# Project Planning Phase

## Sprint Delivery Plan (Product Backlog, Sprint Planning, Stories, Story points)

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|---|---|
| Date | 18 October 2022 |
| Team ID | PNT2022TMID15599 |
| Project Name | Predicting the energy output of wind turbine based on weather condition |
| Maximum Marks | 8 Marks |

**Product Backlog, Sprint Schedule, and Estimation:**

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|---|---|---|---|---|---|---|
| Sprint-1 | Registration | USN-1 | As a user, I can register for the application by entering my email, password, and confirming my password. | 5 | High | Navadeepan B<br>Arivalagan G<br>Dinesh Kumar R<br>Gokul G |
| Sprint-1 | | USN-2 | As a user, I will receive confirmation email once I have registered for the application | 5 | High | Navadeepan B<br>Arivalagan G<br>Dinesh Kumar R<br>Gokul G |
| Sprint-1 | | USN-3 | As a user, I can register for the application through mobile number. | 3 | Low | Navadeepan B<br>Arivalagan G<br>Dinesh Kumar R<br>Gokul G |
| Sprint-1 | | USN-4 | As a user, I can register for the application through Gmail | 2 | Medium | Navadeepan B<br>Arivalagan G<br>Dinesh Kumar R<br>Gokul G |

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|---|---|---|---|---|---|---|
| Sprint-1 | Login | USN-5 | As a user, I can log into the application by entering email & password | 5 | High | Navadeepan B<br>Arivalagan G<br>Dinesh Kumar R<br>Gokul G |
| Sprint-2 | Dashboard | USN-6 | Once logged in, I can access my dashboard | 6 | Medium | Navadeepan B<br>Arivalagan G<br>Dinesh Kumar R<br>Gokul G |
| Sprint-2 | Web Access | USN-7 | As a user, I can access the website to predict the turbine power | 7 | High | Navadeepan B<br>Arivalagan G<br>Dinesh Kumar R<br>Gokul G |
| Sprint-2 | Prediction | USN-8 | As a customer, when I enter the detail the website should predict the approximate turbine power | 7 | High | Navadeepan B<br>Arivalagan G<br>Dinesh Kumar R<br>Gokul G |
| Sprint-3 | Analysis | USN-9 | As a customer, I wish to store my predictions and make analysis | 10 | Medium | Navadeepan B<br>Arivalagan G<br>Dinesh Kumar R<br>Gokul G |
| Sprint-3 | Security | USN-10 | As a customer I expect my data to be secured | 10 | Medium | Navadeepan B<br>Arivalagan G<br>Dinesh Kumar R<br>Gokul G |

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|---|---|---|---|---|---|---|
| Sprint-4 | Database Access | USN-11 | As an administrator, I should maintain the website and keep updating it regularly | 20 | Medium | Navadeepan B<br>Arivalagan G<br>Dinesh Kumar R<br>Gokul G |

## 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 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)

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

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) | Average Velocity (AV) |
|---|---|---|---|---|---|---|---|
| Sprint-1 | 20 | 6 Days | 24 Oct 2022 | 29 Oct 2022 | 20 | 29 Oct 2022 | 3.333 |
| Sprint-2 | 20 | 6 Days | 31 Oct 2022 | 05 Nov 2022 | 20 | 05 Nov 2022 | 3.333 |
| Sprint-3 | 20 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 20 | 12 Nov 2022 | 3.333 |
| Sprint-4 | 20 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 20 | 19 Nov 2022 | 3.333 |

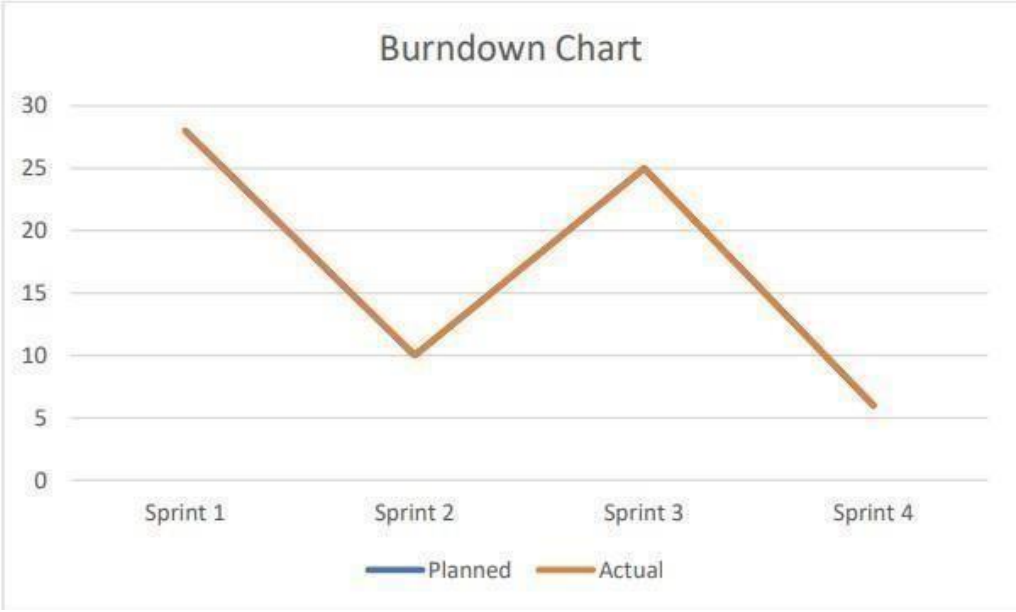
Total No of Days = 6 + 6 + 6 + 6 = 24 Days

Total Story Points = 20 + 20 + 20 + 20 = 80 Points

Average Velocity Per Sprint = 80 / 24 = 3.333

## Burndown Chart:

A burndown chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies suchas Scrum. However, burn down charts can be applied to any project containing measurable progress over time.




https://www.visual-paradigm.com/scrum/scrum-burndown-chart/

https://www.atlassian.com/agile/tutorials/burndown-charts

**Reference:**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https://www.atlassian.com/agile/tutorials/burndown-chart