


Project Proposal

 Status	In progress
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AI Study Tool

Software Mobile and Development

Project Proposal: AI-Powered Study Assistant App

Technology Stack: Kotlin (Android), Firebase & SQL Lite (Backend)

Project Overview

This AI-powered study assistant will enhance learning by summarizing lectures (both text and voice), retrieving key points, and generating quizzes—all while ensuring **offline access and automatic cloud sync**.

Scope

The AI-Powered Study Assistant is designed to assist students in

note-taking, summarization, and quiz preparation, making studying more efficient and organized.

Workflow

All these would be applicable once the student logs in

- Student can make tabs for different courses
- Student will have 2 choices
 - Record a lecture via voice
 - Use a book for making notes (data must be in textual form)
 - It would obviously have a limit of recording (voice / textual form)
- Lecture would generate important points which are stored
- Students can bookmark their favorite topics / recording
- Quizzes can be generated and scheduled

Features

Offline & Cloud Data Management

- **Cloud Sync:** Firebase
- **Offline Storage:** SQL Lite (Stores lectures & summaries)

User Authentication

- **Signup/Login using Email , Google Auth**
- **Secure sessions with Firebase Authentication**

AI-Powered Study Assistance

- **Text Summarization**
- **Important Lecture points**
- **Speech-to-Text (STT)**
- **Quiz Generation**

Lists & Search Functionality

- **Store lecture summaries as searchable lists**
- **Keyword-based search to find specific lectures**

Push Notifications

- **Reminders for upcoming quizzes**
- **Offline mode alert: Sync pending data when online**

Voice & Text-Based Lecture Processing

- **Text Lectures**
- **Voice Lectures**

Course Organization & Study Management

- **Create tabs for different courses.**
- **Bookmark important topics or recordings**

Group Study Mode (Collaborative Learning)

- **Students can share notes and summaries** with friends.
- **AI compares different notes** and finds missing points.

Image-to-Text (OCR) for Handwritten Notes

- Students can **take a picture** of their handwritten notes.
- AI **converts it into digital text** and **summarizes** it for easy reading.
- **GET/POST Images using Web APIs:** Upload & fetch images of handwritten notes from the server.