```
#include <WiFi.h>
#include <HTTPClient.h>
#include "DHT.h"

// WiFi credentials
const char* ssid = "Bap";
const char* password = "1234512345";

// ThingSpeak settings
String apiKey = "H3IBVA550YTRFEI3";  // Your ThingSpeak API key
const char* server = "http://api.thingspeak.com/update";

// DHT11 sensor settings
#define DHTPIN 4         // GPIO pin connected to the DHT11 sensor
#define DHTTYPE DHT11    // DHT11 sensor
DHT dht(DHTPIN, DHTTYPE);

void setup() {
  // Start serial communication
  Serial.begin(115200);

  // Initialize DHT sensor
  dht.begin();

  // Connect to WiFi
  WiFi.begin(ssid, password);
  Serial.print("Connecting to WiFi");
  while (WiFi.status() != WL_CONNECTED) {
    delay(500);
```

```
    Serial.print(".");
  }
  Serial.println("\nWiFi connected");
  Serial.print("IP Address: ");
  Serial.println(WiFi.localIP());
}

void loop() {
  // Read temperature and humidity from the DHT11 sensor
  float temperature = dht.readTemperature();
  float humidity = dht.readHumidity();

  // Check if any reading failed
  if (isnan(temperature) || isnan(humidity)) {
    Serial.println("Failed to read from DHT sensor!");
    return;
  }

  // Print the sensor data to the serial monitor
  Serial.print("Temperature: ");
  Serial.print(temperature);
  Serial.print(" °C ");
  Serial.print("Humidity: ");
  Serial.print(humidity);
  Serial.println(" %");

  // Send data to ThingSpeak
  if (WiFi.status() == WL_CONNECTED) {
    HTTPClient http;
```

```
  String url = String(server) + "?api_key=" + apiKey + "&field1=" + String(temperature) + "&field2=" +
String(humidity);



    http.begin(url);
    int httpCode = http.GET();  // Send the request

    if (httpCode > 0) {
      String payload = http.getString();  // Get response
      Serial.println("ThingSpeak Response: " + payload);
    } else {
      Serial.println("Error in sending request");
    }

    http.end();  // Close connection
  }

  // Wait before sending the next data
  delay(1000);  // 20 seconds (minimum allowed by ThingSpeak)
}
```