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

Date	**22 October 2022**
Team ID	**PNT2022TMID53347**
Team Leader	**Keerthi Rajan S**
Team Members	**Manoj Kumar M, Minu S, Nihil Rengasamy T**
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	Nihil Rengamasy T, Manoj Kumar M
Sprint-1		USN-2	Data Preprocessing – Used to transform the data into useful format.	7	Medium	Keerthi Rajan S, Minu S
Sprint-2	Model Building	USN-3	Calculate the Water Quality Index (WQI) using Regression algorithm of Machine Learning.	10	High	Nihil Rengasamy T, Minu S

Sprint-2		USN-4	Splitting the Model into Training and Testing from the overall dataset.	7	Medium	Manoj Kumar M, Keerthi Rajan S
Sprint-3	Training and Testing	USN-5	Train the Model using Regression algorithm and Testing the Performance of the model.	10	High	Minu S, Keerthi Rajan S
Sprint-4	Implementation of the Application	USN-6	Predict the Water Quality Index (WQI) and recommend the appropriate purification technique.	10	High	Nihil Rengasamy T, Manoj Kumar M
Sprint-4		USN-7	Deploy the Model on IBM Cloud.	7	Medium	Keerthi Rajan S, Nihil Rengasamy T

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.