Business Question and Visualization Report

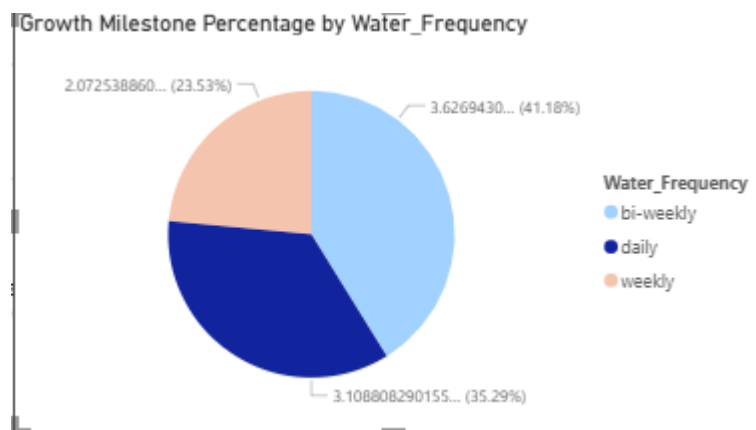| Date	13 January 2026
Team ID	
Project Name	Predicting Plant Growth Stages with Environmental and Management Data Using Power BI
Maximum Marks	5 Marks

Business Questions and Visualisation

Visualization development refers to the process of creating graphical representations of data to facilitate understanding, analysis, and decision-making. In this project, Power BI is used to transform plant growth data into interactive visualizations that help identify optimal environmental and management conditions influencing plant growth milestones.
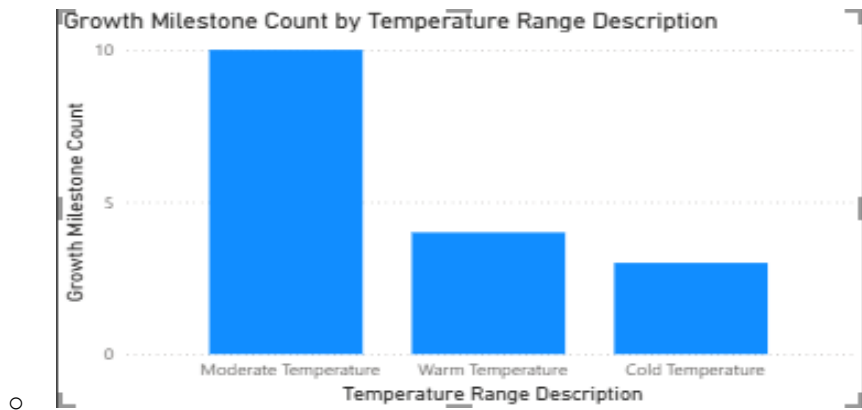
Sample

1. **How does water frequency impact plant growth milestones?**

   o **Visualization**: Pie Chart showing *Growth Milestone Percentage by Water Frequency*
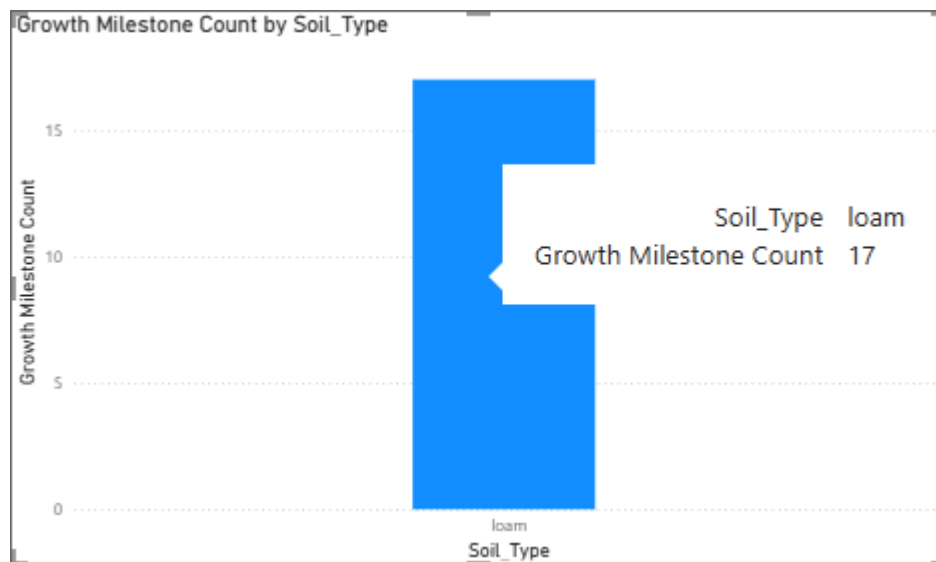
   o *Screenshot of visualisation*

Growth Milestone Percentage by Water_Frequency

2.072538860... (23.53%)
3.6269430... (41.18%)
3.108808290155... (35.29%)

Water_Frequency
● bi-weekly
● daily
● weekly

2. **How does temperature range affect plant growth?**

   o **Visualization**: Column Chart showing *Temperature Range Description by Growth Milestone*
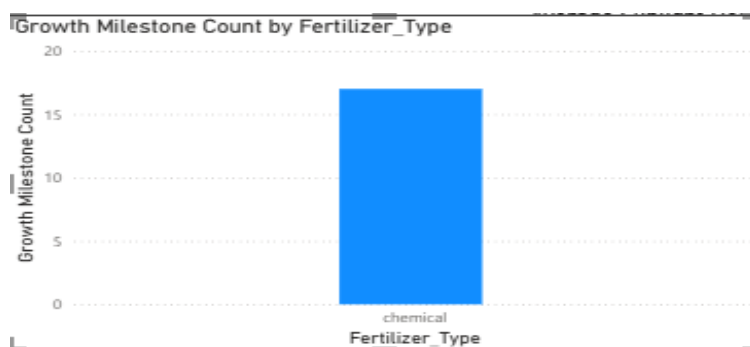
   o *Screenshot of visualisation*

