






Workflow Steps

1. Project Setup (User-Selected Preferences)

- User uploads project documents (PDFs, DOCs, etc.).
- System applies **semantic chunking** and stores chunks in **FAISS** (vector database).
- User selects an **agent** (e.g., Python agent for code-related tasks).

2. User Interaction & Query Handling

- User asks a question or requests debugging, code generation, or idea assistance.
- **Request Categorization System** determines the query type:
 -  **General Idea Inquiry** → AI generates a response.
 -  **Project Document Reference** → System retrieves relevant sections.
 -  **Code Generation / Debugging** → AI fetches relevant project context.
- System asks for confirmation: *“Are you referring to this section?”*
 -  **Yes** → AI proceeds with requested action.
 -  **No** → AI refines search and retries.

3. AI Processing & Execution

- **LangChain** processes the request.
- **Gemini AI** generates a response based on the retrieved project context.
- If the request involves code, the **selected agent** assists in execution.

4. Response & Chat Storage

- The AI sends back the response.
- **MongoDB** stores the conversation for future context reference.
- If needed, past conversations are **automatically referenced** to maintain continuity.