

Objective

Build a simplified web-based system integrating a **Retrieval-Augmented Generation (RAG)** pipeline with a **Knowledge Base**. The system should allow users to:

- Upload documents to create a Knowledge Base.
- Query the Knowledge Base and receive AI-generated responses enriched with retrieved context.

Assignment Scope

You are required to develop a **full-stack web application** with:



Knowledge Base Management

- Upload structured/unstructured documents (**PDF, TXT, CSV, JSON**).
- Store and index documents using a vector database (**FAISS, ChromaDB, or Weaviate**).



Query & Response Generation

- Retrieve relevant content from the Knowledge Base.
- Generate AI responses using an LLM (e.g., **OpenAI, Hugging Face**).
- Show the retrieved context alongside the AI-generated response.



Tech Stack:

- **Backend:** Nest.js (TypeScript) with a minimal Express.js layer.
- **Frontend:** Vue.js + TailwindCSS.
- **Vector DB:** FAISS, ChromaDB, or Weaviate or anything open source.
- **LLM:** OpenAI, Hugging Face, or LlamaIndex.