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

Date	29 September 2023
Team ID	8D3567C80A02B519AB14E4D188B4ABD2
Project Name	Solar panel Forecasting
Maximum Marks	8 Marks

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

Use the below template to create product backlog and sprint schedule

Sprint	Goal	Tasks	Estimation
Sprint 1	Develop the core forecasting algorithm	• Design and implement the machine learning model for solar panel power generation forecasting.2 weeks	2 weeks
		• Train the machine learning model on historical data from various sources.	2 weeks
		• Evaluate the performance of the trained model.	1 weeks
Sprint 2	Implement real-time data acquisition and forecasting	• Establish connections with weather data providers	1 week
		• Implement data ingestion pipelines for real-time data acquisition.	2 weeks
Sprint 3	Develop user interface and visualization dashboards	Design and implement user-friendly interfaces for data visualization and analysis.	2 weeks
		Create interactive dashboards to present forecasting results.	1weeks
		Integrate historical data visualization with real-time forecasts.	1 weeks
Sprint 4	Integrate with existing solar panel monitoring systems	Develop APIs for data exchange with existing solar panel monitoring systems.	1 weeks
		Test the integration with different solar panel monitoring systems.	**2 weeks**
		Implement integration protocols to enable seamless data transfer.	1 weeks
Sprint 5	Deploy and release the forecasting system	Conduct user testing to gather feedback and identify usability issues.	1 week

		Deploy the forecasting system to production environment.	2 weeks
		Provide training and documentation for users.	1 weeks
		Monitor system performance and address any issues.	Ongoing

Total Estimated **Time: 15-20 weeks**

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	20	6 Days	24 Oct 2023	29 Oct 2023	20	29 September 2023
Sprint-2	20	6 Days	31 Oct 2023	05 Nov 2023		
Sprint-3	20	6 Days	07 Nov 2023	12 Nov 2023		
Sprint-4	20	6 Days	14 Nov 2023	19 Nov 2023		

Velocity:

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

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)

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.