

AGRICULTURE PROJECT

Meeting 2



COMBINING SENSORS ALTOGETHER

- Connected all the 3 sensors together along with rtc timer.
- Scheduled alarm to wake up Arduino from sleep mode.



SENSORS VALUE DISPLAY ON SERIAL MONITOR

COM3

```
Welcome to AgriStick Sensor Node
It includes
Soil temperature,
Soil moisture,
Atmospheric temperature,
Atmospheric humidity

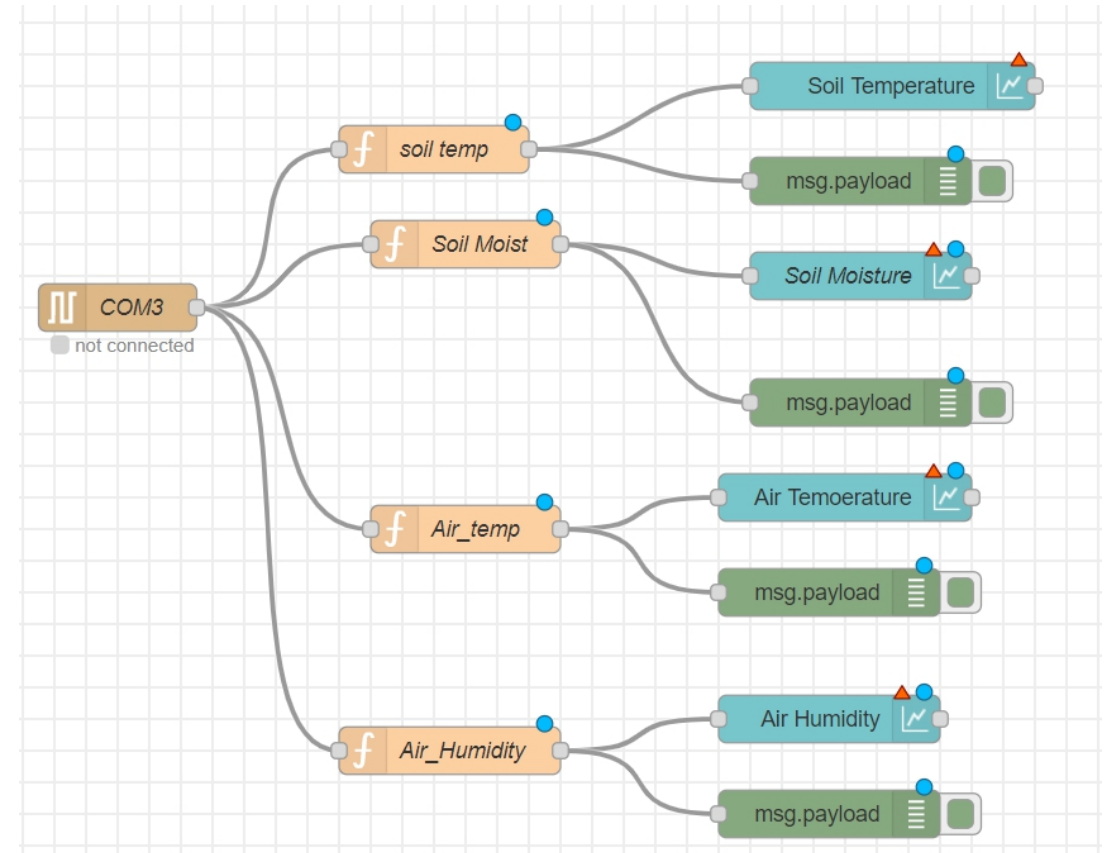
Check time : 7:1:37
initialization done.

Sleep Time: 7:1:38
Interrupt Fired
just woke up!
WakeUp Time: 7:2:0
0 %
Soil Temp: 27.1250 Soil Moist: 627 Atmp Temp: 27.0000 Atmp Hum: 72.8000
Sleep Time: 7:2:1
```



NODE-RED

- Node-RED operates on module based approach where predefined modules are connected graphically to perform the sequence of operations on Node-RED or in other words it directly accesses data from microcontroller boards like **Arduino**, **Raspberry Pi** using the predefined port no. or pin number.
- **Node-RED** is an open source **IoT tool** and has been implemented by the IBM Emerging Technology organization. It is written in JavaScript and works on the NodeJS platform



COM3

26.50,-25,26.60,69.40

26.56,-21,26.60,69.20

26.56,-28,26.60,68.90

26.56,-23,26.60,69.00



Name

soil temp

Setup

Function

Close

```
1 var soil1= msg.payload[0]-48;  
2 var soil2= msg.payload[1]-48;  
3 var soil3= msg.payload[3]-48;  
4 var soil4= msg.payload[4]-48;  
5 var result = (soil1*1000)+ (soil2*100) + (soil3*10) + soil4;  
6 result = result/100;  
7 var result1 = {payload:result};  
8 return[result1];
```



THINGS PENDING

- To work on deploying Dashboard and data visualization using NODE-RED
- To learn how to use Node-Red properly for this project

