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

Date	22 October 2022
Team ID	PNT2022TMID54402
Project Name	Efficient Water Quality Analysis and Prediction using Machine Learning
Maximum Marks	8 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	Data Collection	USN-1	For the purpose of estimating water quality, started gathering the necessary dataset.	6	High	Lavanya.T Manju.R
Sprint-1		USN-2	Data preprocessing: Used to convert the data's format into something valuable.	4	Medium	A.V.Monisha C.R.Priyadarshini
Sprint-2	WQI Calculation, Training and Testing	USN-3	Utilizing the Machine Learning Regression technique to calculate the Water Quality Index (WQI).	6	High	A.V.Monisha C.R.Priyadarshini
Sprint-2		USN-4	Dividing the model into training and testing using the entire dataset.	4	Medium	Lavanya.T Manju.R
Sprint-3	Model Building	USN-5	Training the model using regression algorithm and classification.	5	High	Lavanya.T C.R.Priyadarshini
Sprint-3		USN-6	Testing the performance of the model.	5	High	Manju.R A.V.Monisha

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-4	Implementation of the Application	USN-7	Creating user Interface	5	High	Manju.R Lavanya.T
Sprint-4		USN-8	Local deployment and deployment on IBM Cloud.	5	High	.C.R.Priyadarshini A.V.Monisha

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	24 Oct 2022	29 Oct 2022	10	29 Oct 2022
Sprint-2	10	6 Days	31 Oct 2022	05 Nov 2022	10	05 Nov 2022
Sprint-3	10	6 Days	07 Nov 2022	12 Nov 2022	10	12 Nov 2022
Sprint-4	10	6 Days	14 Nov 2022	19 Nov 2022	10	19 Nov 2022

Velocity:

Imagine we have a 6-day sprint duration, and the velocity of the team is 10 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day).

$$AV = \frac{\text{sprint duration}}{\text{velocity}} = 6/10=0.6$$

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.