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

| Date | 30 October 2022 |
|---|---|
| Team ID | PNT2022TMID32824 |
| Project Name | Efficient Water Quality Analysis & 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/downloading dataset for pre processing . | 10 | High | Naveen Abimanyu |
| | | USN-2 | Data pre-processing formats the data and handles the missing data in the dataset | 10 | High | Naveen Abimanyu |
| Sprint-2 | Model Building | USN-3 | Calculate the Water Quality Index (WQI) using specified formula for every parameter. | 20 | Medium | Harish,Jai Krishna, Amresh |
| | | USN-4 | Splitting the data into training and testing data set from the entire dataset. | 10 | High | Jai Krishna, Amresh |
| Sprint-3 | Training and Testing | USN-5 | Training the model using Random Forest Regression algorithm and testing the performance of the model | 10 | Medium | Naveen Abimanyu |

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|---|---|---|---|---|---|---|
| Sprint-4 | Implementation of Web page | USN-6 | Implementing the web page for collecting the data from user | 10 | High | Naveen Abimanyu Harish,Jai Krishna, Amresh |
| | | USN-7 | Deploying the model using IBM Cloud and IBM Watson Studio. | 10 | Medium | Naveen Abimanyu Harish,Jai Krishna, Amresh |

## 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 | 20 | 05 Nov 2022 |
| Sprint-3 | 20 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 20 | 12 Nov 2022 |
| Sprint-4 | 20 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 20 | 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).

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$