Chatbot Project: Study Bot

Project Title: Song Recommendation System

Project Description: This project involves building a Study Bot — an AI-powered chatbot that helps users ask questions related to study topics and remembers previous conversations using a database. The bot should be able to store chat history, provide contextual responses, and be deployed as a simple API **What is this project about?**

This project focuses on building a simple AI Study Assistant that can answer study-related questions and remember previous conversations using MongoDB.

Students will implement a chatbot using an LLM API, store chat history in a database, and deploy the application. This project helps understand how real-world AI assistants maintain context and persist user data.

What You Have to Do (Step-by-Step):

1. Set Up the Environment and install necessary packages
  - Install necessary Python packages (FastAPI, Uvicorn, langchain, langchain_groq, etc).
  - Set up environment variables for API keys and MongoDB URI.

2. Build the Basic Chatbot
  - Connect the chatbot to an LLM
  - Accept user input and return responses.

3. Add Database Memory (MongoDB)
  - Connect your app to MongoDB (local or Atlas).
  - Store user messages and bot responses.
  - Retrieve previous messages to provide context-aware responses.

4. Create Study Bot Logic
  - Add a system prompt
  - Allow users to ask academic or learning-related questions.

5. Deploy the Application
- Deploy using Render

- Ensure environment variables are configured. **What to Submit:**

Define what students must submit and in what format.

- A PDF report containing:

- Project overview and explanation of memory implementation - Github Repo containing all the coding files.

- Hosted API Link

- Sample API test screenshots (live link if possible) **Tips for Students:**

- Start with a simple chatbot before adding memory.

- Make sure MongoDB connection works before storing chats.

- Keep prompts clear to get better responses.

- Test deployment locally before pushing live. **Deadline:**

Submit your project by 22 February 2026, 11:59 PM in PDF form in the submission link - that will be shared by the admins.