**Business Question and Visualization Report**

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| Date | 10 August 2025 |
| Team ID | xxxxxx |
| Project Name | Predicting Plant Growth Stages Using Environmental & Management Data in Power BI |
| Maximum Marks | 5 Marks |

Visualization development in this project refers to creating clear, interactive graphical representations of plant growth and environmental data to aid understanding, analysis, and decision-making. The goal is to convert raw growth observations and climate readings into visual formats that allow for quick pattern recognition and data-driven farming strategies.

**Business Questions and Visualizations**

**1. Which soil type has the highest average growth rate?**

Visualization: Bar chart comparing growth rate (%) across soil types.

**2. How does watering frequency impact plant growth rate?**

Visualization: Stacked bar chart showing growth rate (%) by water frequency and fertilizer type.

**3. What is the distribution of soil types used in the dataset?**

Visualization: Pie chart showing the proportion of clay, sandy, and loam soil types.

**4. Which fertilizer type is most effective in increasing growth rate?**

Visualization: Horizontal bar chart showing average growth rate (%) by fertilizer type.

**5. How does sunlight category (medium/high) affect growth milestones?**

Visualization: Clustered bar chart showing growth rate (%) by sunlight category.

**6. What is the temperature variation with respect to sunlight hours?**

Visualization: Scatter plot showing temperature (°C) vs. sunlight hours.

**7. Which watering level is most common in the dataset?**

Visualization: Column chart showing count of observations for high, medium, and low watering levels.

**8. What percentage of plants are treated with each type of fertilizer?**

Visualization: Bar chart showing percentage share of organic, chemical, and no fertilizer.