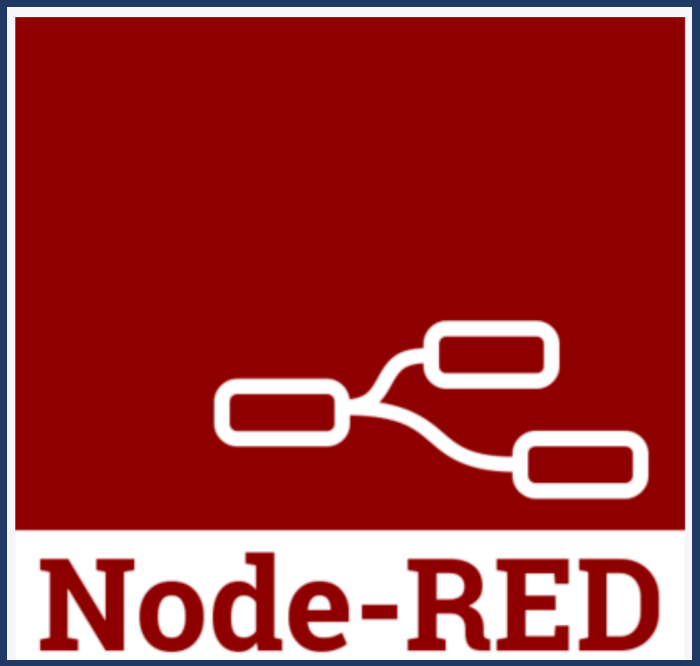
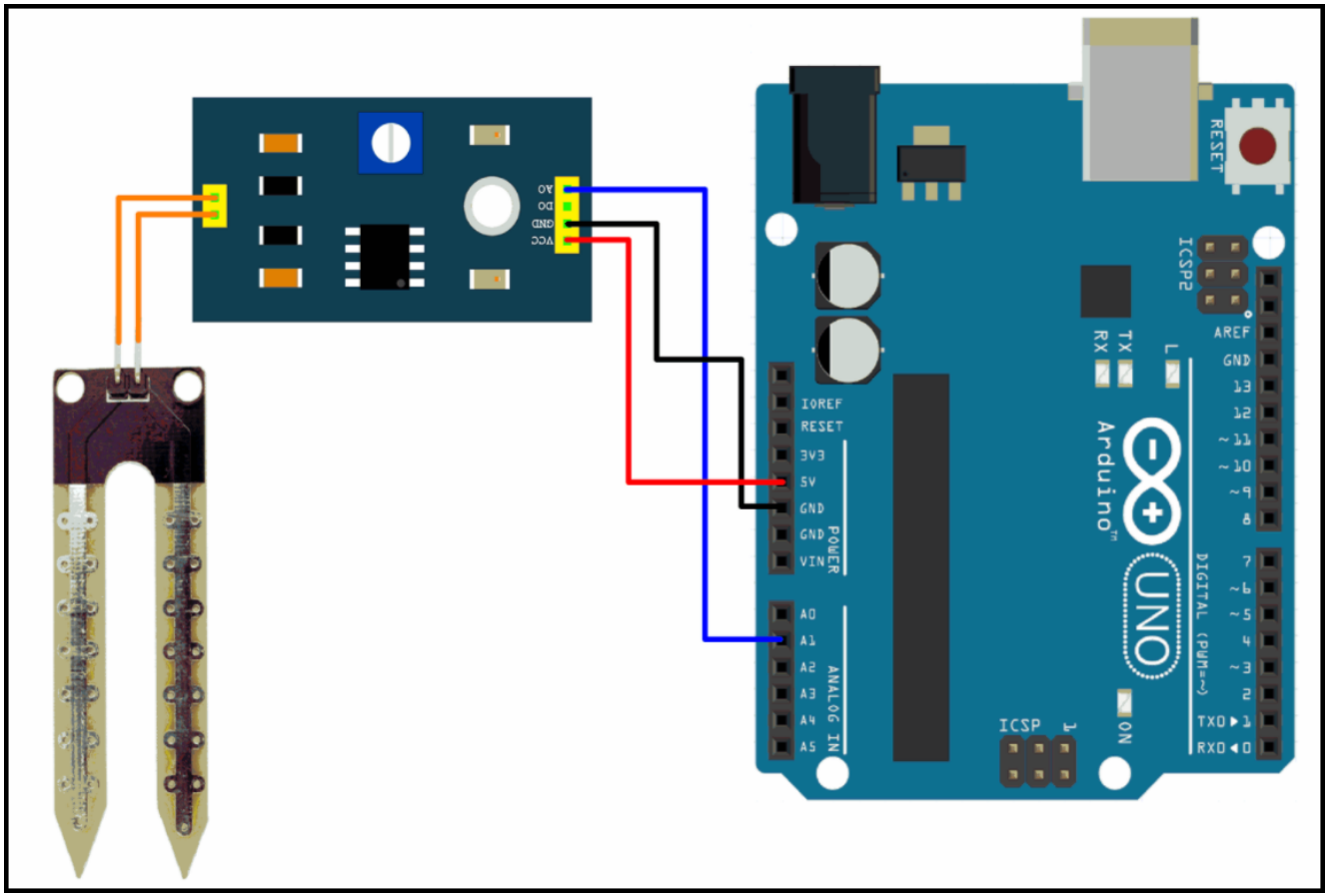


