# **Data Collection and Preprocessing Phase**

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| Date | 28-07-2025 |
| Team ID | YASHRAJ SRIVASTAVA |
| Project Title | Predicting Plant Growth Stages with Environmental and Management Data Using Power BI |
| Maximum  Marks | 3 Marks |

# Data Quality Report

The Data Quality Report will summarize data quality issues from the selected source, including severity levels and resolution plans. It will aid in systematically identifying and rectifying data discrepancies.

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# **Data Quality Report Template**

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| **Data Source** | **Data Quality Issue** | **Severity** | **Resolution Plan** |
| **Smart Farming**  **Data** | Missing values in humidity and sunlight columns | Moderate | Use mean imputation for missing values or apply KNN imputation if patterns exist in nearby records. |
| **Fertilizer Usage**  **& Growth** | Inconsistent labelling of fertilizer types (e.g., "Org", "Organic", "org.") | Low | Apply data standardization using string normalization techniques to unify all entries (e.g., convert all to lowercase and map synonyms). |
| **Temperature &**  **Humidity**  **Records** | Some extreme temperature outliers (e.g., >70°C) that are unrealistic | High | Use Z-score method to detect and remove outliers or cap them using IQRbased clipping. |
| **Soil Performance**  **Data** | Duplicate rows with identical soil and irrigation values | Moderate | Use Power Query or pandas. drop duplicates () to remove duplicate entries and retain unique records. |