Growth Milestone Count by Temperature Range Description

o

3. **Which soil type results in the highest plant growth milestones?**

   o *Visualization*: Clustered Bar Chart showing *Growth Milestone Count by Soil Type*

   o *Screenshot of visualisation*

Growth Milestone Count by Soil_Type
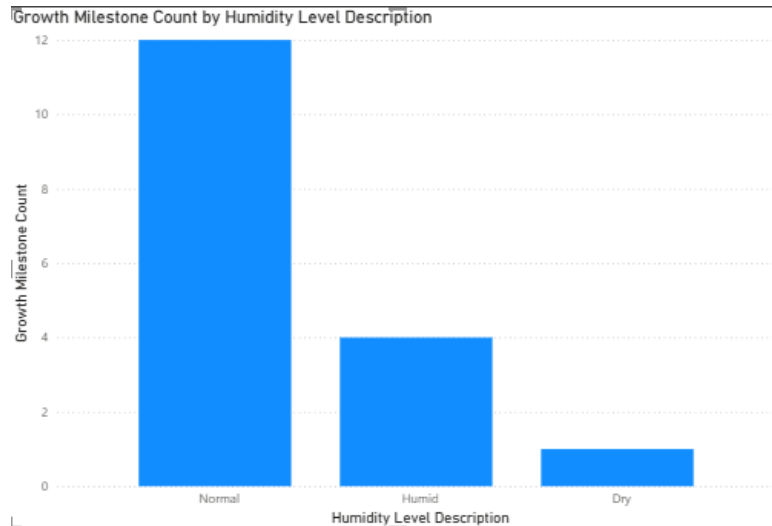
Soil_Type   loam
Growth Milestone Count   17

4. **Which fertilizer type contributes most to plant growth milestones?**

   o *Visualization*: Clustered Column Chart showing *Growth Milestone Count by Fertilizer Type*

   o *Screenshot of visualisation*
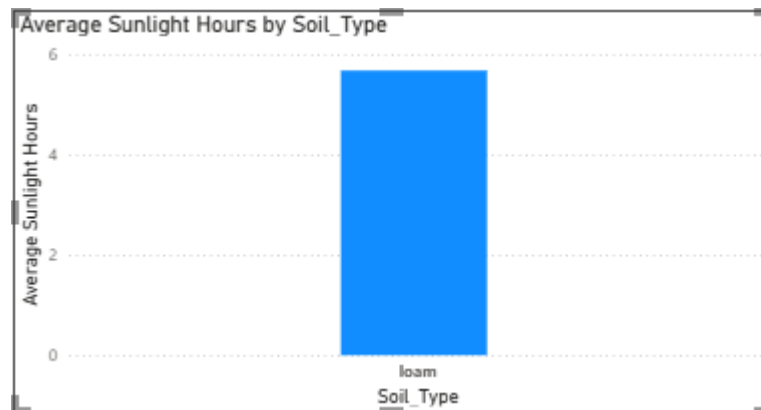

Growth Milestone Count by Fertilizer_Type

5. **How does humidity level influence plant growth milestones?**

   o *Visualization*: Bar Chart showing *Growth Milestone Count by Humidity Level Description*
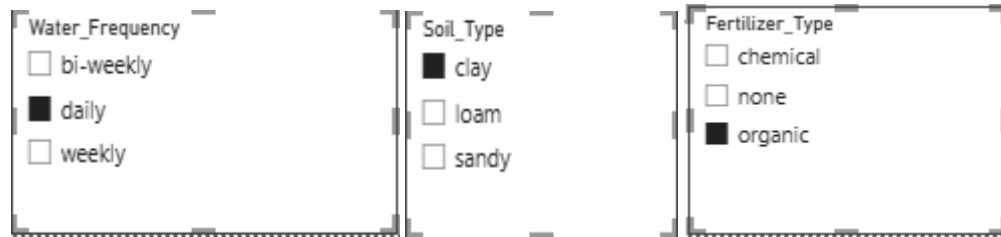
   o *Screenshot of visualisation*

6. **Which soil type receives the highest average sunlight hours?**

   o *Visualization*: Bar Chart showing *Average Sunlight Hours by Soil Type*

   o *Screenshot of visualisation*

7. **What are the overall average environmental conditions affecting plant growth?**

   o *Visualization*: Card Visuals displaying:

   Average Temperature

   Average Humidity

   Average Sunlight Hours

   o *Screenshot of visualisation*

Water_Frequency
- ☐ bi-weekly
- ■ daily
- ☐ weekly

Soil_Type
- ■ clay
- ☐ loam
- ☐ sandy

Fertilizer_Type
- ☐ chemical
- ☐ none
- ■ organic

8. **How do average sunlight hours vary across different conditions affecting plant growth?**

   o *Visualization*: Column Chart showing *Average Sunlight Hours* across different categories (such as Soil Type or Growth Milestone Category).

   o *Screenshot of visualisation*