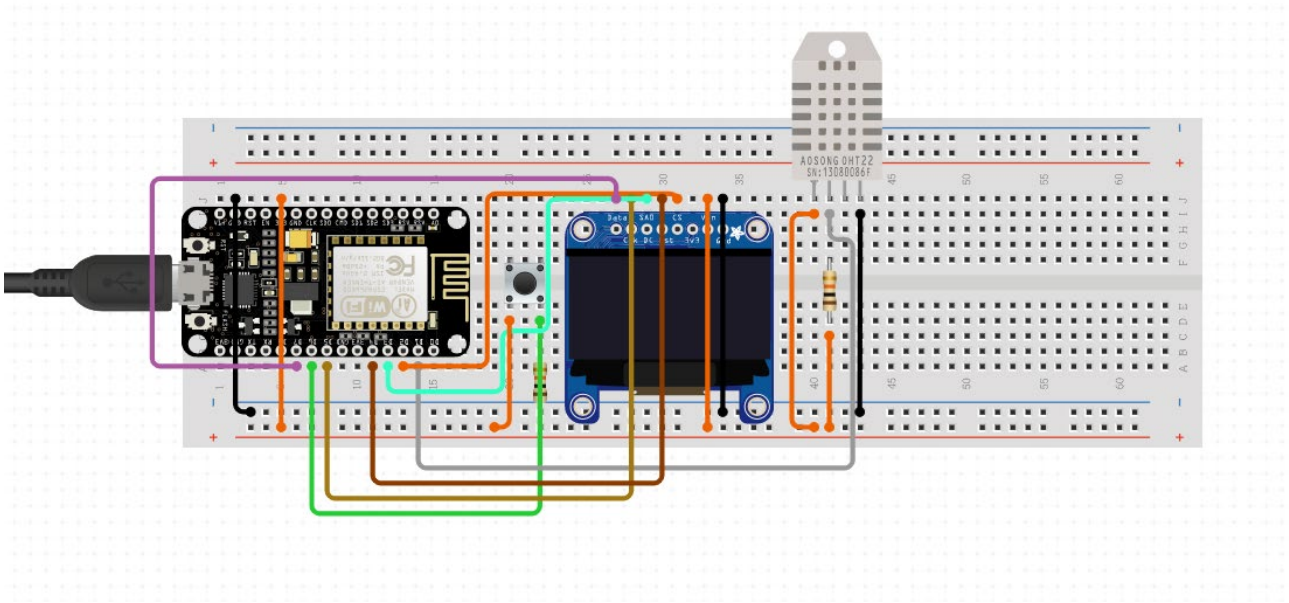
IOT WEATHER STATION

Project Description

Hardware Circuit:



The NodeMCU is connected to OLED display, DHT-11 sensor and a push button with appropriate resistor where needed.
OLED serves as the output for our project. Connect the display pins as specified in the code. Different libraries are used to interface the screen with MCU like "ESP8266 OLED Driver for SSD1306" display developed by Daniel Eichhorn that was used in this project. OLED requires many functions to set the screen colour, for pixel drawings, for display control, text operations and for controlling the frames.
DHT-11 is used to give us the indoor data for Temperature and Humidity. Make sure you a resistor so that the sensor is not damaged. We can also calculate the Dew Point and Humidity index using these values. Dht or Adafruit library can be used to assimilate this sensor into the code.
The Push Button is used to tell the MCU to upload the current weather data to the OM2M server. The code will check if the button is pressed then the block of code to publish data will be executed.

We have to make sure the connections are proper and all the components are grounded.
If we wish to transfer this circuit to a box, we need to use a battery for the supply and use the PCB board to solder all the connections and keep all in place.