

```
In [16]: class Model_base:
    def __init__(self, rooms, fixed_temp):
        self.fixed_temp = fixed_temp
        self.ac_states = {room: "off" for room in rooms}

    def act(self, temperatures):

        actions = {}
        for room, temp in temperatures.items():
            if temp > self.fixed_temp and self.ac_states[room] == "on":
                self.ac_states[room] = "off"
                actions[room] = "turn off the AC"

            elif temp <= self.fixed_temp and self.ac_states[room] == "off":
                self.ac_states[room] = "on"
                actions[room] = "turn on the AC"

            else:
                actions[room] = f"no action (AC already {self.ac_states[room]})"

        return actions

rooms = {
    "living room": 25,
    "drawing room": 27,
    "kitchen": 32,
    "bed room": 20,
    "store room": 22
}

agent = Model_base(rooms, fixed_temp = 20)

print("Rooms -- Temperature --- Action")
for room, temp in rooms.items():
    actions = agent.act({room: temp})
    print(f"{room:12} -- {temp:11} --- {actions[room]}")
```

```
Rooms -- Temperature --- Action
living room --          25 --- no action (AC already off)
drawing room --         27 --- no action (AC already off)
kitchen      --         32 --- no action (AC already off)
bed room     --         20 --- turn on the AC
store room   --         22 --- no action (AC already off)
```