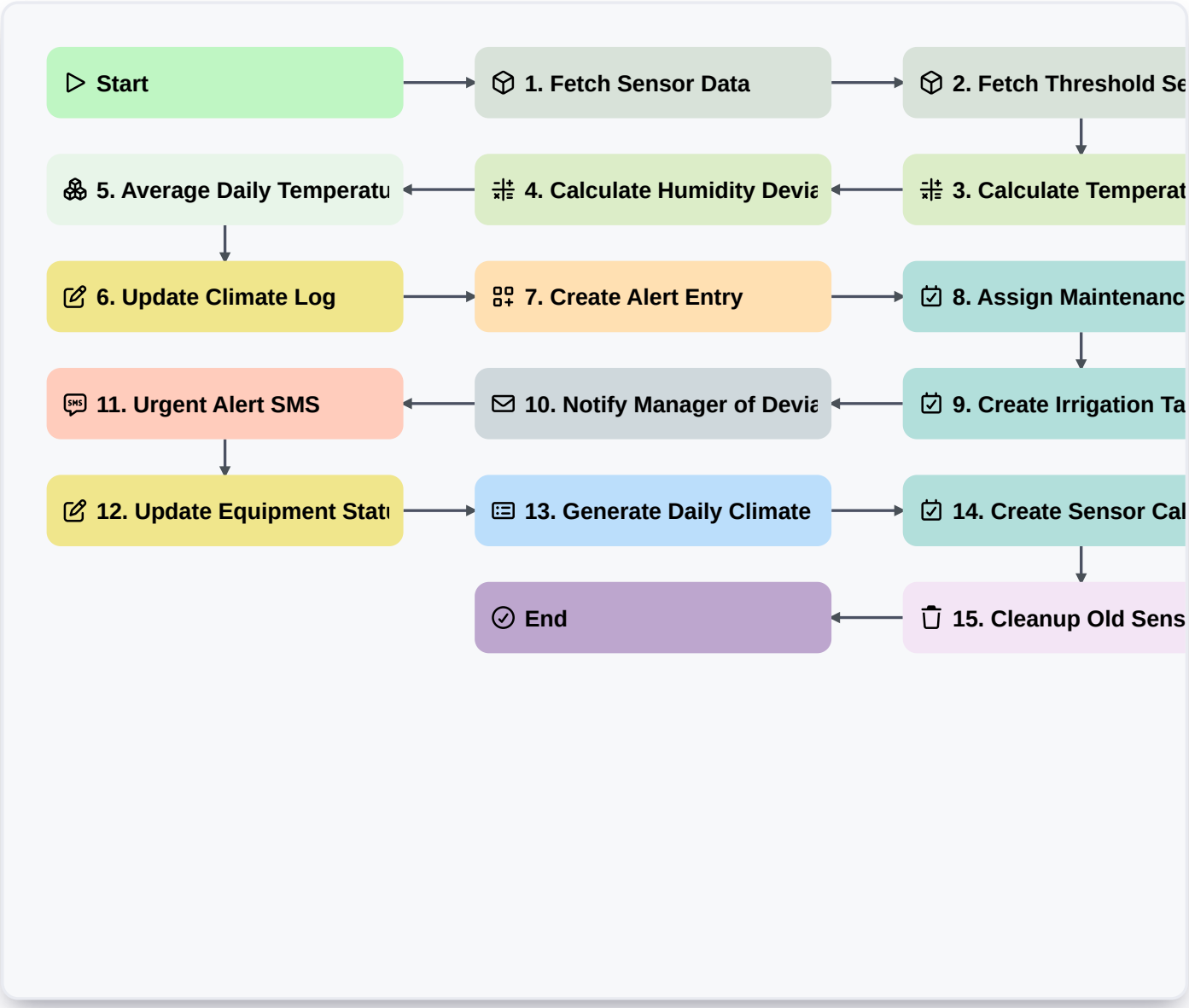
ChecklistGuro

Farm Greenhouse Climate Control Process



Start
Start of the Workflow/Process.

1. Fetch Sensor Data
Retrieve current temperature, humidity, and CO2 levels from the Greenhouse Sensor Data Model.

2. Fetch Threshold Settings
Retrieve the configured target ranges (min/max) for climate parameters from the Configuration Data Model.

3. Calculate Temperature Deviation
Calculate the difference between the current temperature and the target setpoint.

4. Calculate Humidity Deviation
Calculate the difference between current humidity and the target humidity range.

5. Average Daily Temperature
Calculate the average temperature from all sensor entries recorded in the last 24 hours.

6. Update Climate Log
Update the Daily Climate Log entry with the latest aggregated sensor readings.

7. Create Alert Entry
Create a new entry in the Alert Log if any sensor reading falls outside the allowed threshold.

8. Assign Maintenance Task
Create a task for the Greenhouse Technician if a critical deviation (e. e.g. extreme heat) is detected.

9. Create Irrigation Task
Create a task for the Irrigation Specialist if soil moisture levels are below the threshold.

10. Notify Manager of Deviation
Send an email to the Greenhouse Manager when environmental parameters breach safety limits.

11. Urgent Alert SMS
Send an SMS to the On-call Technician for immediate life-critical failures (e.g., heater failure in winter).

12. Update Equipment Status
Update the status of the Ventilation Fan or Humidifier in the Equipment Data Model to 'Active' or 'Error'.

13. Generate Daily Climate Report
Create a summary report of all temperature, humidity, and CO2 fluctuations for the previous 24-hour period.

14. Create Sensor Calibration Task
Create a recurring task for the maintenance team to calibrate sensors every 30 days.

15. Cleanup Old Sensor Logs
Delete sensor data entries older than 90 days to optimize the Data Model performance.

End
End of the Workflow/Process.