HACKXTREME'26

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Problem Statement: FRS-ChatBot Training Challenge

Context:

Modern enterprise solution design documents contain complex use cases, technical specifications, and implementation details that require deep understanding for successful development and deployment. New team members, assessment candidates, and cross-functional stakeholders often struggle to navigate these documents, leading to misinterpretation of requirements, implementation delays, and feature gaps. Manual Q&A sessions are time-intensive and inconsistent.

The Challenge:

Develop and train a FRS-Chat Bot that serves as an intelligent assistant, providing precise, step-by-step guidance extracted from the official solution design document. The chatbot must interpret natural language queries about use cases, flows, technical stack, and implementation details, delivering context-aware responses with direct references to the source document.

Key Objectives for Participants:

Document Ingestion & Training: Parse and index the System design document into a retrievable knowledge base, enabling semantic search across use cases, preconditions, flows, and tech stack.

Intent Recognition & Activity Mapping: Implement natural language understanding to classify queries by activity (e.g.,"How to bulk import employees?"), extracting relevant main flows, alternative flows, preconditions, and postconditions with numbered step-by-step instructions.

Contextual Response Generation:

Generate detailed, structured responses including:

- Use Case Reference (e.g.,“Use Case 2: Bulk Employee Import”)
- Actor & Preconditions
- Step-by-step Main Flow (numbered actions)
- Alternative Flows (error handling)
- Technical Implementation Notes

Interactive Guidance: Guidance: Support follow-up questions like What if validation fails? → Auto-reference Alternative Flow A4 with resolution steps, maintaining conversation context across multiple turns.