

Full Stack Assignment

AI-Powered Collaborative Knowledge Hub (MERN + Gemini)

Goal: Build a MERN app where teams create, manage, and search knowledge documents, with Gemini AI providing **summaries, tags, semantic search, and Q&A over team docs**.

Backend

- **Auth:** Email/password + JWT.
 - Add **roles:** `user`, `admin`.
 - Admins can delete/edit any doc, users only their own.
 - **Documents API:** CRUD with fields:
`title`, `content`, `tags`, `summary`, `createdBy`, `createdAt`, `updatedAt`.
 - **Gemini AI integration:**
 - Summarize docs automatically on creation.
 - Generate intelligent tags.
 - Semantic search across docs.
 - Q&A: Ask Gemini questions, and it should answer **using stored documents as context**.
 - **Search API:**
 - Regular text filter.
 - Semantic search using embeddings.
-

Frontend

- **Pages:**
 - Login/Register
 - Dashboard → list of docs

- Add/Edit Doc → title, content input
 - Search Page → search + AI semantic results
 - **Features:**
 - Each doc card shows: title, summary, tags, author.
 - Button actions:
 - "Summarize with Gemini"
 - "Generate Tags with Gemini"
 - **Team Q&A tab** → input a question, Gemini answers from stored docs.
 - Tag-based filtering (chip-style filters).
-

Extra Layer of Complexity Optional

- **Versioning:** Each time a doc is edited, store a new version. Show a simple **doc history** modal (version + timestamp).
 - **Collaboration Hint:** Show last 5 edited docs and who edited them on the dashboard sidebar ("Team Activity Feed").
-

Deliverables

- GitHub repo with `client/` + `server/`.
 - `.env.example` with required keys (Mongo URI, JWT_SECRET, Gemini API key).
 - README with setup instructions + features overview.
 - Demo video showing:
 - User login → create doc → auto-summary + tags.
 - Semantic search.
 - Team Q&A.
 - Version history.
 - Activity feed.
-