Project Development Phase
Model Performance Test

Date	12 March 2025
Team ID	PNT2025TMID02948
Project Name	Predicting Plant Growth Stages with Environmental and Management Data
Maximum Marks	4

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Screenshot / Values
1.	Data Rendered	**- Temperature Trends:** 20°C - 35°C **- Humidity Patterns:** 40% - 80% **- Soil Moisture Levels:** 30% - 70% **- Sunlight Exposure:** 6 - 12 hours/day **- Irrigation Schedules:** Twice a week **- Fertilizer Usage:** 5g per plant every 15 days
2.	Data Preprocessing	**- Missing Value Handling:** Mean imputation for missing temperature values. **- Standardization:** Soil moisture data normalized between 0-1 scale. **- Outlier Detection:** Removing humidity readings above 90% or below 10%.
3.	Utilization of Data Filters	Date Range Filter, Environmental Filters

4.	DAX Queries Used	Avg_Temperature = CALCULATE(AVERAGE('PlantData'[temperature]), ALLEXCEPT('PlantData', 'PlantData'[growth_milestone])) Count_By_Soil_Type = SUMMARIZE('PlantData', 'PlantData'[soil_type], "Total Plants", COUNT('PlantData'[growth_milestone])) Total_Water_Frequency = SUMMARIZE('PlantData', 'PlantData'[growth_milestone], "Total Watering", SUM('PlantData'[water_frequency])) Avg_Humidity_By_Fertilizer = CALCULATE(AVERAGE('PlantData'[hu

		midity]), ALLEXCEPT(' PlantData', 'PlantData'[f ertilizer_typ e])) Is_Optimal_Co ndition = IF('PlantData'[t emperature] BETWEEN 20 && 30 && 'PlantData'[h umidity] BETWEEN 50 && 70, "Optimal", "Not Optimal")

		SUM('world_food_production_cleaned'[Potatoes Production (tonnes)]) + SUM('world_food_production_cleaned'[Rice Production (tonnes)]) +

		SUM('world_food_production_cleaned'[Rye Production (tonnes)]) + SUM('world_food_production_cleaned'[Soybeans Production (tonnes)]) + SUM('world_food_production_cleaned'[Sugar cane Production (tonnes)]) + SUM('world_food_production_cleaned'[Sunflower seed Production (tonnes)]) + SUM('world_food_production_cleaned'[Sweet potatoes Production (tonnes)]) + SUM('world_food_production_cleaned'[Tea Production (tonnes)]) + SUM('world_food_production_cleaned'[Tomatoes Production (tonnes)]) + SUM('world_food_production_cleaned'[Wheat Production (tonnes)]) + SUM('world_food_production_cleaned'[Yams Production (tonnes)])
5.	Dashboard design	No of Visualizations -8 (1) Slicer (2) Card (3) Guage Chart (4) Bar Chart (5) Area Chart (6) Ribbon Chart (7) Donut Chart (8) Text box
6	Report Design	No of Visualizations – 7 (1) Slicer (2) Card (3) Pie Chart (4) Donut Chart (5) Table (6) Line Chart (7) Text box