

## Project Planning Phase

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

Date	18 October 2022
Team ID	PNT2022TMID37849
Project Name	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
Sprint1	Data Collection	USN-1,2	Collecting/downloading dataset for pre-processing .	10	High	Afra Iman A Fathima koya Nilora S Farhana K Hameetha Shajini A
Sprint1		USN-1,2	Data pre-processing-formats the data and handles the missing data in the dataset..	10	Medium	Afra Iman A Fathima koya Nilora S Farhana K Hameetha Shajini A
Sprint2	Model Building	USN-1,2	Calculate the Water Quality Index (WQI) using specified formula for every parameter.	10	High	Afra Iman A Fathima koya Nilora S Farhana K Hameetha Shajini A
Sprint2		USN-1,2	Splitting the data into training and testing data set from the entire dataset.	10	High	Afra Iman A Fathima koya Nilora S Farhana K Hameetha Shajini A
Sprint3	Training and Testing	USN-1,2	Training the model using Random Forest Regression algorithm and testing the performance of the model (accuracy rate)	20	High	Afra Iman A Fathima koya Nilora S Farhana K Hameetha Shajini A
Sprint4	Implementation of Web page	USN-1,2	Implementing the web page for collecting the data from user	10	High	Afra Iman A Fathima koya Nilora S Farhana K Hameetha Shajini A
Sprint4		USN-1,2	Deploying the model using IBM Cloud and IBM Watson Studio	10	Medium	Afra Iman A Fathima koya Nilora S Farhana K Hameetha Shajini A

### 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)
Sprint1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

#### Velocity:

Sprint 1 Average Velocity:

$$\text{Average Velocity} = 20/6 = 3.3$$

Sprint 2 Average Velocity:

$$\text{Average Velocity} = 20/6 = 3.3$$

Sprint 3 Average Velocity:

$$\text{Average Velocity} = 20/6 = 3.3$$

Sprint 4 Average Velocity:

$$\text{Average Velocity} = 20/6 = 3.3$$

#### Burndown Chart:

