

Temperature Management in Capstone House

User input

Solution does not require user input

Button or joystick

Discord Bot

REST API

How to get the temperature of the room

Hygrothermometer

Thermistor

Bi-metal thermometer

Thermometer

Report the temperature of the room

Only manage temperature and don't report it

Thermometer User Checks

7 segment display

LCD Screen

Discord Bot

REST API

Actually determine what to set the air to

Raspberry PI

ESP32 (wroom or pico)

User checks thermometer and adjusts

Pre-build board reports when the temperature is too high/low

How should we be changing the temperature

Heater to raise temperature

Turn off air to raise temperature

Ways to change the temperature

User rotates knob

Servo rotates knob

Open the wall and see what the knob does to find a better way

Stepper Motor

Use the low air mode to lower temperature

Use all air modes for quick temperature response