FINAL DELIVERABLES

Team ID	PNT2022TMID18885
Project Name	Project - Personal Assistance for Seniors Who Are Self-Reliant

Source Code:

```
#include <WiFi.h>//library for wifi
#include <PubSubClient.h>//library for MQtt
#include <LiquidCrystal_I2C.h>
#define LED 2
void callback(char* subscribetopic, byte* payload, unsigned int
payloadLength);


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

#define ORG "brtbli"//IBM ORGANITION ID
#define DEVICE_TYPE "Mydevice01"//Device type mentioned in ibm watson IOT
Platform
#define DEVICE_ID "12345"//Device ID mentioned in ibm watson IOT Platform
#define TOKEN "9uhV*uqZLpBlHUXugg"      //Token
String data3="";


//-------- 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/medicine/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);
  pinMode(LED,OUTPUT);
```

```
  delay(10);
  Serial.println();
  wificonnect();
  mqttconnect();
}

void loop()// Recursive Function
{
  if (!client.loop()) {
    mqttconnect();
  }
}

/*.....................................retrieving to
Cloud..............................*/


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("Please take "+ data3);
  if(data3 != "")
  {
    lcd.init();
    lcd.print("Take"+ data3);

digitalWrite(LED,HIGH);
delay(20000);
digitalWrite(LED,LOW);

  }

  else
  {
digitalWrite(LED,LOW);

  }
data3="";


}
```