Project Planning Phase

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

Date	31 October 2022
Team ID	PNT2022TMID17967
Project Name	Project – Efficient Water Quality Analysis and Prediction using Machine Learning
Maximum Marks	8 Marks

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

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data Pre-processing	USN-1	The water quality dataset is pre-processed like the missing values are replaced with mean of the corresponding attributes.	5	Low	1
Sprint-2	Water Quality Index Calculation	USN-3	The water quality index is calculated using the standard formula. This formula requires some features such as pH, DO, coliform, conductivity, BOD, nitratine. Finally, the WQI is updated in the dataset.	10	Medium	2
Sprint-3	Building Predictive Model	USN-4	Using the updated dataset, a random forest classifier is used to create a prediction model with high accuracy.	20	High	3
Sprint-4	Finding Water Quality Level	USN-5	Finding the water quality level based on the predicted output of the model.	15	High	1
Sprint-4	User Interface (HTML Page)	USN-6	Designing the user interface to get input from user and show the WQI and water quality level.	15	High	2
Sprint-4	Connecting with Cloud	USN-7	The completed module is shifted into cloud.	15	High	3

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 2022	29 Oct 2022	20	28 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	04 Oct 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	11 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	15 Nov 2022

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)

$$AV = \frac{sprint\ duration}{velocity}$$

$$= 20/6 = 3.33$$

Burndown Chart:

	A	B	C	D	E
1	Days	**6**	**12**	**18**	**24**
2	**Total story points**	20	20	20	20
3	**Story points complet**	20	20	18	17