Develop a code to publich in IBM IoT Platform

Date	17 November 2022
Team ID	PNT2022TMID00114
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.c
om";
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;
```

```
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_percenta
  ge; 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);
    }
}
```