Node-RED: Case Study

Requirement:

i. Microcontroller x 1
ii. Soil Moisture x 2
iii. NodeRED

The schematic diagram:



The result:

When you run the sketch, you'll see the close to the following readings in the serial monitor:

- when the soil was dry (~850)
- when the soil was completely wet (~400)

Status: Dry
Test Reading: ~850

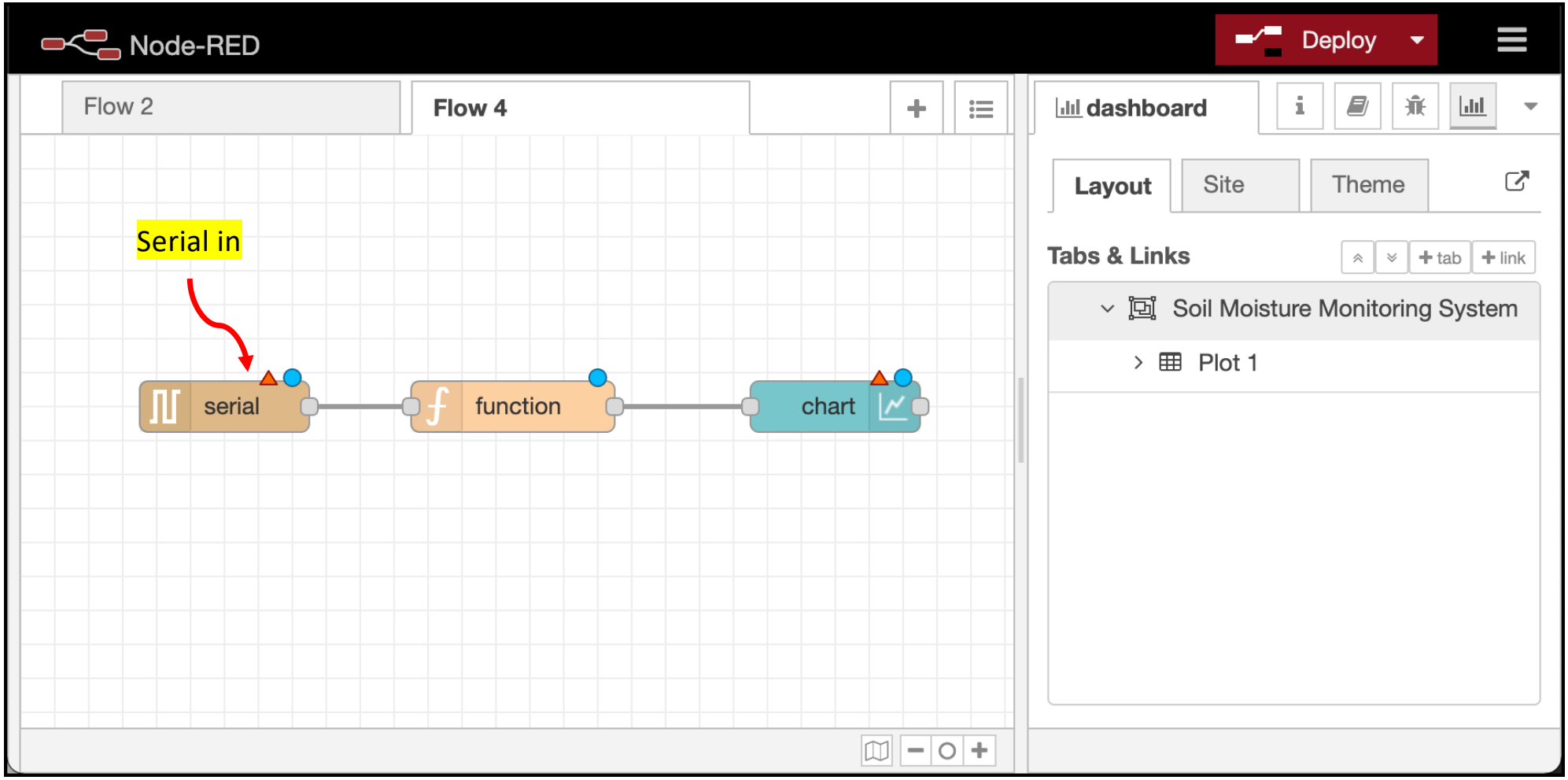
Status: Completely wet
Test Reading: ~400

