

Node-RED - Chromium

Node-RED Dashboard 127.0.0.1:1880

Getting Started Help Projects Safety Info

Node-RED

filter nodes

Flow 1

+

environment

debug 1

chart

debug 2

debug 3

debug 4

led

OK

switch

LED on

LED off

LDR

gas

PIR

timestamp

temperature

button

dropdown

switch

slider

numeric

text input

date picker

colour picker

form

text abc

gauge

chart

audio out

notification

100% Reset Deploy

dashboard

Layout Site Theme

Tabs & Links

Tab 1

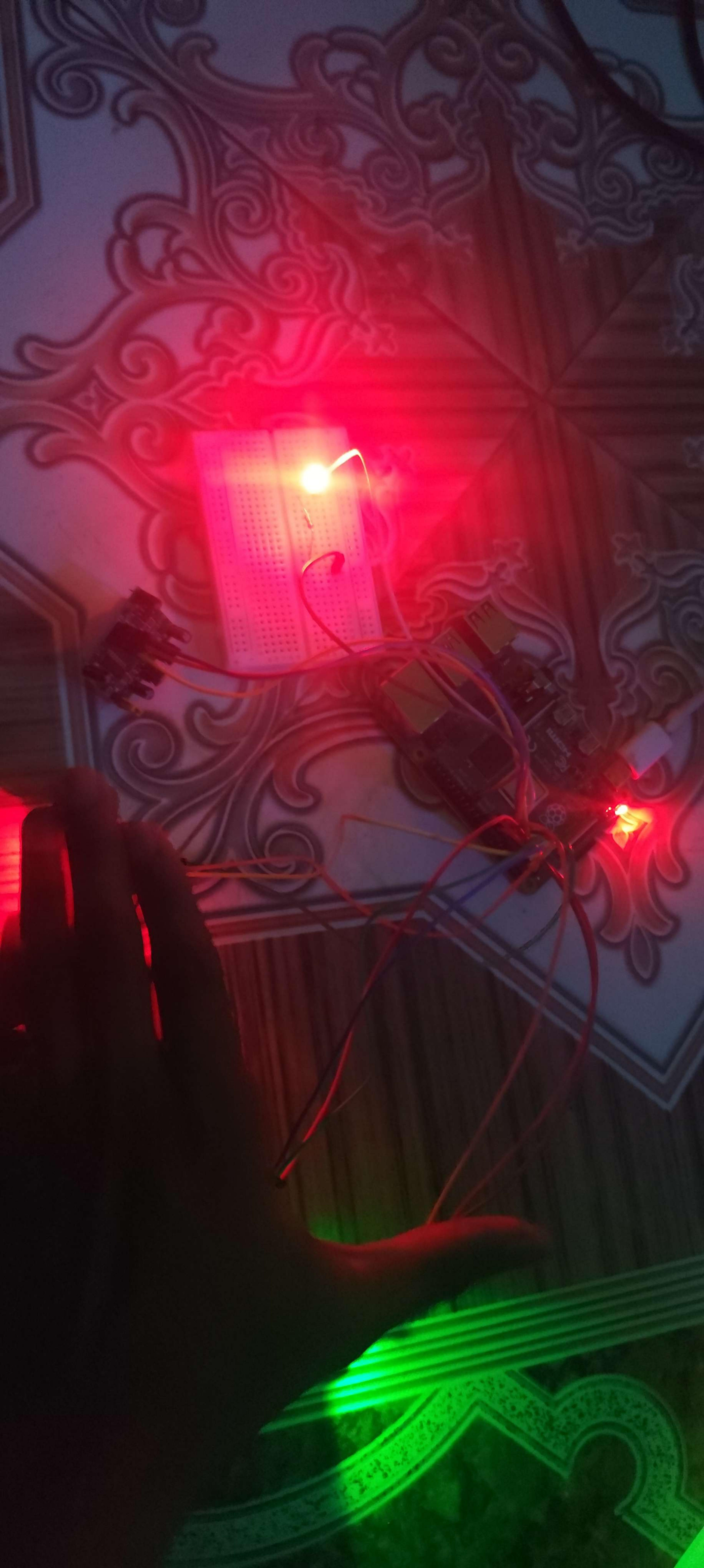
Group 1

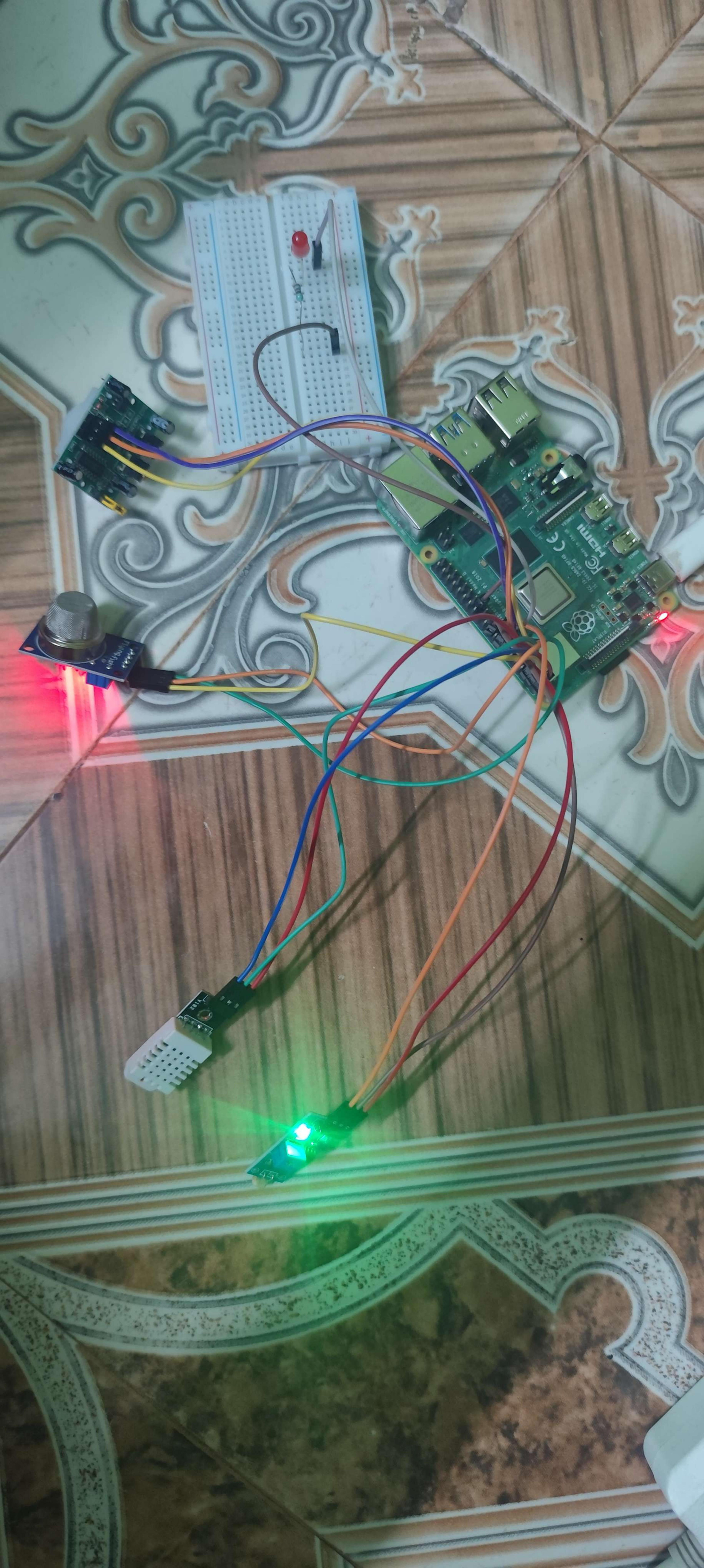
environment

Group 2

Diagram Description:

The diagram illustrates a Node-RED flow named "Flow 1". It starts with a "temperature" node which has multiple output ports. One port connects to a "debug 1" node, another to a "chart" node, and two others to "debug 2" and "debug 3" nodes respectively. Another port from the "temperature" node connects to a "PIR" sensor node. The "PIR" node outputs to a "debug 4" node. A "gas" sensor node also outputs to the same "debug 4" node. Following this, there