**Project Planning Phase**

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

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| --- | --- |
| Date | 18 October 2022 |
| Team ID | PNT2022TMID52665 |
| Project Name | Project – 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 | Deepthy Shivani A  Divya K  Subiksha Devi MS  Soundarya M |
| Sprint-1 |  | USN-2 | Data pre-processing. Used to transform the data into useful format.   |  | | --- | |  | | 10 | Medium | Deepthy Shivani A  Divya K  Subiksha Devi MS  Soundarya M |
| Sprint-2 | Model Building | USN-3 | Calculate the Water Quality Index (WQI) using regression algorithm of machine learning | 10 | High | Deepthy Shivani A  Divya K  Subiksha Devi MS  Soundarya M |
| Sprint-2 |  | USN-4 | Splitting the data into training and testing from the entire dataset. | 10 | Medium | Deepthy Shivani A  Divya K  Subiksha Devi MS  Soundarya M |
| Sprint-3 | Training and Testing | USN-5 | Training the model using regression algorithm and testing the performance of the model. | 20 | Medium | Deepthy Shivani A  Divya K  Subiksha Devi MS  Soundarya M |
| Sprint-4 | Implementation of Web Page | USN-6 | Implementing the web page for collecting the data from the user | 10 | High | Deepthy Shivani A  Divya K  Subiksha Devi MS  Soundarya M |
| Sprint-4 |  | USN-6 | Deploying the model using IBM cloud and IBM Watson studio | 10 | Medium | Deepthy Shivani A  Divya K  Subiksha Devi MS  Soundarya M |

**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 |
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**Velocity:**

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let’s calculate the team’s average velocity (AV) per iteration unit (story points per day).

Sprint 1 Average Velocity:

Average Velocity = 20/2 = 10

Sprint 2 Average Velocity:

Average Velocity = 20/2 = 10

Sprint 3 Average Velocity:

Average Velocity = 20/1 = 20

Sprint 4 Average Velocity:

Average Velocity = 20/2 = 10

**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](https://www.visual-paradigm.com/scrum/what-is-agile-software-development/) methodologies such as [Scrum](https://www.visual-paradigm.com/scrum/scrum-in-3-minutes/).

