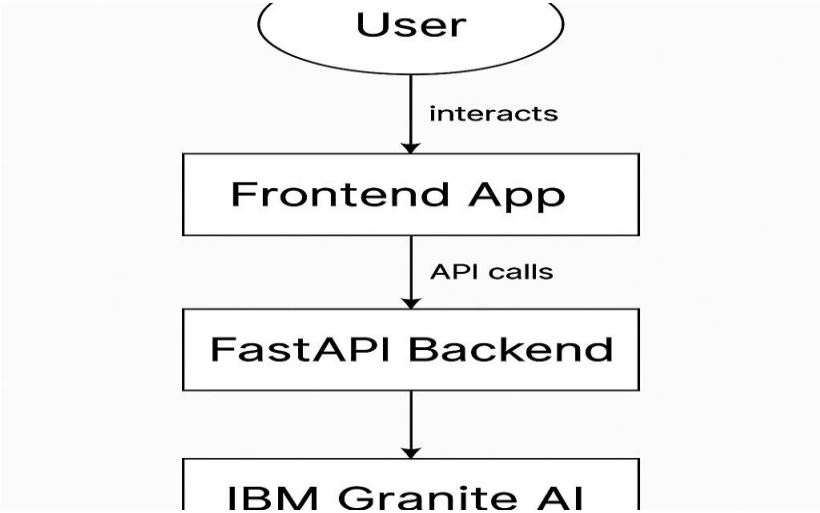
Project Design Phase-II
Data Flow Diagram & User Stories

Date	22 June 2025
Team ID	LTVIP2025TMID37462
Project Name	Sustainable Smart-city AI Assistant Using IBM LLM
Maximum Marks	2 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Example: (Simplified)



User Stories

ID	User Role	User Story	Feature Area	Acceptance Criteria	Us
US-01	City Administrator	As a city administrator, I want to upload KPI data so that I can get forecasted values for planning.	KPI Forecasting	Can upload .csv files, preview data, and get prediction results.	
US-02	Eco-Conscious Citizen	As a citizen, I want to get eco-friendly tips by topic so that I can live more sustainably.	Eco Tips	Can enter topics (like "energy", "water") and receive relevant tips.	
US-03	General Resident	As a resident, I want to ask sustainability questions so that I can get quick AI answers.	Chat Assistant	Can enter queries, receive responses, and get suggestions for common topics.	
US-04	Policy Maker / Student	As a policymaker or student, I want to generate sustainability reports so I can understand and share eco strategies.	Report Generator	Can input a topic (like "waste management"), and receive a clear report.	
US-05	End User	As a user, I want to navigate easily through different sections so that I can access the features smoothly.	UI/UX & Navigation	Sidebar links work; each section (KPI, Eco Tips, Chat, Report) opens as expected.	
US-06	Developer / Data Analyst	As a developer, I want to use backend APIs via FastAPI and AI integration so that I can enable real-time smart city interactions.	Backend Integration	REST APIs work (/forecast, /chat, etc.), integrated with IBM Granite model, and exposed publicly using Ngrok or LocalTunnel in Google Colab.	

1. Dashboard Viewing
   As a user, I want to select a city to view real-time data on water, energy, and air quality.
2. KPI Forecasting
   As a planner, I want to upload a CSV to get future predictions for sustainability metrics.
3. Eco Tips
   As an eco-conscious citizen, I want to get practical tips by entering a sustainability topic.
4. Chat Assistant
   As a learner, I want to ask sustainability questions and get AI responses.

   Report Generation
   As a policymaker, I want to generate reports on topics like water or waste managemen