https://lastminuteengineers.com/soil-moisture-sensor-arduino-tutorial/

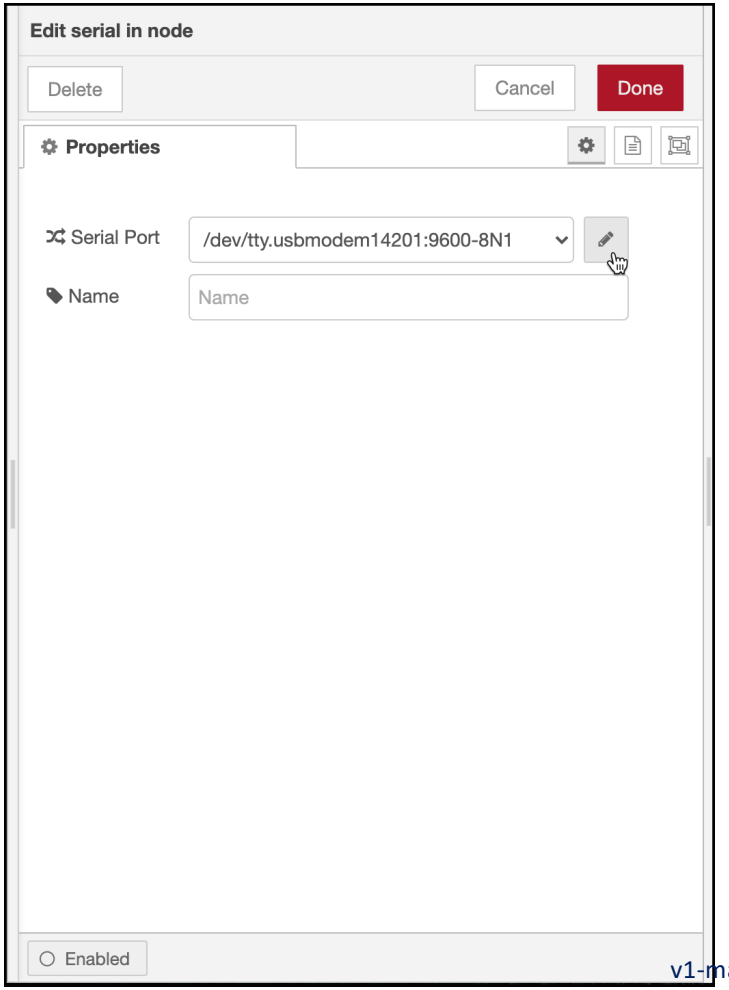
The sketch:

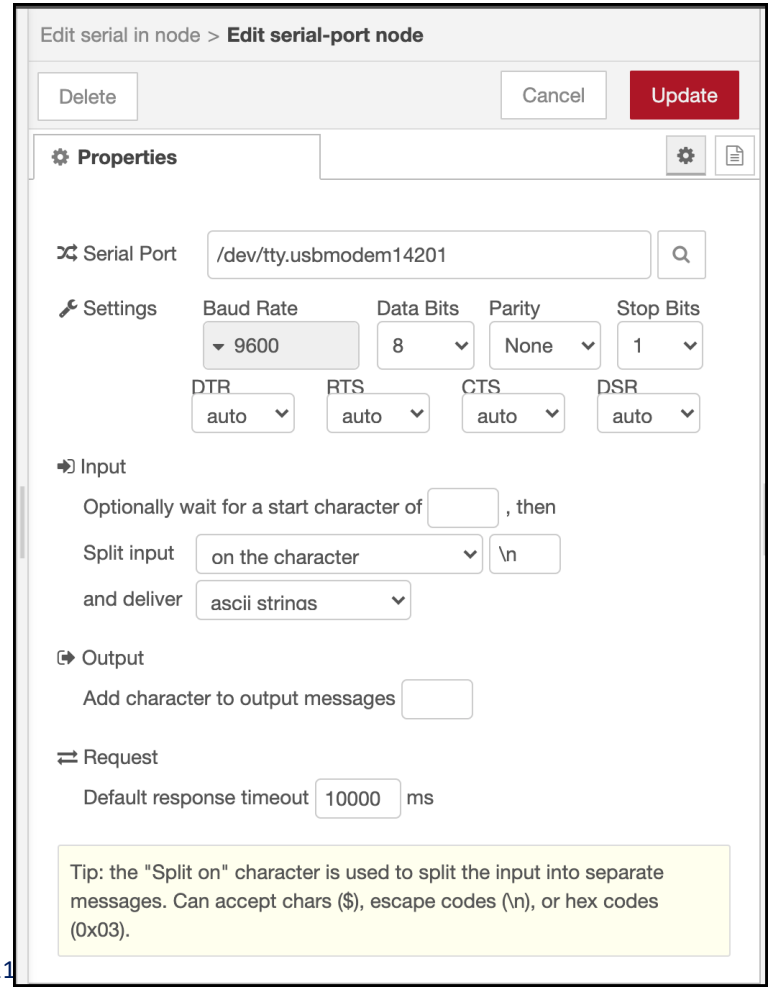
```
// the setup routine runs once when you press reset:
void setup() {
  // initialize serial communication at 9600 bits per second:
  Serial.begin(9600);
  String moist;
}

// the loop routine runs over and over again forever:
void loop() {
  // read the input on analog pin 0:
  int sensorValue = analogRead(A0);
  moist = string(sensorValue); // need to convert to string which will pickup by nodeRED
  // print out the value you read:
  Serial.print("Moisture Level: ");
  Serial.print(moist);
 Serial.println(",");  //delimiter -> for nodeRED

  delay(1000);       // delay in between reads for stability
}
```

Node-RED layout:

