Use Case U1: Request Current Weather Data
Scope: Weather Station
Level: User Goal
Primary Actor: User
Scenario: Request Heat Index Data
Related Use Cases: N/A
Stakeholders and Interests:

- User: Wants accurate and current Heat Index data

Preconditions: The Weather Station is running.
Success Guaranties (Postconditions): Heat Index Data is returned to the requesting user.

Main Success Scenario:

User	**System**
1. Request Heat Index Data in the requested units (Metric, English, Absolute).	
	2. Retrieves the Temperature Data.
	3. Retrieves the Humidity Data.
	4. Calculates the Heat Index.
	5. Converts the Heat Index to the requested units.
	6. Presents the Heat Index to the User in the requested units.

Alternative Flows:
2a. If the System cannot measure the Temperature, then the System informs the User the Dewpoint cannot be measured: stating the reason.

2b. If the Heat Index cannot be calculated accurately, then the System informs the User the Heat Index cannot be calculated accurately.

3a. If the System cannot measure the Humidity, then the System informs the User the Dewpoint cannot be measured: stating the reason.

Special Requirements: Both the Temperature and Humidity are need for Heat Index Calculation.

Technology and Variations List:
2a. The temperature must be converted to degrees Fahrenheit to calculate the Heat Index in the current formula.

2b. The temperature must be above 70 degrees Fahrenheit to accurately calculate the Heat Index.

Frequency of Occurrence: Could be nearly continuous.

Open Issues:

- Consider using another heat index calculation that is accurate below 70 fahrenheit (if it makes sense to do so).