

Develop A Code To Public In IBM IOT Platform

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Team ID	PNT2022TMID39877
Project Name	Project – Smart Farmer - IoT Enabled Smart Farming Application

Connection Of IBM Cloud Using Arduino (C++) Code :

```
#include "Arduino.h"
```

```
#include "dht.h"
```

```
#include "SoilMoisture.h"
```

```
#define dht_apin A0
```

```
#define organization = "9fbmnc"
```

```
#define deviceType="smartfarmer"
```

```
#define deviceId="smartfarmer_1"
```

```
#define authMethod="use-token-auth"
```

```
#define authToken= "12345678"
```

```
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:

```
const int sensor pin-A1; //soil moisture
```

```
int pin out-9:
```

dht DHT:

```
int e-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 delay(10000); // wait for 100 msecond
```

ON

```
digitalWrite(3, LOW); // turn the LED/Buzz OFF
```

```
delay(100);
```

```
Serial.begin(9600);
```

I

```
delay(1000);
```

```
DHT read1 1(dht apin); //temprature float h DHT.humidity.
```

```
Bloat -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 my moisture percentage;
```

```
delay(1000);
```

```
if(m-40)//pump
```

```
while(m-40)
```

```
digitalWrite(pin_out HIGH); //open pump
```

```
sensor analog= analogRead(sensor pin); I moisture percentage (100-  
((sensor_analog/1023.00)
```

```
100));
```

```
m-moisture percentage:
```

```
delay(1000);
```

```
digitalWrite(pin out LOW)
```

```
if(c>-0)
```

```
mySerial begin(9600);
```

```
delay(15000);
```

```
Serial begin(9600)
```

```
delay(1000);
```

```
Serial.print("");
```

```
delay(1000)
```

```
Serial print((String)"update->" + (String)Temprature + t + (String)"Humidity=" + h + (String)  
)"Moisture=" + m):
```

```
delay(1000);
```