task progress. All Calander tasks, reminders and such data are stored locally in an SQLite Database and also backed up to the cloud in a online Database like Firestore or other such services that best meet our needs.

**Canvas Access:** The app enhances user convenience by allowing the integration of Canvas through API keys. Users can pull their to-do list of upcoming assignments directly into the app, consolidating all their tasks and study materials in one place. This integration streamlines the studying process, minimizing the effort required to manage assignments from different platforms. This part of the app will make the HTTP requests to Canvas with the Users Canvas API Key to get info on upcoming assignments.

### Low Priority Features:

**Calendar Integration:** Seamless integration with device calendars is a key feature, enabling users to visualize their tasks and deadlines alongside their other commitments. By synchronizing with their calendars, users can maintain a holistic view of their schedules, aiding in effective time management.

**Goal Setting:** Setting academic goals is made easy with this app. Users can define their objectives and break down larger goals into manageable tasks. The app helps users track their progress toward these goals, fostering a sense of accomplishment and motivation as they achieve milestones.

**Subject Notes and Resources:** The app serves as a centralized hub for organizing study materials. Users can store and categorize class notes, lecture slides, and study resources. Additionally, the app allows users to attach various resources like PDFs, images, or links to specific tasks. This streamlined access to study materials within the app enhances the overall studying experience.

**Dark Mode and Theming:** While a lower priority, the plan is for the app to offer support for dark mode and various themes. This customization option allows users to personalize their app interface, enhancing user experience, especially during nighttime study sessions.

**Gamification and Motivation:** Another lower priority feature is to enhance user engagement; the app incorporates gamification elements. Users can earn achievements, rewards, or points, making the studying process more interactive and enjoyable. Additionally, motivational quotes or messages are integrated to inspire users, fostering a positive attitude toward their studies.

**Search Functionality:** The app features a robust search functionality, allowing users to quickly locate specific tasks, notes, or resources. Advanced filtering and sorting options further enhance user efficiency, enabling them to organize and find their study materials with ease.

**Settings and Customization:** Users can customize their app preferences to align with their individual needs. This includes settings such as time zone and date format, providing a tailored user experience. Personalization enhances usability, making the app more intuitive for users.

## UML:

A diagram of a computer

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## User Interface Mock-up:

A screenshot of a blue study app

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**Figure 1-1: Home Page/Login Page**

**A screenshot of a login form

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**Figure 1-2: Profile/Registration Pages**

**A screenshot of a computer

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**Figure 1-3: Task Management**

**A screenshot of a calendar

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**Figure 1-4: Calendar/Feedback and Support**

**A screenshot of a computer screen

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**Figure 1-5: Support/Feedback Pages**

**A screenshot of a progress tracker

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**Figure 1-6: Progress Tracker/Settings Page**

**A screenshot of a blue study schedule

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**Figure 1-7: Upcoming Page/Calendar Page**

**A screenshot of a computer screen

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**Figure 1-8: Calendar Tasks/Manage Subjects**

**A screenshot of a computer

Description automatically generated**

**Figure 1-9: Subject/Notes Pages**

**A screenshot of a blue screen

Description automatically generated**

**Figure 1-10: Navigation Menu**

**References**

**O**penAI. (2023, October 8th). ChatGPT [GPT-3.5 model]. Retrieved from https://www.openai.com