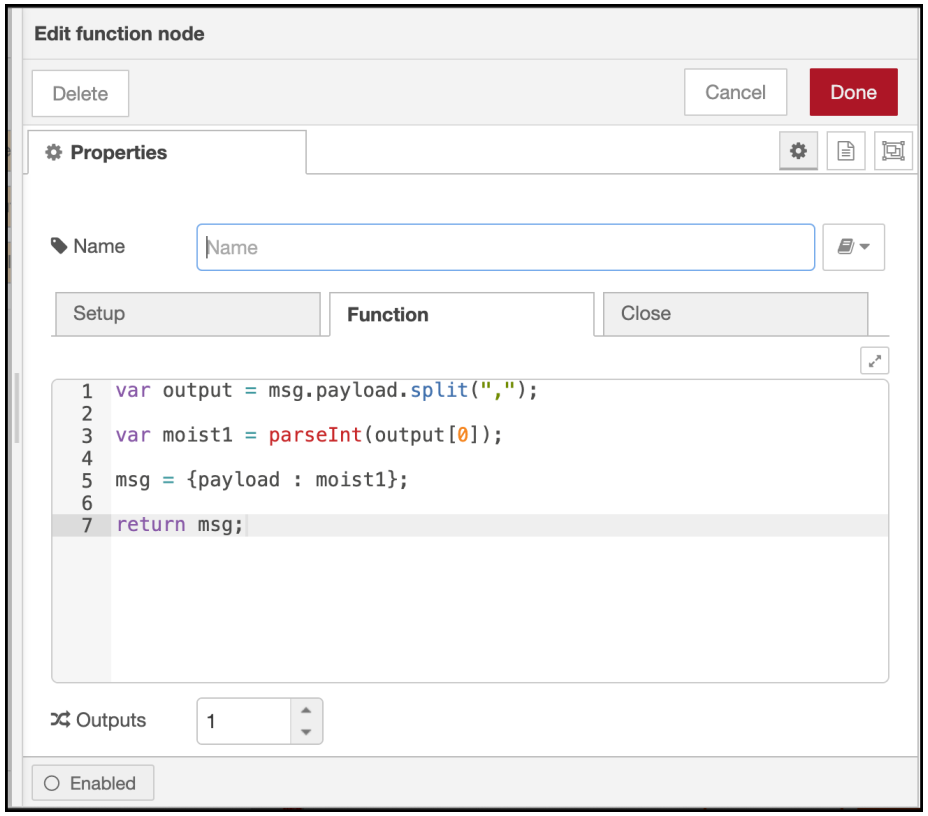


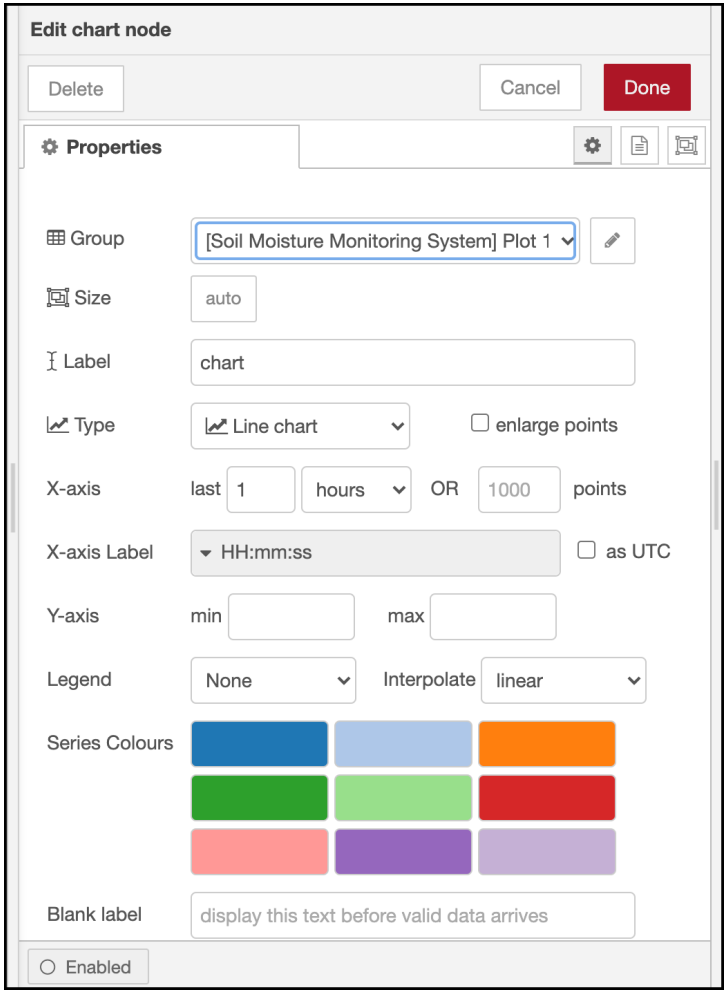
Node-RED properties:



