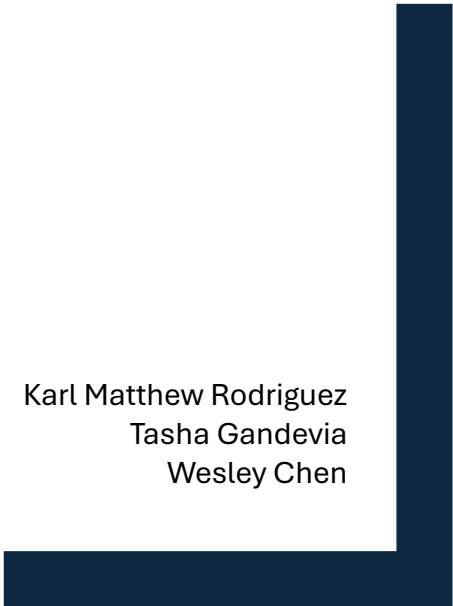




Group 20 - Waves

PROJECT PROPOSAL: STUDY BUDDY



Karl Matthew Rodriguez
Tasha Gandevia
Wesley Chen

Overview of the Project

Where the idea came from:

The idea stems from the challenge students face in maintaining focus while studying, especially with distractions like social media or ADHD. These interruptions can negatively impact academic performance, highlighting the need for a more focused study environment.

Why it's important:

The website helps students stay organized and focused, allowing them to manage their time and study more effectively. By reducing distractions and offering AI-driven support, it empowers students to overcome challenges and reach their academic goals.

Potential users and their needs:

First-year to final-semester students: Need help organizing busy schedules, managing assignments, and allocating study time. The website reduces the stress of academic responsibilities.

Students with good time management: Benefit from additional tools to further enhance their study efficiency and stay ahead of deadlines.

High and low GPA students: High achievers can reinforce learning, while lower-performing students need help with time management and study strategies. Both benefit from personalized study tools.

How it fulfills those needs:

The integration with Google Calendar helps students manage study sessions and deadlines, while the Gemini AI API offers personalized flashcards and quizzes from their notes. Progress tracking allows students to focus on areas needing improvement. This combination of time management and tailored study tools serves students at all levels.

Personas



Name: Alex Martinez

Age: 22 years old

Education: Second-year Computer-Science student

Lifestyle: Lives in a shared apartment near campus, juggles between classes, part-time work, and a social life.

Skills: Tech-savvy, good at multitasking, efficient with basic coding, and has a solid grasp of study techniques like flashcards and quizzes.

Goals:

- Improve grades and stay organized with assignments
- Minimize distractions during study time and maintain consistent focus
- Use tools that can help him absorb material more effectively, like flashcards or quizzes

Challenges:

- Constant distractions from social media and gaming during study time
- Procrastinates and struggles with time management
- Needs a way to break down large assignments and stay motivated throughout longer study sessions



Name: Lisa Johnson

Age: 36 years old

Education: Third-year Computer-Science student

Lifestyle: Married with two young children (ages 7 and 9). She is a full-time student while managing household duties and caring for her kids. She often studies late at night when the house is quieter, or in short spurts throughout the day between her kids activities.

Skills: Strong organizational skills in managing her household and studies, skilled at time-blocking for productivity, and adept at using apps like Google Calendar.

Goals:

- Stay focused during limited study hours (usually evening)
- Use personalized study tools, such as quizzes and reminders to maximize efficiency
- Manage ADHD symptoms by setting clear, structured study periods with breaks

Challenges:

- ADHD makes it hard to stay focused for extended periods of time
- Balancing study time with family responsibilities is a major stressor
- Needs tools to manage time effectively and reminders to help stay on track



Name: David Kim

Age: 28 years old

Education: First-year MBA student, studying abroad in Canada

Lifestyle: Lives in a small dorm room on campus, far from family and friends. Balances his studies with part-time work at a university research centre. He frequently engages with international student events and uses video calls to stay connected to his family back home.

Skills: Proficient time management, adaptable to new environments, and fluent in multiple languages. Familiar with using various study tools and apps for academic success.

Goals:

- Excel in his MBA program to secure a job in an international business role.
- Manage his time effectively between school, part-time work, and personal life
- Stay connected with his culture and family while adjusting to life abroad

Challenges:

- Struggles with feeling isolated and homesick at times
- Managing a rigorous academic workload while working part-time
- Navigating language barriers and cultural differences in academic settings

API's

Gemini AI API

Gemini is Google's AI project developed by DeepMind. It's a sophisticated AI system that competes with other leading models like OpenAI's GPT. It can generate text, answer questions, aid in research, and more.

Google Calendar API

Google Calendar is a time management and scheduling tool developed by Google. It acts as a day planner, giving users an overview of their schedule. Users can schedule events, set reminders, and receive notifications. They can also sync their calendar with another user.

YouTube API

YouTube, also created by Google, is a video-sharing platform that allows users to upload, watch, and share videos.

Spotify API

Spotify is a music streaming service that allows users to listen to music, podcasts, and other audio content. It allows users to create and share playlists, invite others to listen in real-time with you, and more.

Features

Gemini AI API

For our features, we plan on implementing auto-generated flashcards based on the user's prompt, auto-generated quizzes based on the topic the user gives along with how many questions are needed and the difficulty of the quiz all given by the user, and the user being able to ask the AI questions about their homework and receive hints for questions.

Google Calendar API

For our features, we plan on allowing the website to send out reminders for events like exams, sync and display events from the user's Google Calendar, display the current date and time, and for the user to add events to their Google Calendar.

