Requirement: The system shall measure room temperature every 2 seconds.

Classification: Functional

Requirement: Humidity data should be logged continuously.

Classification: Functional

Requirement: Wi-Fi should connect automatically when power is turned on.

Classification: Functional

Requirement: The device must operate within a temperature range of 0°C to 50°C.

Classification: Non-Functional

Requirement: Users should be able to configure the system remotely.

Classification: Functional

Requirement: There will be support for over-the-air (OTA) updates.

Classification: Functional

Requirement: The display should show current temperature and setpoint.

Classification: Functional

Requirement: Use a secure protocol.

Classification: Non-Functional

Requirement: The thermostat should respond quickly to temperature changes.

Classification: Functional

Requirement: Buttons should provide tactile feedback.

Classification: Functional

Requirement: Provide weekly energy reports to the user.

Classification: Functional

Requirement: Enable firmware update.

Classification: Functional

Requirement: It should not overheat.

Classification: Non-Functional

Requirement: Maintain temperature stability.

Classification: Functional