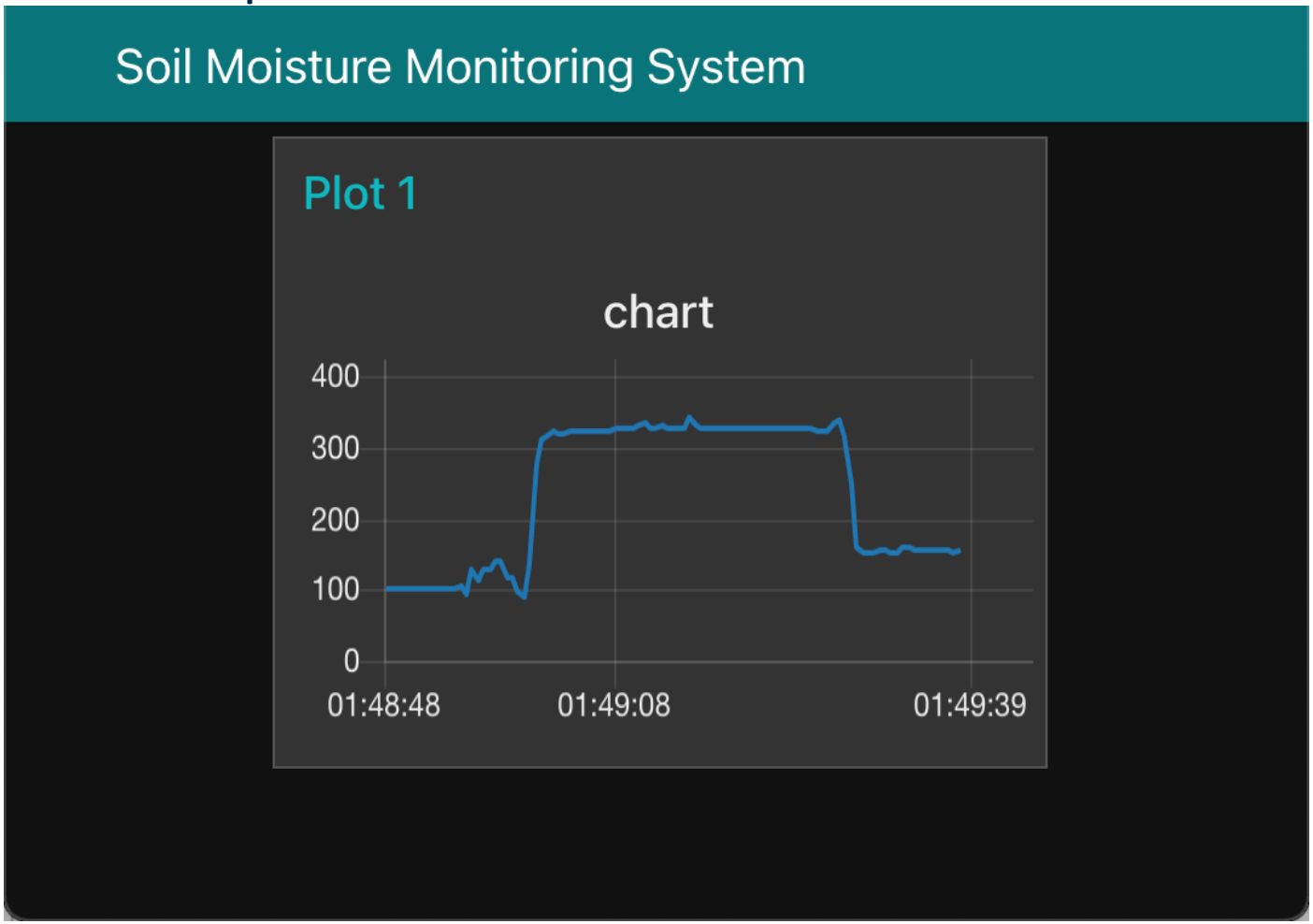


Node-RED layout:





Node-RED expected output:



EXERCISES:

Add one more sensor, modify the function node.

QnA

END