are two parallel paths. The first path starts with a "LED ON" node, which then connects to an "LDR" sensor node. The "LDR" node outputs to a "switch" node. From the "switch" node, one path leads to a "LED on" node and the other to a "LED off" node. Both "LED on" and "LED off" nodes then converge to a final "led" node, which is labeled "OK". A "button" node is also present in the flow, connected to a "debug 1" node.





Raspberry pi

Projects - Components.

- Raspberry pi
- Temperature & Humidity Sensor - DHT22.
- PIR motion Sensor (HC-SR501).
- Smoke sensor module.
- Breadboard.
- jumper wires.
 - male - Female
 - male - male.
- LED's
- 220Ω
- +5V power Supply.
- micro-SD.

1. DHT 22 (Humidity & Temperature).

VCC - 3.3V (Pin 1)

Data - GPIO 4 (Pin 7)

GND - GND (Pin 6)

2. PIR motion Sensor (HC-SR501)

VCC - 5V (Pin 2)

OUT - GPIO 17 (Pin 11)

GND - GND (Pin 14)

3. MQ-2 Gas Sensor (Digital output)

VCC - 5V (Pin 4)

DO - GPIO 27 (Pin 13)

GND - GND (Pin 9)

4. LED

Anode (+) - GPIO 22 (Pin 15)

Cathode (-) - GND via 220Ω resistor.

