**ASSIGNMENT #3**

**MODEL BASED AGENT:**

**EXPALNATION:**

This document explains the main parts of the Temperature Agent program. The code reads past room temperatures from a text file and decides whether to turn the AC on or off based on current and past average temperatures.

## Class Definition:

The code is written inside a class called (TempAgent). This class helps organize the program into small parts (methods). When we create an object from this class, we give it two things: the target temperature and the history file name.

## Reading Past Temperatures:

The method (past\_average) is used to find the average past temperature of a given room. It looks inside the text file, finds the section for that room, and collects all the old temperature values. Finally, it calculates the average.

## Deciding Action:

The method (action) takes the room name and current temperature. It checks the average past temperature. If both the current and past average are higher than the fixed target temperature, it returns 'Turn ON AC'. Otherwise, it returns 'Turn OFF AC'.

## Displaying Results:

The method (show) prints a simple message for each room. The message contains the room name, the current temperature, the past average temperature, and the action (ON/OFF). For example: (Room 1 | Current: 26°C | Past Avg: 23.5°C | Action: Turn ON AC).

## Example Usage:

At the end of the code, a dictionary is made with room names and their current temperatures. Then, for each room, the agent object is asked to show the result by calling (agent.show).