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**Roll# BSAIM-035**

**AI LAB TASKs**

**LAB TASK 3:**

**• Model-Based Reflex Agent**

**• This agent not only checks the current temperature but also remembers the previous**

**action to avoid turning the heater on or off unnecessarily.**

rooms = {}

heater\_state = {}

num\_rooms = int(input("Enter number of rooms: "))

for \_ in range(num\_rooms):

room = input("Enter room name: ")

temp = int(input(f"Enter initial temperature for {room}: "))

rooms[room] = temp

heater\_state[room] = False

for cycle in range(5):

print(f"\n=== Cycle {cycle + 1} ===")

for room in rooms:

if rooms[room] < 22:

print(f"{room}: {rooms[room]}°C → Heater ON")

heater\_state[room] = True

else:

print(f"{room}: {rooms[room]}°C → Heater OFF")

heater\_state[room] = False

for room in rooms:

rooms[room] += 1 if heater\_state[room] else -1

**OutPut**

**Enter number of rooms: 1**

**Enter room name: 1**

**Enter initial temperature for 1: 1**

**=== Cycle 1 ===**

**1: 1°C → Heater ON**

**=== Cycle 2 ===**

**1: 2°C → Heater ON**

**=== Cycle 3 ===**

**1: 3°C → Heater ON**

**=== Cycle 4 ===**

**1: 4°C → Heater ON**

**=== Cycle 5 ===**

**1: 5°C → Heater ON**