YouTube API (backup)

For the features of the website, the users can search for YouTube videos on the website, the website can display YouTube videos based on what the user searches, and the users can play their YouTube playlists.

Spotify API (backup)

For the features, the user can search any song available on Spotify, play songs that they type in, and be given suggestions for music based on their recently listened to songs.

User Story

Google Calendar

Set reminders

As a busy student with many commitments, I want to receive study reminders synced with my calendar so that I can stay on top of my assignments and deadlines without missing anything.

As a student with ADHD, I want reminders sent regularly to refocus me on tasks so that I can avoid getting distracted and stay on track.

Sync and display calendar events

As a student who needs to stay organized, I want my class schedule and study sessions synced so that I can see all my tasks and events in one place without switching between websites or apps.

As a student who also works part-time, I want to sync my work shifts and study schedule into the website so that I can manage my time effectively and plan around commitments.

Display current date and time

As a student who forgets deadlines, I want to always see the current date alongside my study plan so that I can easily track when assignments and exams are approaching.

As a student planning my week, I want to quickly view today's date and upcoming events so that I can plan my study sessions accordingly.

As an international student, I want to see the time back home alongside the current local time so that I can plan my study sessions around a good time to contact my family without missing important study deadlines.

Adding items to calendar

As a student who picks up last-minute shifts at work, I want to be able to add tasks and study sessions, along with working hours, to my calendar so that I can immediately plan how to spend my time and get organized.

Gemini AI

Flashcards:

As a student who wants to study more efficiently, I want to create flashcards automatically based on my study materials, so that I can quickly review key concepts without manually inputting data.

As a student who struggles with organizing information, I want AI to categorize and create

flashcards from my notes, so that I can have a well-organized and structured study set for quick reference.

Create quizzes:

As a student preparing for an exam, I want to generate quizzes based on specific topics I am struggling with, so that I can test my knowledge and improve my understanding before the exam

As a student with limited study time, I want AI to create quizzes from my notes, so that I can quickly assess my learning progress without spending time designing the quiz.

Ask questions:

As a student who needs immediate help, I want to ask questions to the AI chatbot when I don't understand a concept, so that I can get a quick, accurate answer without searching through textbooks.

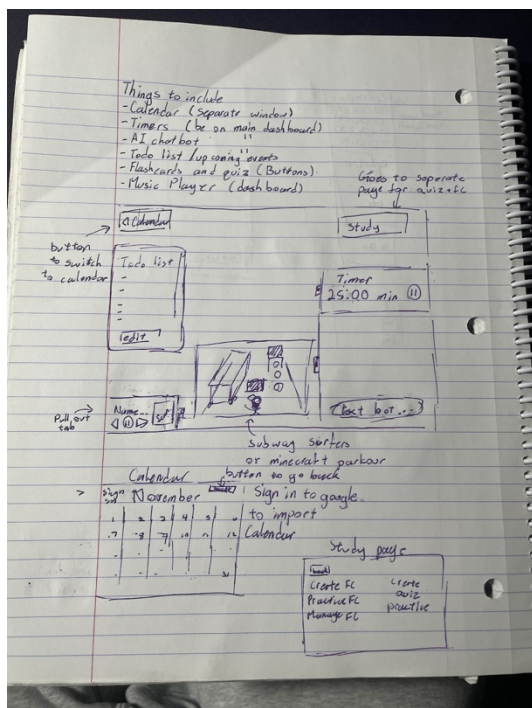
As a student working late at night, without access to a tutor, I want to use the chatbot to clarify doubts, so that I can continue studying without being stuck on difficult concepts.

Get hints about questions

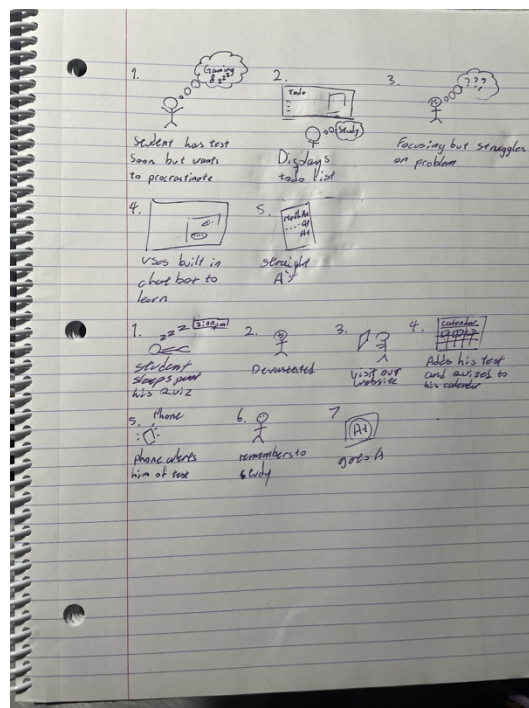
As a student stuck on a difficult problem, I want to get hints from AI so that I can have a better understanding of the question and concept without immediately seeing the full answer.

As a student trying to solve practice problems, I want to get progressive hints from the AI, so that I can learn by solving the problem myself with guidance.

Storyboard of application interface/features



Application Interface



Application Storyboard

Front end tech stack

The front-end technology stack for our project will be JavaScript, HTML, and CSS. We chose to work with this tech stack because these are the languages needed to develop fully functioning websites. We chose not to go with a framework, like React, because since we are all not very experienced in web development, adding in a framework would make coding the project much more confusing for all of us. It would also take time away from making the project because we would need to spend time learning the framework first.