

## Project Planning Phase

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

|               |   |
|---------------|---|
| Date          | 24 October 2022   |
| Team ID       | PNT2022TMID18314  |
| Project Name  | Predicting the energy output of wind turbine based on weather conditions. |
| 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 Preparation              | USN-1             | Collecting wind dataset and pre-processing it   | 20           | High     | Arunagirinathan<br>Harish B |
| Sprint-2 | Model Building                | USN-2             | Create an ML model to predict energy output   | 5            | Medium   | Arjun V                     |
| Sprint-2 | Model Evaluation              | USN-3             | Calculate the performance, error rate, and complexity of the ML model and evaluate the dataset based on the parameter that the dataset consists of. | 5            | Medium   | Ganta Veda Mouli            |
| Sprint-2 | Model Deployment              | USN-4             | As a user, I need to deploy the model and need to find the results.   | 10           | Medium   | Arjun V                     |
| Sprint-3 | Web page (Form)               | USN-5             | As a user, I can use the application by entering the wind dataset to analyze or predict the results.  | 20           | Medium   | Arunagirinathan<br>Harish B |
| Sprint-4 | Dashboard                     | USN-6             | As a user, I can  | 20           | High     | Arjun V Ganta               |

|  |  |  |   |  |  |            |
|--|--|--|---|--|--|------------|
|  |  |  | predict the energy output by clicking the submit button and the application will show weather prediction. |  |  | Veda Mouli |
|--|--|--|---|--|--|------------|

### 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  | 03 Nov 2022                  |
| Sprint-3 | 20                 | 6 Days   | 07 Nov 2022       | 12 Nov 2022               | 20  | 10 Nov 2022                  |
| Sprint-4 | 20                 | 6 Days   | 14 Nov 2022       | 19 Nov 2022               | 20  | 17 Nov 2022                  |

**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)

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

**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 methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.

