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

Date	22 October 2022
Team ID	PNT2022TMID08775
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	Collect the appropriate dataset for predicting the water quality.	10	High	3
Sprint-1		USN-2	Data Preprocessing – Used to transform the data into useful format.	7	Medium	2
Sprint-2	Model Building	USN-3	Calculate the Water Quality Index (WQI) using Regression algorithm of Machine Learning.	10	High	4

Sprint-2		USN-4	Splitting the Model into Training and Testing from the overall dataset.	7	Medium	2
Sprint-3	Training and Testing	USN-5	Train the Model using Regression algorithm and Testing the Performance of the model.	10	High	4

Sprint	**Functional Requirement (Epic)**	**User Story Number**	**User Story / Task**	**Story Points**	**Priority**	**Team Members**
Sprint-4	Implementation of the Application	USN-6	Predict the Water Quality Index (WQI) and recommend the appropriate purification technique.	10	High	4
Sprint-4		USN-7	Deploy the Model on IBM Cloud.	7	Medium	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	10	6 Days	24 Oct 2022	29 Oct 2022	8	29 Oct 2022
Sprint-2	10	6 Days	31 Oct 2022	05 Nov 2022	7	05 Nov 2022
Sprint-3	10	6 Days	07 Nov 2022	12 Nov 2022	8	12 Nov 2022
Sprint-4	10	6 Days	14 Nov 2022	19 Nov 2022	7	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.