Industrial IoT Minor

Name: Kshitij Kumar Sharma Roll No: 1905514 Branch: CSE

Experiment - 3

AIM: To interface DHT11/DHT22, pressure, voltage and current sensor date 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.

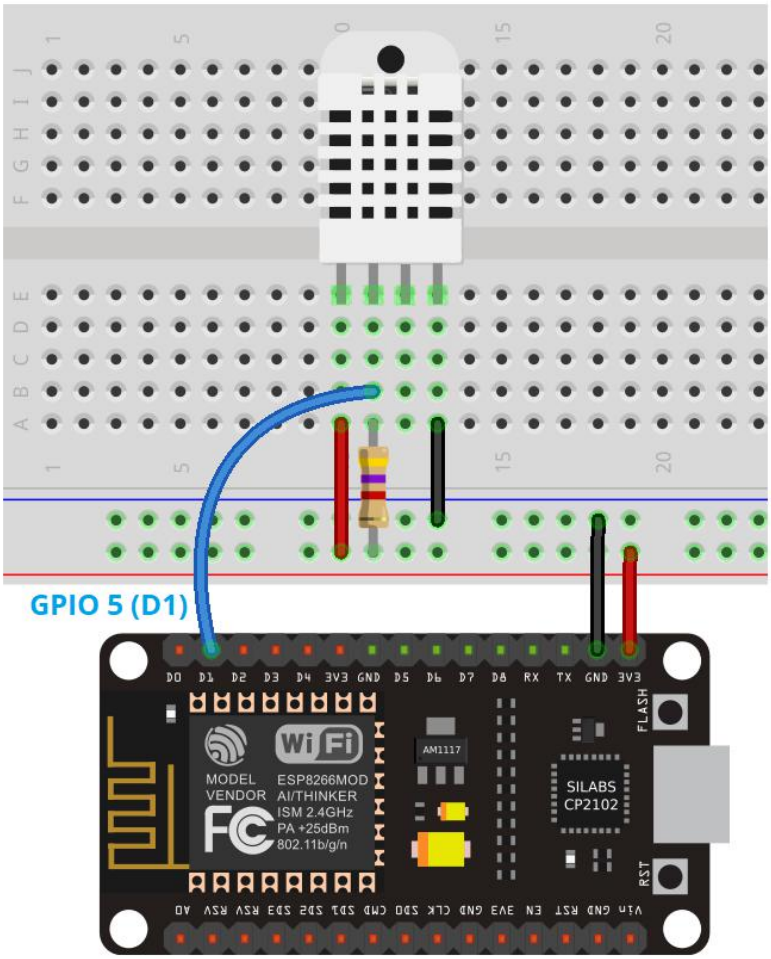
SIMULATION CODE:

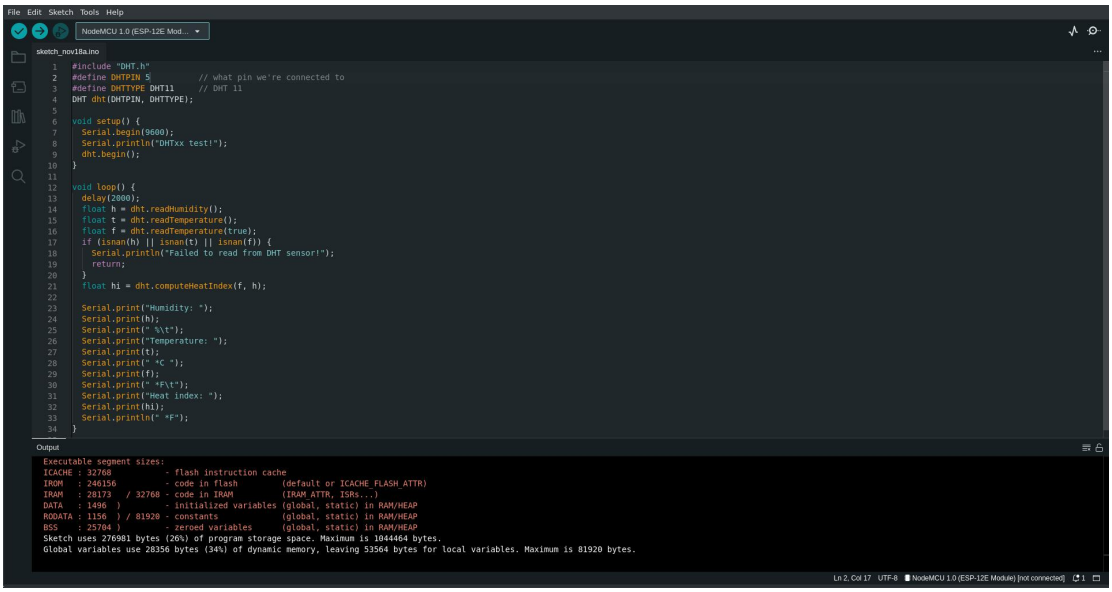
```
#include "DHT.h"
#define DHTPIN 5 // what pin we're connected to
#define DHTTYPE DHT11 // DHT 11
DHT dht(DHTPIN, DHTTYPE);

void setup() {
Serial.begin(9600);
Serial.println("DHTxx test!");
dht.begin();
}
void loop() {
delay(2000);
float h = dht.readHumidity();
float t = dht.readTemperature();
float f = dht.readTemperature(true);
if (isnan(h) || isnan(t) || isnan(f)) {
Serial.println("Failed to read from DHT sensor!");
return;
}
float hi = dht.computeHeatIndex(f, h);
Serial.print("Humidity: ");
Serial.print(h);
Serial.print(" %\t");
Serial.print("Temperature: ");
Serial.print(t);
Serial.print(" *C ");
Serial.print(f);
Serial.print(" *F\t");
Serial.print("Heat index: ");
```

```
Serial.print(hi);
Serial.println(" *F");
}
```

SIMULATION RESULT:





CONCLUSION: After performing this experiment we were able to find Temperature and Humidity using DTH11 and ESP8266.
.