<h1 style="text-align:center">Project Design Phase
Solution Architecture</h1>

Date	27 June 2025
Team ID	LTVIP2025TMID29301
Project Name	Citizen AI – Intelligent Citizen Engagement Platform using IBM Granite
Maximum Marks	4 Marks

Solution Architecture:

Solution architecture defines how the Citizen AI platform integrates multiple technologies to improve citizen engagement, administrative responsiveness, and data-driven decision-making in public services. It connects the challenge of civic inefficiency with AI-powered solutions that are scalable, secure, and transparent.
Objectives of the Solution Architecture:

• Select an optimal tech stack (Python Flask, IBM Granite, HTML/CSS, Hugging Face) to support real-time chat, sentiment analysis, and dashboard visualizations.

• Define module interaction: Chat Assistant, Feedback Analyzer, Sentiment Classifier, Admin Dashboard all connected via Flask backend and rendered through web UI.

• Visualize system behavior through Data Flow Diagrams and Architecture Diagrams showing the flow of queries, responses, and sentiment.

• Outline integration strategy with Hugging Face APIs for LLM inference, and prepare for future modules like voice input, multilingual support, and mobile integration.

• Ensure scalability and security by allowing future cloud deployment (Render, Firebase), database integration, and secure session management for user privacy.

Example - Solution Architecture Diagram:

Citizen AI - Intelligent Citizen Engagement Platform