Developa codeto publich inIBMIoTPlatform

Date	17November 2022
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ProjectName	Project – Smart Farmer-IoT Enabled smartFarmingApplication

ConnectingSensorswithArduinousingC++code

```
#include
"Arduino.h"#include
"dht.h"
#include
"SoilMoisture.h"#defined
ht_apinA0

#define organization =
"mmbh4c"#define deviceType =
"smartfarmer"#define deviceId =
"smartfarmer_1"#define authMethod =
"use-token-auth"#defineauthToken
="123456789"

char server[] =
ORG".messaging.internetofthings.ibmcloud.
com";
char publishTopic[] = "iot-
2/evt/abcd_1/fmt/json";chartopic[]="iot-
2/cmd/home/fmt/String";
```

```
char authMethod[] = "use-token-
auth";chartoken[]=TOKEN;
char clientId[] = "d:" ORG ":" DEVICE_TYPE
":"DEVICE_ID;
```

```
const int sensor_pin = A1;//soil moistureint
pin_out =9;
dht
DHT;int
c=0;voidset
up()
{
pinMode(2, INPUT); //Pin 2 as
INPUTpinMode(3, OUTPUT); //PIN 3 as
OUTPUTpinMode(9,OUTPUT);//output for
pump
}
voidloop()
{
  if(digitalRead(2) ==HIGH)
  {
  digitalWrite(3,HIGH);    // turn the LED/Buzz
  ONdelay(10000);// wait for 100
  mseconddigitalWrite(3,LOW);  // turn the
  LED/Buzz OFFdelay(100);
  }
   Serial.begin(9600);
     delay(1000);
    DHT.read11(dht_apin);
  //tempraturefloath=DHT.humidity;
```

```
 float
  t=DHT.temperature;dela
  y(5000);Serial.begin(960
  0);
  float
 moisture_percentage;int
 sensor_analog;
 sensor_analog=analogRead(sensor_pin);
 moisture_percentage = ( 100 - ( (sensor_analog/1023.00)
*100 ));
 float
 m=moisture_percentage;dela
 y(1000);
 if(m<40)//pump
 {
 while(m<40)
 {
 digitalWrite(pin_out,HIGH);      //open
 pumpsensor_analog=analogRead(sensor_pin);
 moisture_percentage = ( 100 - ( (sensor_analog/1023.00)
*100 ));
 m=moisture_percentage;
 delay(1000);
 }
 digitalWrite(pin_out,LOW);     //closepump
```

}

```
  if(c>=0)
  {
  mySerial.begin(9600);de
  lay(15000);Serial.begin(
  9600);delay(1000);Seria
  l.print("\r");delay(1000);

  Serial.print((String)"update-
>"+(String)"Temprature="+t+(String)"Humidity="+h+(String
)"Moisture="+m);
  delay(1000);
    }
}
```