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**Section: BSAI 3A**

**Class: AI lab**

**Report on Model-Based Reflex Agent for Temperature Control:**

**OVERVIEW:**

The provided Python script implements a Model-Based Reflex agent designed to control a heater based on temperature readings. The agent decides whether to turn the heater on or off depending on whether the current temperature falls outside a prediefined comfortable range(15C – 11C).

**FUNCTIONALITY:**

* The agent with previous\_action = None
* If the temperature is below 15C , the heater is turned on useless it already on.
* If the temperature is above 11C, the heater is turned on unless it already off.
* If the temperature is within the range, no action taken.

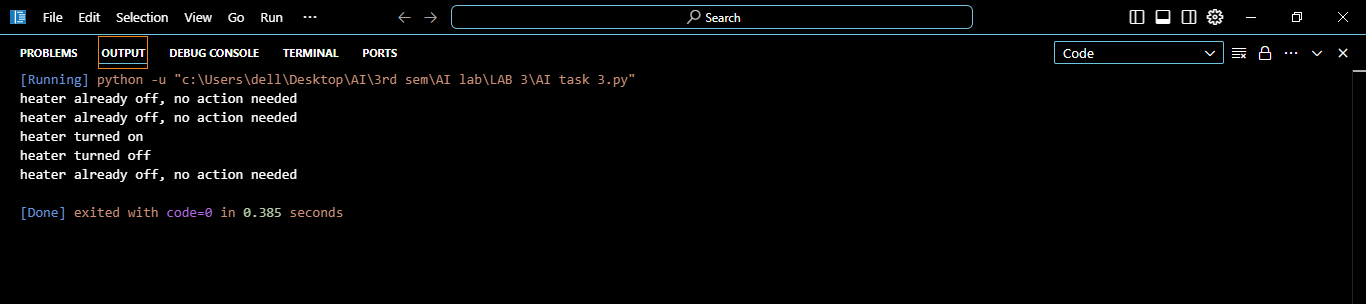
**ISSUES OR OBSERVATION:**

* Incorrect Range Boundries:  
   the comfortable range (15,11) is incorrectly defined. Typically , the lower bound should be smaller than the upper bound.
* Logic Flaw in Decision\_Making:
  + - * + The if conditions do not correctly handle cases where the temperature falss between 11C and 15C .
* TYPO:
* The output message “heater alreadyon, no action needed” is missing a space (“already on”).

**RECOMMENDTION:**

* Correct the range definations to (11, 15) instead of (15,11).
* Update conditions to ensure that teamperature between 11C and 15C are handled appropriately.
* Improve output messages for clarity

**OUTPUT :**

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