NAME: VARSHINNE.P

REG NO: 20BML0041

CAMPUS: VIT VELLORE

TASK 2

QUESTION

In wokwi connect push button and upload 0 and 1 to IBM cloud.

SOLUTION:

CODE:

```
#include <WiFi.h>
#include <PubSubClient.h>
#define LED 5
#define BUTTON 23

void callback(char* subscribetopic, byte* payload, unsigned int payloadLength);


#define ORG "8edt29"
#define DEVICE_TYPE "wokwi"
#define DEVICE_ID "2311"
#define TOKEN "12345678"
String data3;

char server[] = ORG ".messaging.internetofthings.ibmcloud.com";
char subscribetopic[] = "iot-2/cmd/command/fmt/String";
char authMethod[] = "use-token-auth";
char token[] = TOKEN;
char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;

WiFiClient wifiClient;
PubSubClient client(server, 1883, callback ,wifiClient);
void setup()
{
  Serial.begin(115200);
  pinMode(LED,OUTPUT);
  delay(10);
  Serial.println();
  wificonnect();
  mqttconnect();
}

void loop()
{
  delay(1000);
```

```
33  void loop()
34  {
35    delay(1000);
36    if (!client.loop())
37    {
38      mqttconnect();
39    }
40  }
41
42  void mqttconnect()
43  {
44    if (!client.connected())
45    {
46      Serial.print("Reconnecting client to ");
47      Serial.println(server);
48      while (!!!client.connect(clientId, authMethod, token))
49      {
50        Serial.print(".");
51        delay(500);
52      }
53
54      initManagedDevice();
55      Serial.println();
56    }
57  }
58  void wificonnect()
59  {
60    Serial.println();
61    Serial.print("Connecting to ");
62
63    WiFi.begin("Wokwi-GUEST", "", 6)
64    while (WiFi.status() != WL_CONNECTED)
65    {
66      delay(500);
```

```
66      delay(500);
67      Serial.print(".");
68    }
69    Serial.println("");
70    Serial.println("WiFi connected");
71    Serial.println("IP address: ");
72    Serial.println(WiFi.localIP());
73  }
74
75  void initManagedDevice()
76  {
77    if (client.subscribe(subscribetopic))
78    {
79      Serial.println((subscribetopic));
80      Serial.println("subscribe to cmd OK");
81    }
82    else
83    {
84      Serial.println("subscribe to cmd FAILED");
85    }
86  }
87
88  void callback(char* subscribetopic, byte* payload, unsigned int payloadLength)
89  {
90
91    Serial.print("callback invoked for topic: ");
92    Serial.println(subscribetopic);
93    for (int i = 0; i < payloadLength; i++) {
94      data3 += (char)payload[i];
95    }
96
97    Serial.println("data: "+ data3);
98    if(data3=1)
99    {
```

```
90
91    Serial.print("callback invoked for topic: ");
92    Serial.println(subscribetopic);
93    for (int i = 0; i < payloadLength; i++) {
94      data3 += (char)payload[i];
95    }
96
97    Serial.println("data: "+ data3);
98    if(data3=1)
99    {
100     Serial.println(data3);
101     digitalWrite(LED,HIGH);
102   }
103
104   else
105   {
106     Serial.println(data3);
107     digitalWrite(LED,LOW);
108   }
109   data3="";
110
111 }
```

OUTPUT: