Experiment no 8: write a program on Arduino or raspberry pi to retrieve temperature and humidity data from the cloud.

#include "ThingSpeak.h"

#include <ESP8266WiFi.h>

const char ssid[] = "Redmi Note 11 Pro+ 5G"; // your network SSID (name)

const char pass[] = "mani@123"; // your network password

int statusCode = 0;

WiFiClient client;

//---------Channel Details---------//

unsigned long counterChannelNumber = 2062499; // Channel ID

const char \* myCounterReadAPIKey = "W5564YQ3MJPU0S7V"; // Read API Key

const int FieldNumber1 = 1; // The field you wish to read

const int FieldNumber2 = 2; // The field you wish to read

//-------------------------------//

void setup()

{

Serial.begin(115200);

WiFi.mode(WIFI\_STA);

ThingSpeak.begin(client);

}

void loop()

{

//----------------- Network -----------------//

if (WiFi.status() != WL\_CONNECTED)

{

Serial.print("Connecting to ");

Serial.print(ssid);

Serial.println(" ....");

while (WiFi.status() != WL\_CONNECTED)

{

WiFi.begin(ssid, pass);

delay(5000);

}

Serial.println("Connected to Wi-Fi Succesfully.");

}

//--------- End of Network connection--------//

//---------------- Channel 1 ----------------//

long temp = ThingSpeak.readLongField(counterChannelNumber, FieldNumber1, myCounterReadAPIKey);

statusCode = ThingSpeak.getLastReadStatus();

if (statusCode == 200)

{

Serial.print("Temperature: ");

Serial.println(temp);

}

else

{

Serial.println("Unable to read channel / No internet connection");

}

delay(100);

//-------------- End of Channel 1 -------------//

//---------------- Channel 2 ----------------//

long humidity = ThingSpeak.readLongField(counterChannelNumber, FieldNumber2, myCounterReadAPIKey);

statusCode = ThingSpeak.getLastReadStatus();

if (statusCode == 200)

{

Serial.print("Humidity: ");

Serial.println(humidity);

}

else

{

Serial.println("Unable to read channel / No internet connection");

}

delay(100);

//-------------- End of Channel 2 -------------//

}