

Project Planning Phase

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

Date	16 November 2022
Team ID	PNT2022TMID21084
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:

