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# Guidelines for Temperature Agent System

This document provides guidelines for a Temperature Agent system that is designed to manage heating across multiple rooms, such as Bedroom, Kitchen, and Drawing Room. The system uses an intelligent agent to monitor and adjust the heater based on the current temperature in each room.

## Objectives

- To maintain the desired room temperature by controlling the heater.  
- To provide independent temperature control for each room.  
- To keep track of historical temperature readings for future reference.  
- To ensure energy efficiency by avoiding unnecessary heater usage.

## Key Features

- Each room has its own agent with a desired temperature.  
- The system decides when to turn the heater ON or OFF based on the difference between current and desired temperatures.  
- Historical data of temperatures is stored for each room.  
- The system remembers the last action (Heater ON or Heater OFF) for consistency.

## Decision-Making Rules

1. If the temperature falls below the desired level, the heater will be turned ON.  
2. If the temperature rises above the desired level, the heater will be turned OFF.  
3. If the temperature is within the acceptable range, the system will keep the last action.  
4. Special rules may be applied for specific temperature values (e.g., 20°C).

## Benefits of the System

- Provides comfort by maintaining the desired temperature in each room.  
- Saves energy by intelligently managing the heater.  
- Allows scalability for multiple rooms with different requirements.  
- Offers flexibility to add more rules and conditions.