Wire Type

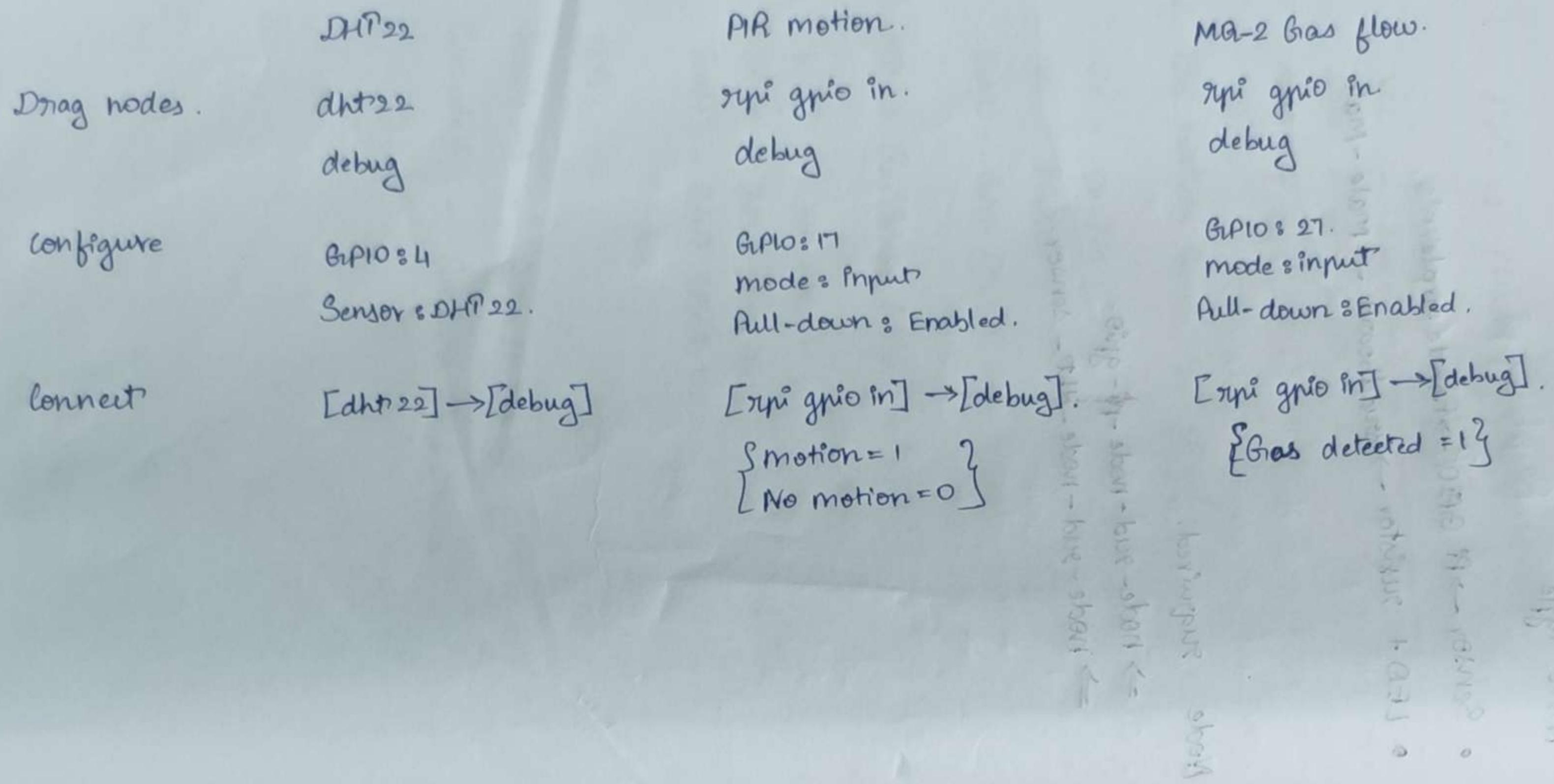
- Sensor → Pi GPIO → Female - male.
- LED + resistor → Breadboard → Male - Male

Node required.

⇒ node-gnd-node-pi-gpio.

⇒ node-gnd-node-dht-sensor.

NODE RED FLOWS.



LED control flow.

inject

GPIO pin out

GPIO: 22

Type: Digital output.

[inject] → [GPIO pin out]

payload 1 → LED ON

payload 0 → LED OFF.

Auto LED on motion detected.

[PIR pin in] → [Switch] → [LED pin out]

Switch rule:

- msg.payload == 1 → ON
- msg.payload == 0 → OFF.