Basic Project Plan

Phase 1: Foundation

Tasks:

1. Environment setup and basic project structure
2. Database schema design
3. Basic web scraping implementation
4. Document processing pipeline setup

Phase 2: Core Features

Task 1: Vector Database Integration

About:Setting up and integrating the vector database for embedding storage and retrieval.

Approach:

- Configure Qdrant
- Implement embedding generation
- Create storage procedures
- Set up retrieval mechanisms

Key Learning Needed

- Vector databases
- Embedding concepts
- Similarity search algorithms
- Performance optimization

Importance:

Critical for efficient similarity search and context retrieval in the RAG system.

Task 2: RAG System Implementation

About: Building the core RAG system with context retrieval and generation capabilities.

Implementation Approach:

- Integrate LLM API
- Implement context retrieval

- Set up prompt templates
- Create response generation pipeline

Key Learning Needed:
- LLM concepts
- Prompt engineering
- Context window management
- Token handling

Importance:
This is the core functionality that enables intelligent document interaction.

Phase 3: Enhancement
Task 1: Frontend Development
About:Creating the user interface for document upload and interaction.

Approach:
- Set up frontend framework
- Create upload interface
- Implement chat UI
- Add progress indicators

Requirements:
- Next.js/Nuxt.js
- Real-time updates
- File upload handling
- User feedback mechanisms

Phase 4: Finalization
Task 1: Testing and Optimization
About:Comprehensive testing and performance optimization.

Task 2: Deployment