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**TASK 3**

**Code Explaination:-**

**Short Explanation — How & Why**

* **SimpleReflexAgent**
  + ✅ *How:* Compares current temperature to desired.
  + ✅ *Why:* Makes quick decisions but doesn’t remember past actions, so it can repeat the same command unnecessarily.
* **ModelBasedReflexAgent**
  + ✅ *How:* Also compares temperature, but **stores the last action**.
  + ✅ *Why:* Avoids repeating the same instruction (e.g., “Turn on” again when it’s already on), making it more efficient.
* **simulate()**
  + ✅ *How:* Loops through rooms and applies the agent’s decision.
  + ✅ *Why:* Shows how both agents behave in different rooms and over repeated cycles.

**Output:-** 