

Project Planning Phase

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

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|---------------|--|
| Date | 18 October 2022 |
| Team ID | PNT2022TMID10904 |
| Project Name | 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-2 | Registration | USN-1 | As a user, I can register for the application by entering my email, password, and confirming my password. | 2 | High | Yogashree. D |
| Sprint-2 | Confirmation | USN-2 | As a user, I will receive confirmation email once I have registered for the application | 1 | High | Shri Janani. M |
| Sprint-2 | Verification | USN-3 | As a user, I can register for the application through OTP message or email | 2 | Low | Sathiyapriya. M |
| Sprint-3 | Parameter Passing | USN-4 | As a user, I can provide values for various parameters of water quality | 1 | High | Nithyasree. N |
| Sprint-3 | Predicting | USN-5 | Using ML algorithm, predictions are made using the parameter provided | 2 | Medium | Sathiyapriya. M |
| Sprint-4 | Result | USN-6 | Quality of the water is determined | 1 | High | Nithyasree. N |
| Sprint-1 | Data Cleaning | USN-5 | Removing the null values and outliers from the data | 1 | Low | Yogashree. D |

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|---------------|--|--------------------------|---|---------------------|-----------------|---------------------|
| Sprint-1 | Data Pre-processing And Model Building | USN-5 | Scaling the data and training the model with the data | 3 | High | Nithyasree. N |
| Sprint-4 | Solution Providing | USN-1 | Better water usage ideas are provided based on the quality of water | 1 | Medium | Shri Janani. 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 | 4 Nov 2022 |
| Sprint-2 | 20 | 6 Days | 31 Oct 2022 | 05 Nov 2022 | 20 | 5 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)

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

Average Velocity=Story points per day

Sprint Duration=Number of days per sprint (Duration)

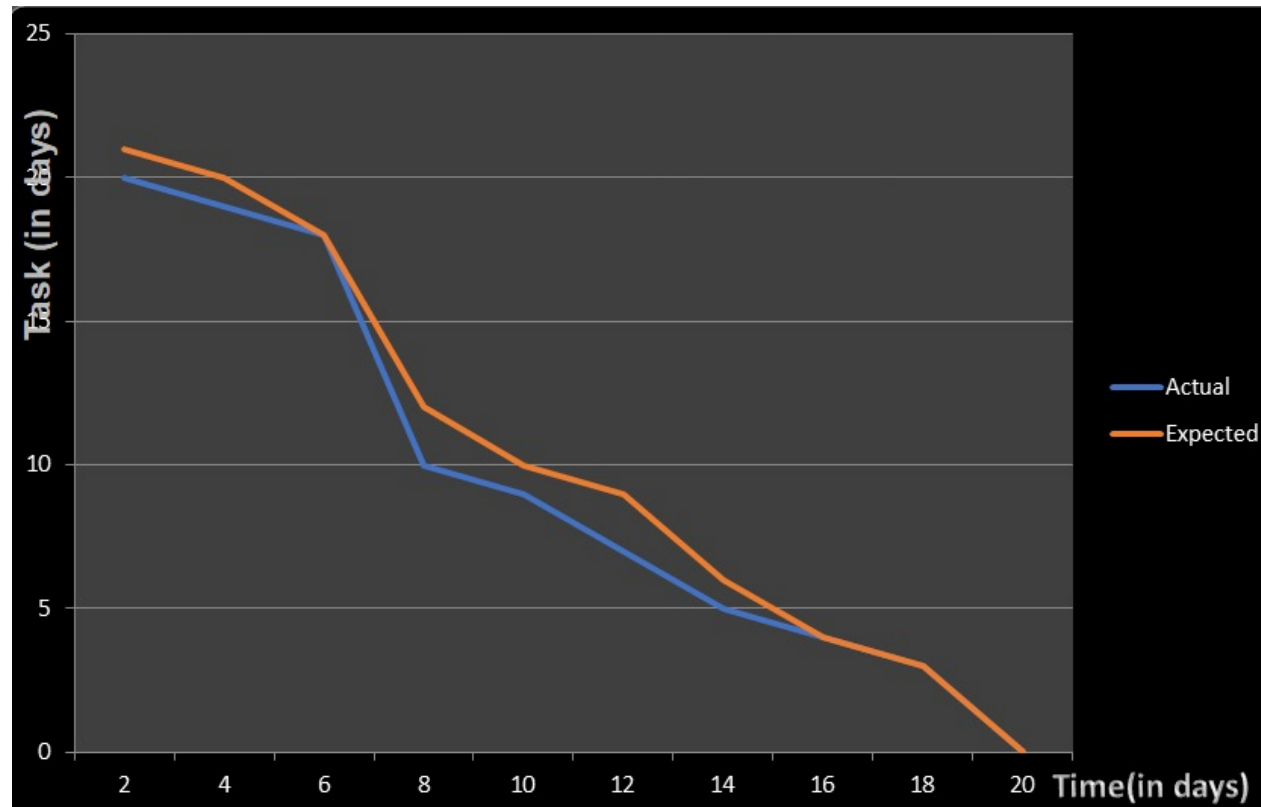
Velocity=points per sprint

$$AV=20/4=6(\text{approx.})$$

The average velocity is 4 points per sprint.

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.



Reference:

<https://www.atlassian.com/agile/project-management>

<https://www.atlassian.com/agile/tutorials/how-to-do-scrum-with-jira-software>

<https://www.atlassian.com/agile/tutorials/epics>

<https://www.atlassian.com/agile/tutorials/sprints>