EduZen is a web-based AI-powered platform for students, built to run in a browser and integrate with Google services.

**📌 Revised Project Scope: AI Study Buddy & Well-Being Assistant (EduZen)**

EduZen is a lightweight AI-powered assistant designed to support students both academically and emotionally. Instead of building a complex learning management system, EduZen focuses on delivering **core, meaningful features** using Google AI technologies. The system offers two major components: an **AI-Powered Study Companion** and an **AI-Powered Well-Being Assistant** that work hand-in-hand to improve learning efficiency while reducing academic stress.

**🌟 AI-Powered Study Companion**

The AI Study Companion allows students to upload images of lecture notes or textbooks. The system uses **Google Cloud Vision API** to extract text, which is then summarized into key points using **Google Gemini API or Firebase ML Kit**. The assistant automatically generates multiple-choice quizzes and flashcards based on the content, helping students revise quickly and interactively.

The interface is built for simplicity, allowing students to easily interact with their generated study content. Users can also revisit their past learning materials through a progress tracker and optionally export the generated summaries and quizzes to **Google Docs**, **Google Drive**, or deploy quizzes through **Google Forms**.

**🧘 AI-Powered Well-Being Assistant (Built into the AI Tutor)**

EduZen’s AI Tutor is more than just a study tool — it also acts as a mental health companion. Through **Google Dialogflow**, students can chat with the AI to seek guidance or simply express how they’re feeling. The assistant uses **Firebase ML Kit** to perform sentiment analysis and detect stress levels in user messages. If signs of stress are detected, the assistant will respond with supportive messages, motivational quotes, guided breathing exercises, or suggest taking short breaks.

This functionality ensures that EduZen doesn’t just push productivity — it promotes a healthy, balanced study experience. Additionally, the system can schedule reminders for study or rest using **Google Calendar**, helping students maintain a productive rhythm without burning out.

**⚙️ Key Technologies Used**

* **Google Cloud Vision API** is used for OCR to extract text from uploaded images of study material.
* **Google Gemini API / Firebase ML Kit** powers summarization and quiz generation.
* **Google Dialogflow** enables chatbot interactions for both study help and emotional support.
* **Firebase** provides backend support for user data, chat history, and sentiment analysis.
* **Google Calendar, Docs, Forms, and Drive** are used for scheduling, exporting, and storing content.

**🔗 Extended Google Platform Integrations**

EduZen is designed with scalability in mind. Here’s how it can connect with existing Google platforms for greater accessibility and impact:

* **Google Classroom**: EduZen can be integrated as a virtual study assistant, offering AI-generated summaries and quizzes within student assignments. It can also detect learning challenges and recommend personalized study plans.
* **Google Meet**: During online classes, EduZen can serve as a real-time note-taker or study assistant. It can summarize discussions or suggest quick revision questions based on the ongoing lecture.
* **Google Assistant**: Students can interact with EduZen using voice commands like “Summarize Chapter 5” or “Create a quiz from my notes,” making the assistant accessible on the go.
* **Google Docs and Drive**: EduZen allows students to save their summaries, flashcards, and quizzes directly to their Google Drive or Docs for future reference.
* **Google Forms**: AI-generated quizzes can be instantly formatted into interactive Google Forms, making it easy for teachers or students to share tests.
* **Google Sheets**: The system can log student performance and quiz scores, allowing for simple analysis of learning progress.
* **Google Calendar**: EduZen can schedule personalized study plans, rest breaks, and motivational check-ins to help students stay focused without overwhelming themselves.
* **Google Translate**: For students from different backgrounds, EduZen can translate AI-generated materials into multiple languages, promoting inclusivity and accessibility.