# *Model-Based Reflex Agent Explanation*

## How it Works:

1. Class Initialization (\_\_init\_\_):  
- The agent is initialized with a desired temperature (e.g., 22°C).  
- It keeps a dictionary 'previous\_actions' to remember past actions.  
  
2. Perception (perceive):  
- The agent perceives the room name and its current temperature.  
  
3. Action Decision (act):  
- If current temperature < desired temperature → Heater is turned ON.  
- If current temperature ≥ desired temperature → Heater is turned OFF.  
- If the same action was already performed in the previous cycle, the agent avoids repeating it and responds with: 'No change needed (Heater already On/Off)'.  
  
4. Loop Over Rooms:  
- For each cycle, the agent reads temperatures of all rooms and decides the action.

## Why this Approach is Used:

- This is a Model-Based Reflex Agent because it remembers previous actions and avoids unnecessary repetitions.  
- This makes the system more efficient, saving energy by not repeating the same commands.  
- It models real-life heating systems where efficiency is important.

## Output Screenshot:

