Week-9.

Aim: write a Program to create TCP Server on cloud using Arduino and Respond with humidity data to TCP client when requested.

Software Required

* Thingspeak Server
* Arduino IDE.

Connections:

+ → 3.3V	Node MCU
− → GND.	DHT 22.
Out → D3	Jumper wires.
	cable.

Source code.

```
#include "ESP8266WiFi.h"
#include "DHT.h"
const char *ssid = "Sruthi";
const char *password = "Sruthi20";
WiFiServer WiFiServer(8000);
DHT dht(D3, DHT22);
void setup() {
Serial.begin(115200);
```

```
delay(1000);
WiFi.begin(ssid, password);
while(WiFi.status()!=WL_CONNECTED){
delay(1000);
Serial.println("connecting...");
}
Serial.Print("connected to WiFi. IP:");
Serial.println(WiFi.localIP());
WiFiServer.begin();
dht.begin();
}
void loop(){
WiFiClient client = WiFiServer.available();
if(client){
while(client.connected()){
while(client.available()>0){
float h= dht.readHumidity();
client.Print("humidity:");
client.println(h);
Serial.println(h);
delay(2000);
}}
```

```
    client.stop();
    Serial.println("client disconnected");
  }
}
```

Output: