

## Project Planning Phase

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

| Sprint   | Functional Requirement (Epic)   | User Story Number | User Story / Task Description   | Story Points | Priority | Team Members      |
|----------|---------------------------------|-------------------|---|--------------|----------|-------------------|
| Sprint-1 | Data collection and integration | USN-1             | Gather relevant environmental data, including temperature, humidity, soil moisture, and light levels                | 7            | High     | Rehaman           |
|          | Data Preparation                | USN-2             | Cleans the collected data for analysis.   | 8            | High     | Rehaman, Ravindra |
| Sprint-2 | Data Analysis                   | USN-3             | Utilize Power BI's analytical tools to explore relationships between environmental factors and plant growth stages. | 5            | Low      | Akmal, Rakesh     |
|          | Visualization Development       | USN-4             | Create interactive visualization for key metrics.   | 6            | Medium   | Ravindra, Rakesh  |
|          | Dashboard Design                | USN-5             | Design user-friendly interfaces that allows stakeholders to easily access and interpret data.                       | 8            | High     | Rehaman, Akmal    |

|               |  |
|---------------|--|
| Date          | 20 March 2025  |
| Team ID       | PNT2025TMID06956   |
| Project Name  | Prediction plant growth stages with environment and management data using power BI |
| Maximum Marks | 5 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 | Data Analysis                 | USN-3             | Utilize Power BI's analytical tools to explore relationships between environmental factors and plant growth stages. | 5            | Low      | Akmal        |
|          | Visualization Development     | USN-4             | Create interactive visualization for key metrics.   | 6            | Medium   | Ravindra     |

|  |                  |       |   |   |      |         |
|--|------------------|-------|---|---|------|---------|
|  | Dashboard Design | USN-5 | Design user-friendly interfaces that allows stakeholders to easily access and interpret data. | 8 | High | Rehaman |
|--|------------------|-------|---|---|------|---------|

### Project Tracker, Velocity & Burndown Chart: (4 Marks)

| Sprint  | Total Story Points | Duration (Days) | Start Date    | End Date (Planned) | Story Points Completed (Planned) | Release Date (Actual) |
|---------|--------------------|-----------------|---------------|--------------------|----------------------------------|-----------------------|
| Sprint1 | 24                 | 5               | 13 Mar 2025   | 17 Mar 2025        | 24                               | 26 Mar 2025           |
| Sprint2 | 24                 | 5               | 17 March 2025 | 21 Mar 2025        | 24                               | 26 Mar 2025           |

### 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)

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

### Burndown Chart:

A burndown chart illustrates:

- X-axis: Sprint duration (time in days).
- Y-axis: Remaining story points.
- It starts with 20 story points at day 0 and decreases daily based on completed points.