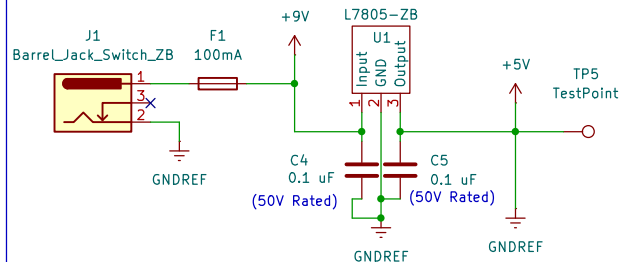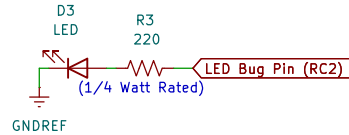My Power supply is not needed as the main power will be Jumped from Mihir which is the main board. However, this power supply is used for testing purposes.
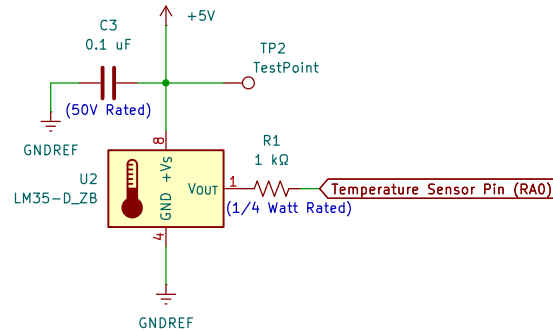
Power Supply Circuit_ZB

J1
Barrel_Jack_Switch_ZB

F1
100mA

+9V

U1
L7805-ZB
Input GND Output

+5V

TP5
TestPoint

GNDREF

C4
0.1 uF
(50V Rated)

C5
0.1 uF
(50V Rated)

GNDREF

GNDREF

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 Button 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

PIC_Nano_ZB
usb

1	NC	VBUS	56
2	ID	VOFF	55
3	CDC_RX	DBG3	54
4	CDC_TX	DBG0	53
5	DBG1	GND	52
6	DBG2	VTG	51
7	RC2	RA7	50
8	RC3	RA6	49
9	RB2	RA5	48
10	RB1	RB3	47
11	RC4	RB0	46
12	RC5	RA2	45
13	RC6	RA1	44
14	RD4	RA0	43
15	GND	GND	42
16	RA3	RD7	41
17	RA4	RD6	40
18	RE2	RD5	39
19	RC7	RB5	38
20	RD0	RF7	37
21	RD1	RF6	36
22	RD2	RF5	35
23	RD3	RF4	34
24	GND	GND	33
25	RF0	RE1	32
26	RF1	RE0	31
27	RF2	RC1	30
28	RF3	RC0	29

LED Bug Pin (RC2)

Button Bug Pin (RC4)

TP1
TestPoint

+5V

TP4
TestPoint

Power

GNDREF

Analog Connector Pin (RA1)
Temperature Sensor Pin (RA0)

GNDREF

GNDREF

GNDREF

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

LED Bug

D3
LED

R3
220
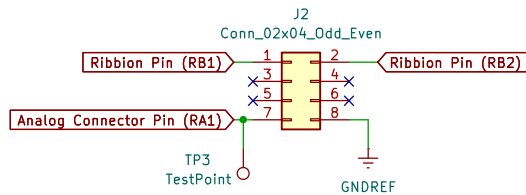(1/4 Watt Rated)

LED Bug Pin (RC2)

GNDREF

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

C3
0.1 uF
(50V Rated)

+5V

TP2
TestPoint

GNDREF

U2
LM35-D_ZB
GND +Vs
Vout

R1
1 kΩ
(1/4 Watt Rated)

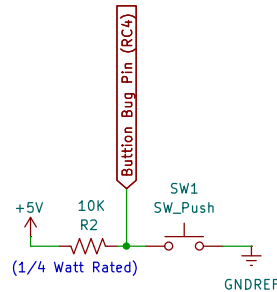Temperature Sensor Pin (RA0)

GNDREF

The Connector Circuit 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_ZB

J2
Conn_02x04_Odd_Even

Ribbion Pin (RB1)   1   2   Ribbion Pin (RB2)
3   4
5   6
Analog Connector Pin (RA1)   7   8

TP3
TestPoint

GNDREF

The Button Bug is a debugging feature in which the Input signal from 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

Button Bug Pin (RC4)

+5V

10K
R2
(1/4 Watt Rated)

SW1
SW_Push

GNDREF