POC: Agentic AI for Legal Professional Support

This Proof of Concept (POC) demonstrates an Agentic AI system designed to support legal professionals in the Indian context. The system focuses on two major legal frameworks: the Bharatiya Nyaya Sanhita (BNS) and various banking and financial acts commonly referred to as BSA. The objective is to create an intelligent assistant that can answer legal queries, assist with research, and support drafting or reviewing tasks.

Technical Architecture

The system consists of:

- A Streamlit frontend: Provides an interactive UI where legal professionals can ask questions.

- A Flask backend: Acts as an API server that connects the frontend to the AI model.

- Gemini AI model: Used as the core intelligence to process legal questions and generate answers.

- A JSON-based knowledge base: Stores important legal texts, acts, and case summaries.

- Python virtual environment: Ensures dependencies are managed and isolated.

Key Legal Sources Used

1. Bharatiya Nyaya Sanhita (BNS) 2023: Replaces IPC, with 358 sections focusing on modernizing criminal law.

2. Banking and financial acts:

   - Banking Regulation Act, 1949

   - Reserve Bank of India Act, 1934

   - SARFAESI Act, 2002

   - Negotiable Instruments Act, 1881

   - Insolvency and Bankruptcy Code (IBC), 2016

   - Prevention of Money Laundering Act (PMLA), 2002

   - FEMA, 1999

   - Payment and Settlement Systems Act, 2007

3. Important legal terms and selected case summaries for practical context.

Features & Advantages

- Natural language question answering for legal professionals.

- Human-like, contextual responses.

- Can be expanded to support document review, compliance checks, and case summarization.

- Flexible knowledge base that can be updated easily.

How It Works

1. User inputs a legal question through the Streamlit frontend.

2. The frontend sends the question to Flask backend via HTTP request.

3. Flask backend integrates knowledge base context and forwards it to Gemini AI model.

4. Gemini AI generates an answer based on legal context and returns it to the frontend.

5. The frontend displays the answer in a user-friendly format.

Potential Future Enhancements

- Integrate additional acts and recent case laws.

- Add multi-language support (Hindi, regional languages).

- Enable file upload and document analysis features.

- Deploy on a secure cloud server for real-time team collaboration.

- Implement advanced analytics and dashboards for usage insights.

Conclusion

This POC provides a foundation for building an advanced, agentic AI system for legal support in India. It demonstrates feasibility and opens opportunities to enhance efficiency, reduce manual research time, and improve decision-making quality for legal professionals.