Project Planning Phase

Project Planning Template (Product Backlog, Sprint Planning, Stories, Storypoints)

Date	28 June 2025
Team ID	LTVIP2025TMID60548
Project Name	Sustainable Smart City Assistant Using IBM Granite LLM
Maximum Marks	5 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Infrastructure Setup	US-1	As a developer, I can install and configure all required dependencies via requirements.txt.	1	High	Vaishnavi
Sprint-1	Infrastructure Setup	US-2	As a developer, I can set up .env and Pydantic config.py to securely load API credentials.	2	High	Keerthi
Sprint-1	Infrastructure Setup	US-3	As a developer, I can initialize FastAPI with a /health endpoint and folder structure for routers.	2	High	Abhinash
Sprint-1	Infrastructure Setup	US-4	As a user, I can see a basic Streamlit layout with a sidebar navigation skeleton.	3	Medium	Gangadhar
Sprint-2	Feedback & Chat Modules	US-5	As a citizen, I can submit feedback via a Streamlit form (name, category, message).	3	High	Vaishnavi
Sprint-2	Feedback & Chat Modules	US-6	As an admin, I can view and categorize submitted feedback in a FastAPI-powered admin endpoint	2	Medium	Keerthi
Sprint-2	Feedback & Chat Modules	US-7	As a user, I can ask sustainability questions in chat and see AI-generated responses.	3	High	Abhinash
Sprint-2	Feedback & Chat Modules	US-8	As a developer, I can wire the /chat FastAPI route to IBM Watsonx Granite LLM.	2	High	Gangadhar

Sprint-3	Policy Summarization & Semantic Search	US-9	As a planner, I can upload a policy document and get a concise summary from Watsonx Granite LLM.	5	High	Vaishnavi
Sprint-3	Policy Summarization & Semantic Search	US-10	As a planner, I can enter a keyword and retrieve relevant policy excerpts via Pinecone vector search	3	Medium	Keerthi
Sprint-3	Policy Summarization & Semantic Search	US-11	As a developer, I can test document embedding and ensure Pinecone indexing/retrieval works end-to-end.	2	Medium	Abhinash
Sprint-4	Analytics, Eco Tips & Reporting	US-12	As an admin, I can upload KPI CSVs and receive next-year forecasts via built-in ML models.	4	High	Gangadhar
Sprint-4	Analytics, Eco Tips & Reporting	US-13	As an admin, I get alerted when anomaly detection flags unusual KPI trends.	3	Medium	Vaishnavi
Sprint-4	Analytics, Eco Tips & Reporting	US-14	As a citizen, I can input “solar” or “plastic” and receive actionable eco tips from Granite LLM.	1	Medium	Keerthi
Sprint-4	Analytics, Eco Tips & Reporting	US-15	As a planner, I can generate a Markdown sustainability report combining KPI insights and LLM narratives.	2	Low	Abhinash

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	10	6 Days	28 May 2025	3 June 2025	10	3 June 2025
Sprint-2	10	6 Days	5 June 2025	11 June 2025	10	11 June 2025

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-3	10	6 Days	13June 2025	18 June 2025	10	18 June 2025
Sprint-4	10	6 Days	20 June 2025	26 June 2025	10	26 June 2025

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Burndown Chart:

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.