Report

Date	31 July 2025
Team ID	xxxxxx
Project Name	Predicting Plant Growth Stages with Environmental and Management Data Using Power BI
Maximum Marks	5 Marks

A report is a comprehensive document that provides a detailed and structured account of data analysis, findings, and insights. It is typically used for in-depth analysis, documentation, and communication of results. Reports are suitable for a diverse audience, including decision-makers, analysts, and stakeholders who need a comprehensive understanding of the data.

Designing a report in Power BI involves connecting to data sources, creating visualizations like charts and graphs, customizing their appearance and interactivity, organizing them logically on the canvas, formatting elements for consistency and clarity, and optionally creating dashboards for a summarized view. Throughout the process, it's essential to consider the audience's needs and ensure the report effectively communicates insights from the data. Finally, iterate based on feedback to continually improve the report's design and usefulness.

Observations drawn from reports in Power BI can provide valuable insights into business performance and trends.

1. Trends Analysis:

- Power BI time series and trend visualizations show changes over time (e.g., growth milestone counts across months or seasons), helping to anticipate future patterns or cycles.

2. Performance Benchmarking

- Reports visualize how different segments perform (e.g., loam vs. sandy soil), enabling you to benchmark locations, teams, or products against each other.

3. Anamaly Detection:

- Outliers or sudden changes in performance (such as unexpected drops in growth stages) are quickly identified, allowing fast investigation and response.

4. Continuous Improvement:

- Regular observations provide a feedback loop, so you can track the impact of interventions and refine strategies over time.

Example:

1. **Soil Type Dominance**:

- Loam soil leads all categories with 96 growth milestones, substantially outperforming sandy(31) and clay(30) soils.

2. **Water Frequency Effectiveness**:

- Daily watering achieves a slightly higher growth milestone percentage(0.51) compared to weekly(0.49) and biweekly(0.48) schedules.

3. **Sunlight Exposure Patterns:**

   Sandy soil receives the highest average sunlight hours(7.27), but loamy soil achieves more growth milestone even with slightly less sunlight.

4. **Overall Growth Achievement**:

- The total number of achieved growth milestone in the dataset is 96, indicating strong effectiveness of the optimal conditions identified.