

## Project Planning Phase

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

Date	18 October 2022
Team ID	PNT2022TMID15632 Efficient Water Quality Analysis and Prediction using Machine Learning
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	Collecting dataset for pre-processing	10	High	Billu Dilip Budharaju Sumanth Aduri Charansai Bandla Venkata Akash Bhuvanendra Chowdary V
Sprint-1		USN-2	Data pre-processing-Used to transform the data into useful format.	10	Medium	Billu Dilip Budharaju Sumanth Aduri Charansai Bandla Venkata Akash Bhuvanendra Chowdary V
Sprint-2	Model Building	USN-3	Calculate the Water Quality Index (WQI) using Regression algorithm of machine learning.	10	High	Billu Dilip Budharaju Sumanth Aduri Charansai Bandla Venkata Akash Bhuvanendra Chowdary V
Sprint-2		USN-4	Splitting the data into training and testing from the entire dataset.	10	Medium	Billu Dilip Budharaju Sumanth Aduri Charansai Bandla Venkata Akash Bhuvanendra Chowdary V
Sprint-3	Training and Testing	USN-5	Training the model using regression algorithm and testing the performance of the model	20	Medium	Billu Dilip Budharaju Sumanth Aduri Charansai Bandla Venkata Akash Bhuvanendra Chowdary V
Sprint-4	Implementation of Web page	USN-6	Implementing the web page for collecting the data from user	10	High	Billu Dilip Budharaju Sumanth Aduri Charansai Bandla Venkata Akash Bhuvanendra Chowdary V
Sprint-4		USN-6	Deploying the model using IBM Cloud and IBM Watson Studio	10	Medium	Billu Dilip Budharaju Sumanth Aduri Charansai Bandla Venkata Akash Bhuvanendra Chowdary V

### 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	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022		
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022		
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022		

#### Velocity:

Sprint 1 Average Velocity:

$$\text{Average Velocity} = 20/2 = 10$$

Sprint 2 Average Velocity:

$$\text{Average Velocity} = 20/2 = 10$$

Sprint 3 Average Velocity:

$$\text{Average Velocity} = 20/1 = 20$$

Sprint 4 Average Velocity:

$$\text{Average Velocity} = 20/2 = 10$$

#### Burndown Chart:

