Sprint 4

Team ID	PNT2022TMID34709
Project Name	Personal Assistance for Seniors Who Are Self Reliant

Code for Simulation:

```
#include <WiFi.h>//library for wifi
#include <PubSubClient.h>//library for MQtt
#include <LiquidCrystal_I2C.h>
#include "DHT.h"// Library for dht11
#define DHTPIN 15     // what pin we're connected to
#define DHTTYPE DHT11   // define type of sensor DHT 11
#define LED 2
DHT dht (DHTPIN, DHTTYPE);// creating the instance by passing pin and typr of
dht connected void callback(char* subscribetopic, byte* payload, unsigned int
payloadLength);

//-------credentials of IBM Accounts------

#define ORG "64yf7x"//IBM ORGANITION ID
#define DEVICE_TYPE "b11m3edevicetype"//Device type mentioned in ibm watson
IOT Platform
#define DEVICE_ID "b11m3edeviceid"//Device ID mentioned in ibm watson IOT
Platform
#define TOKEN "-&EMtr7l-v-Gz2G))e"     //Token
String data3=""; int buzz= 13;

//-------- Customise the above values --------
char server[] = ORG ".messaging.internetofthings.ibmcloud.com";// Server Name
char publishTopic[] = "iot-2/evt/Data/fmt/json";// topic name and type of event
perform and format in which data to be send char subscribetopic[] = "iot-
2/cmd/command/fmt/String";// cmd  REPRESENT command type AND COMMAND IS TEST
OF FORMAT STRING char authMethod[] = "use-token-auth";// authentication method
char token[] = TOKEN;
char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id
LiquidCrystal_I2C lcd(0x27,16,2);

//-----------------------------------------
WiFiClient wifiClient; // creating the instance for wificlient  PubSubClient
client(server, 1883, callback ,wifiClient); //calling the predefined client
id by passing parameter like server id,portand wificredential
 void setup()// configureing the ESP32
{
```

```
  Serial.begin(115200);
dht.begin();   pinMode(buzz,
OUTPUT);
pinMode(LED,OUTPUT);
delay(10);   Serial.println();
wificonnect();
mqttconnect();
}  void loop()// Recursive
Function
{   if (!client.loop())
{     mqttconnect();

}
}



/*.....................................retrieving to
Cloud.............................*/   void
PublishData(float temp, float humid) {
mqttconnect();//function call for connecting to ibm
   } void mqttconnect() {   if
(!client.connected()) {
    Serial.print("Reconnecting      client      to      ");
Serial.println(server);                                  while
(!!!client.connect(clientId,    authMethod,    token))    {
Serial.print(".");       delay(500);
    }
initManagedDevice();
     Serial.println();
  } } void wificonnect() //function defination for
wificonnect
{
  Serial.println();
  Serial.print("Connecting to ");

  WiFi.begin("Wokwi-GUEST", "", 6);//passing the wifi credentials to establish
the connection   while (WiFi.status() != WL_CONNECTED) {     delay(500);
Serial.print(".");
  }
  Serial.println("");
  Serial.println("WiFi connected");
  Serial.println("IP address: ");
  Serial.println(WiFi.localIP());
}    void  initManagedDevice()  {       if
(client.subscribe(subscribetopic))      {
Serial.println((subscribetopic));
    Serial.println("subscribe to cmd OK");
  } else {
```

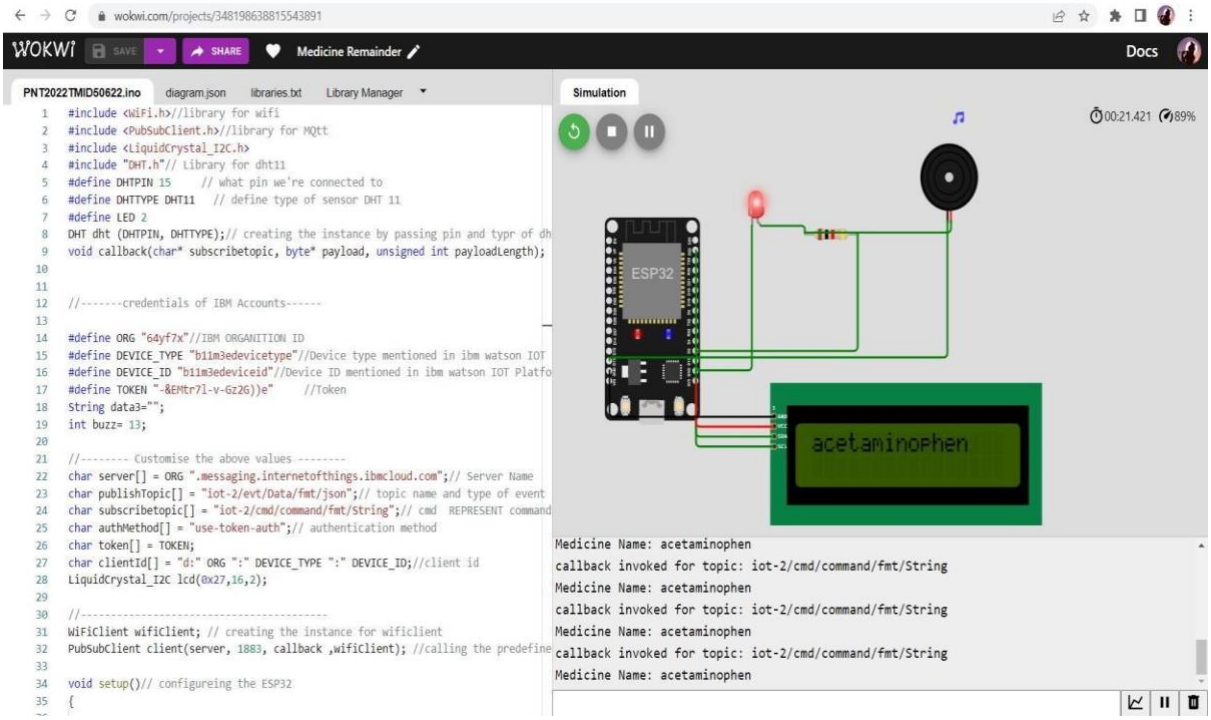
```
    Serial.println("subscribe to cmd FAILED");
  }
}  void callback(char* subscribetopic, byte* payload, unsigned int
payloadLength)
{

  Serial.print("callback invoked for topic: ");
Serial.println(subscribetopic);    for (int i =
0; i < payloadLength; i++) {
//Serial.print((char)payload[i]);     data3
+= (char)payload[i];
  }

  Serial.println("Medicine Name: "+ data3);    if(data3
!= "")
  {     lcd.init();
lcd.print(data3);
digitalWrite(LED,HIGH);
tone(buzz, 100, 1000);
delay(2000);
digitalWrite(LED,LOW);
noTone(buzz);
delay(1000);

  }    else    {
digitalWrite(LED,LOW);
   } data3="";
}
```

Output:


wokwi.com/projects/348198638815543891
WOKWI
SAVE
SHARE
Medicine Remainder
Docs
PNT2022TMID50622.ino
diagram.json
libraries.txt
Library Manager
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#include <LiquidCrystal_I2C.h>
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#define LED 2
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//-------credentials of IBM Accounts------
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char publishTopic[] = "iot-2/evt/Data/fmt/json";// topic name and type of event
char subscribetopic[] = "iot-2/cmd/command/fmt/String";// cmd REPRESENT command
char authMethod[] = "use-token-auth";// authentication method
char token[] = TOKEN;
char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id
LiquidCrystal_I2C lcd(0x27,16,2);
//---
WiFiClient wifiClient; // creating the instance for wificlient
PubSubClient client(server, 1883, callback ,wifiClient); //calling the predefine
void setup()// configureing the ESP32
{
Simulation
00:21.421
89%
ESP32
acetaminophen
Medicine Name: acetaminophen
callback invoked for topic: iot-2/cmd/command/fmt/String
Medicine Name: acetaminophen
callback invoked for topic: iot-2/cmd/command/fmt/String
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