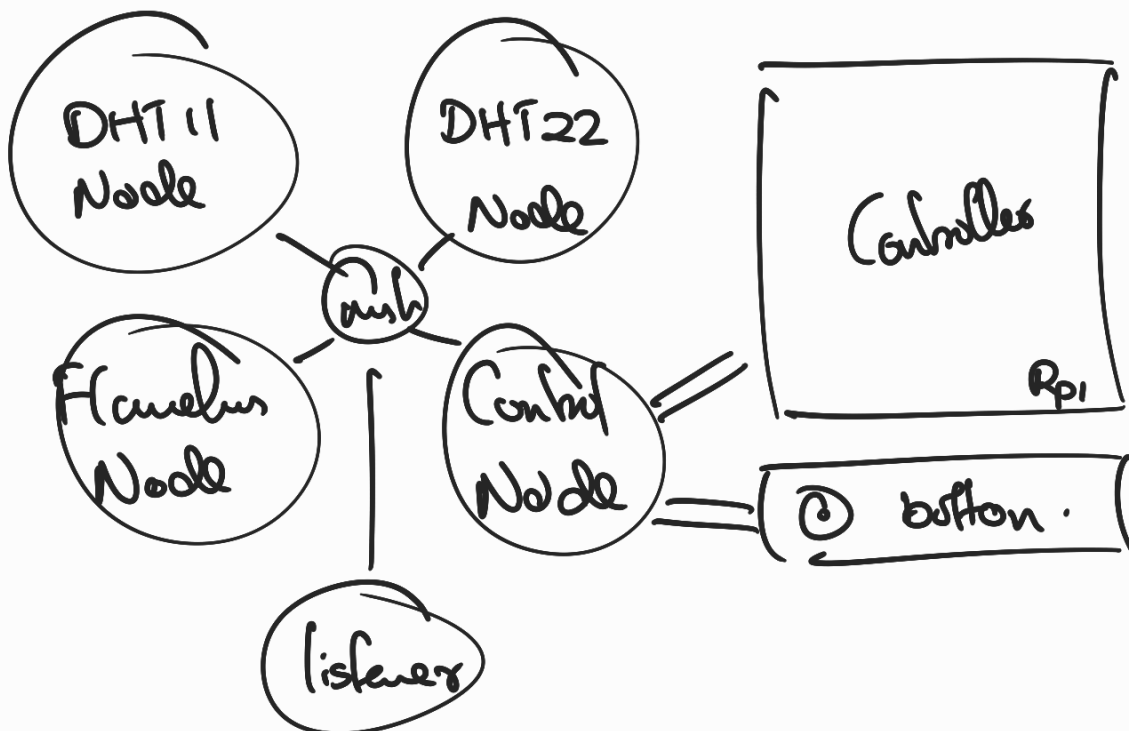# Exp3 - ControlNode Polling

Goals

- Implement basic mesh messaging protocols
- Achieve serial interface b/w Node & Rpi
- Fix Binary Artifacting (adjust baud rate)

Files

Flamgasnode.ino   controlnode.ino

dht11node.ino   listenernode.ino

dht22node.ino   controller.py

Diagram

Behaviour

- DHT11/DHT22/FlameGas Nodes

  → Log mesh updates internally
  → check recieved messages for ping requests
  and respond with sensor readings & config.

- Listener Node

  -> Log all recieved messages and mesh updates

- Control Node

  → send ping requests when button is pressed
  → forward mesh updates to Rpi
  → forward all messages to Rpi

- Controller (Rpi)

  → read all messages in the serial buffer
  and parse into dict or str

Notes

- 115200 baud rate may be too high. experiment w/ lower values and check serial monitors for data integrity.

- 57600 baud rate significantly reduced binary artifacts. occasional occurrences

- 38400 baud rate seems to have fixed all binary artifacting. cautiously optimistic.

38400 → ideal baud rate for Software Serial w/ amateur wiring.