Develop a code to publich in IBM IoT Platform

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Team ID	PNT2022TMID48581
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

Connecting Sensors with Arduino using C++ code

```
#include "Arduino.h"

#include "dht.h"

#include "SoilMoisture.h"

#define dht_apin A0


#define organization = "mmbh4c"

#define deviceType = "smartfarmer"

#define deviceId = "smartfarmer_1"

#define authMethod = "use-token-auth"

#define authToken = "123456789"


char server[] = ORG
".messaging.internetofthings.ibmcloud.com";

char publishTopic[] = "iot-2/evt/abcd_1/fmt/json";

char topic[] = "iot-2/cmd/home/fmt/String";  char

authMethod[] = "use-token-auth";  char token[] =

TOKEN;

char clientId[] = "d:" ORG ":" DEVICE_TYPE ":"
```

```
DEVICE_ID; i
const int sensor_pin = A1;  //soil moisture
int pin_out = 9; dht DHT; int c=0; void
setup() { pinMode(2, INPUT); //Pin 2 as
INPUT pinMode(3, OUTPUT); //PIN 3 as
OUTPUT pinMode(9, OUTPUT);//output
for pump
} void loop() {   if
(digitalRead(2) == HIGH)
  {
  digitalWrite(3, HIGH);   // turn the LED/Buzz ON
delay(10000);  // wait for 100 msecond    digitalWrite(3,
LOW);   // turn the LED/Buzz OFF   delay(100);
  }
   Serial.begin(9600);
delay(1000);
    DHT.read11(dht_apin); //temprature
float h=DHT.humidity;
  float t=DHT.temperature;     delay(5000);
Serial.begin(9600);    float moisture_percentage;   int
sensor_analog;   sensor_analog = analogRead(sensor_pin);
moisture_percentage = ( 100 - ( (sensor_analog/1023.00) *
```

```
100 ) );   float
m=moisture_percentage;
delay(1000);   if(m<40)//pump
  {
  while(m<40)
  {
  digitalWrite(pin_out,HIGH);      //open pump
sensor_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);
delay(15000);
Serial.begin(9600);   delay(1000);
  Serial.print("\r");
delay(1000);
```

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