Project Planning Phase

Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

Date	15 February 2026
Team ID	LTVIP2026TMIDS90527
Project Name	Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management
Maximum Marks	5 Marks

Product Backlog & Sprint Schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint -1	Data Collection (Epic 1)	USN-1	As a data engineer, I can gather wind turbine datasets from open sources (Kaggle, UCI, etc.).	2	High	Team Member A
Sprint -1		USN-2	As a developer, I can load the dataset into the project environment for preprocessing.	1	High	Team Member B
Sprint -1	Data Preparation (Epic 2)	USN-3	As a data scientist, I can handle missing values to ensure clean input data.	3	High	Team Member C
Sprint -1		USN-4	As a data scientist, I can create new fields/features for better model accuracy.	3	Medium	Team Member C
Sprint -1		USN-5	As a developer, I can handle inconsistencies in data formatting.	3	Medium	Team Member B
Sprint -2	Data Visualization (Epic 3)	USN-6	As a user, I can view bar charts of wind speed vs. power output.	2	Medium	Team Member D

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint -2		USN-7	As a user, I can view pie charts of energy distribution.	2	Medium	Team Member D
Sprint -2		USN-8	As a user, I can view line charts showing trends in wind speed and power.	2	Medium	Team Member D
Sprint -2		USN-9	As a user, I can view correlation heatmaps to understand feature relationships.	4	High	Team Member C
Sprint -2	Dashboard (Epic 4)	USN-10	As a user, I can interact with a prediction dashboard built using Flask.	5	High	Team Member A
Sprint -2	Documentation (Epic 5)	USN-11	As a project owner, I can read a clear project story/report for portfolio use.	5	Medium	Team Member B

Project Tracker, Velocity & Burndown Chart

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	12	6 Days	01 Mar 2026	06 Mar 2026	12	06 Mar 2026
Sprint-2	20	6 Days	08 Mar 2026	13 Mar 2026	20	13 Mar 2026
Sprint-3	20	6 Days	15 Mar 2026	20 Mar 2026	–	–
Sprint-4	20	6 Days	22 Mar 2026	27 Mar 2026	–	–

Velocity

- **Total Story Points = 12 + 20 = 32**
- **Number of Sprints = 2**
- **Velocity = 32 ÷ 2 = 16 Story Points per Sprint**

If sprint duration = 10 days, then:

- **Average Velocity (AV) per iteration unit = 16 ÷ 10 = 1.6 Story Points per Day**

Burndown Chart

A burndown chart will show:

- **X-axis → Sprint days (time).**
- **Y-axis → Remaining story points.**
- **Line slopes downward as tasks are completed, ideally reaching zero by sprint end.**