

# SMART ELECTRIC VEHICLES MINOR

## Experiment 3

**AIM:** To interface DHT11/DHT22, pressure, voltage and current sensor data input to ESP8266

**OBJECTIVE:** To write a code in Arduino IDE and find out reading for DTH 11

**THEORY:** DHT11/22: The DHT11 detects water vapor by measuring the electrical resistance between two electrodes. The humidity sensing component is a moisture holding substrate with electrodes applied to the surface. When water vapor is absorbed by the substrate, ions are released by the substrate which increases the conductivity between the electrodes.

### **SIMULATION CODE:**

```
#include <dht.h>

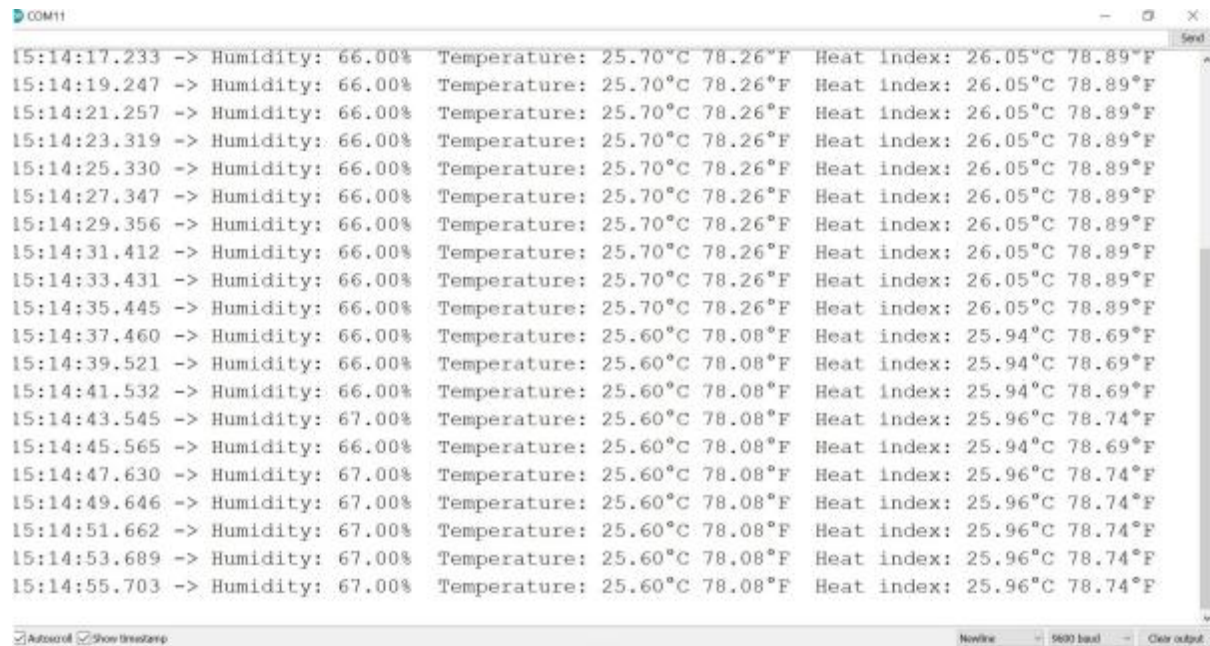
dht DHT;

#define DHT11_PIN 2

Void setup() {
  Serial.begin(9600);
}

Void loop() {
  Int chk = DHT.read11(DHT11_pin);
  Serial.print("Temperature = ");
  Serial.println(DHT.temperature);
  Serial.print("Humidity = ");
  Serial.print(DHT.Humidity);
  delay(1000);
}
```

## SIMULATION RESULT:



```
COM11
15:14:17.233 -> Humidity: 66.00% Temperature: 25.70°C 78.26°F Heat index: 26.05°C 78.89°F
15:14:19.247 -> Humidity: 66.00% Temperature: 25.70°C 78.26°F Heat index: 26.05°C 78.89°F
15:14:21.257 -> Humidity: 66.00% Temperature: 25.70°C 78.26°F Heat index: 26.05°C 78.89°F
15:14:23.319 -> Humidity: 66.00% Temperature: 25.70°C 78.26°F Heat index: 26.05°C 78.89°F
15:14:25.330 -> Humidity: 66.00% Temperature: 25.70°C 78.26°F Heat index: 26.05°C 78.89°F
15:14:27.347 -> Humidity: 66.00% Temperature: 25.70°C 78.26°F Heat index: 26.05°C 78.89°F
15:14:29.356 -> Humidity: 66.00% Temperature: 25.70°C 78.26°F Heat index: 26.05°C 78.89°F
15:14:31.412 -> Humidity: 66.00% Temperature: 25.70°C 78.26°F Heat index: 26.05°C 78.89°F
15:14:33.431 -> Humidity: 66.00% Temperature: 25.70°C 78.26°F Heat index: 26.05°C 78.89°F
15:14:35.445 -> Humidity: 66.00% Temperature: 25.70°C 78.26°F Heat index: 26.05°C 78.89°F
15:14:37.460 -> Humidity: 66.00% Temperature: 25.60°C 78.08°F Heat index: 25.94°C 78.69°F
15:14:39.521 -> Humidity: 66.00% Temperature: 25.60°C 78.08°F Heat index: 25.94°C 78.69°F
15:14:41.532 -> Humidity: 66.00% Temperature: 25.60°C 78.08°F Heat index: 25.94°C 78.69°F
15:14:43.545 -> Humidity: 67.00% Temperature: 25.60°C 78.08°F Heat index: 25.96°C 78.74°F
15:14:45.565 -> Humidity: 66.00% Temperature: 25.60°C 78.08°F Heat index: 25.94°C 78.69°F
15:14:47.630 -> Humidity: 67.00% Temperature: 25.60°C 78.08°F Heat index: 25.96°C 78.74°F
15:14:49.646 -> Humidity: 67.00% Temperature: 25.60°C 78.08°F Heat index: 25.96°C 78.74°F
15:14:51.662 -> Humidity: 67.00% Temperature: 25.60°C 78.08°F Heat index: 25.96°C 78.74°F
15:14:53.689 -> Humidity: 67.00% Temperature: 25.60°C 78.08°F Heat index: 25.96°C 78.74°F
15:14:55.703 -> Humidity: 67.00% Temperature: 25.60°C 78.08°F Heat index: 25.96°C 78.74°F
```

**CONCLUSION:** After performing this experiment we were able to find Temperature and Humidity through ESP8266

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