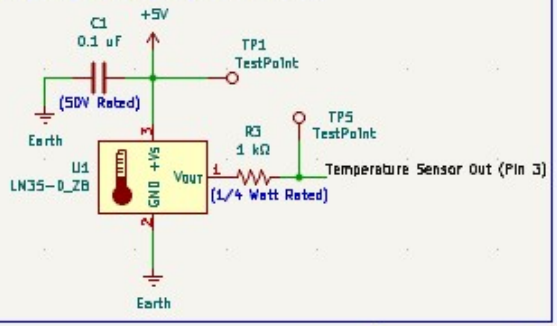
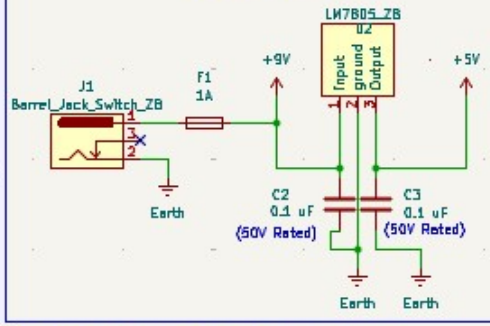
Once the room is at a certain temperature of heat, the Temperature Sensor then acitvates an input to close the curtains that goes to the Microcontroller.

LM35 (analog 10 mv/°c) temperature sensor_ZB



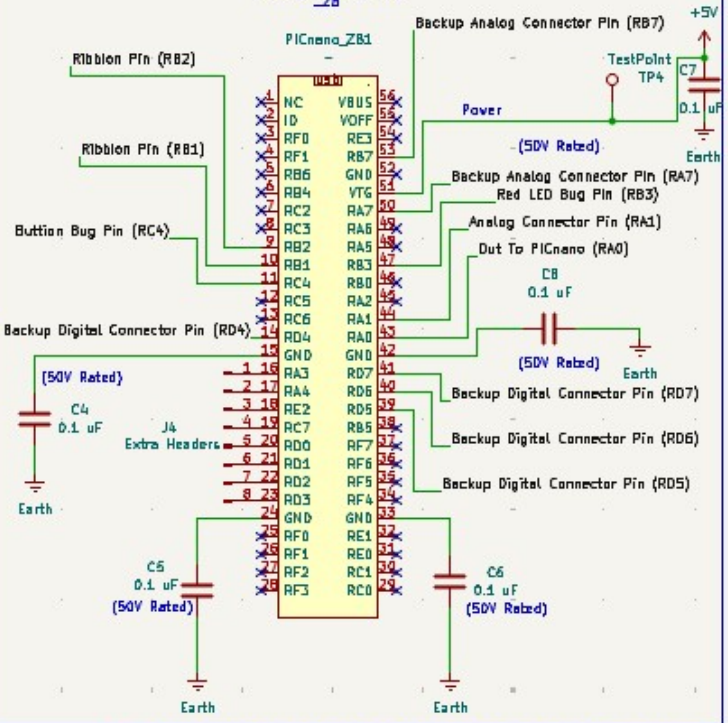
My Power supply is not needed as the main power will be Jumped from Mihir which is the main board. However, this power supply is used for testing purposes.

Power Supply Circuit_ZB



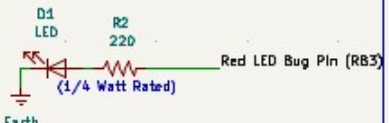
This Microcontroller takes the signals that come from the Temperature Sensor and Button debug and directs it to the connector circuit which then leads to Mihir's board. Pin RC4 is the Debugging Buttion Pin, Pin RC2 is the LED Debugging Pin, Pin RA1 is the Analog Connector Pin, and Pin RA0 is the Temperature Sensor Pin.

MicroController Circuit _ZB



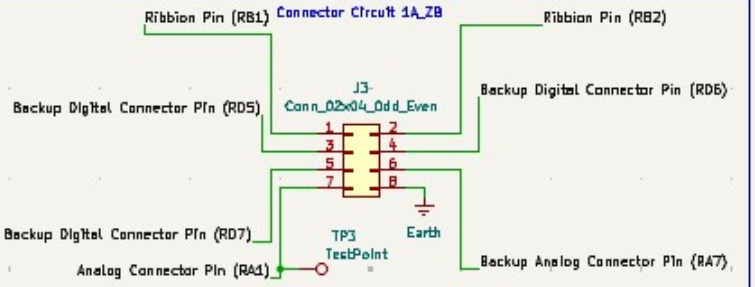
This LED Debugging is what activates the LED to light up acting as a indicator the Debugging is occuring.

Red LED Bug



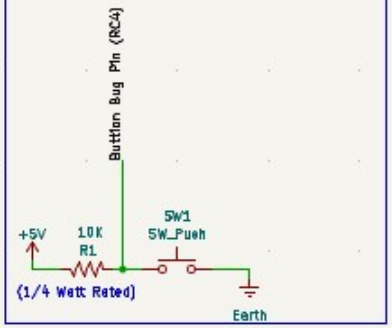
The Connector Circuit 1A is where the Digital and Analog signals are recieved. The Digital pins are connector Pin 1, and connector Pin 2, both being the ribbion Pins, (RB1 and RB2) while Pin 7 is the Analog Pin getting signals from Pin RA1. This analog pin 7 is what connects the Temperature sensors input from the Microcontroller to the Motor on Mihir (Main Board). Pin connector 8 is ground.

Connector Circuit 1A_ZB



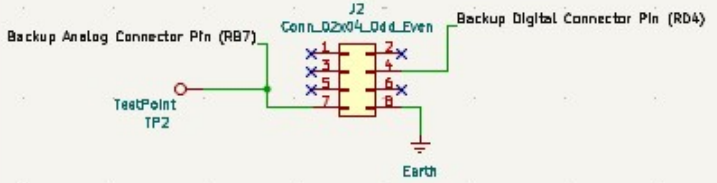
The Button Bug is a debugging feature in which the input signalfrom clicking the button, goes into the Digital I/O of the microcontroller which is what signals the motor on Mihir's board to start the recallabration Proccess.

Button Bug



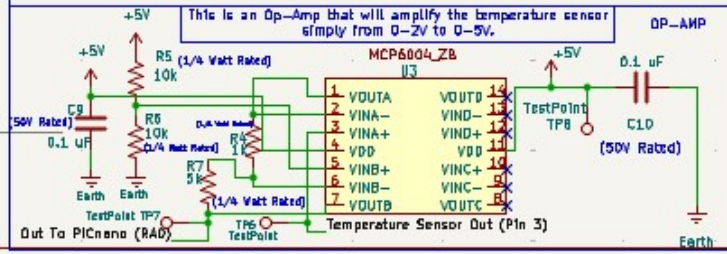
The Connector Circuit 1B is where the Digital and Analog signals are recieved. This is the backup connector Circuit in case if Connector Circuit 1A fails. Connector Circuit 1B takes the analog input from the Temperature sensor from the Backup Pin RB7 to the Analog Pin 7 on Connector Circuit 1B. This connector also recieves the digital input signal of the Debugging Button from the backup Pin RD4 to the Digital Pin 4 on Connector Circuit 1B. This then allows both input signals to go to the Connector 1B Hub which is Adrian's board.

Connector Circuit 1B_ZB



This is an Op-Amp that will amplify the temperature sensor simply from 0-2V to 0-5V.

OP-AMP



Team 206: Zane Brauer

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File: Updated_PCB.kicad_sch

Title: Zane Brauer Temperature Subsystem

Size: A4	Date: 2025-11-05	Rev: 5.0
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