# Connected IBM IOT watson cloud with wokwi(nodemcu)

| Date | 03 November 2022 |
|------|------------------|
| Team ID | PNT2022TMID15483 |
| Project Name | PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF-RELIANT |
| Maximum Marks | 20 marks |
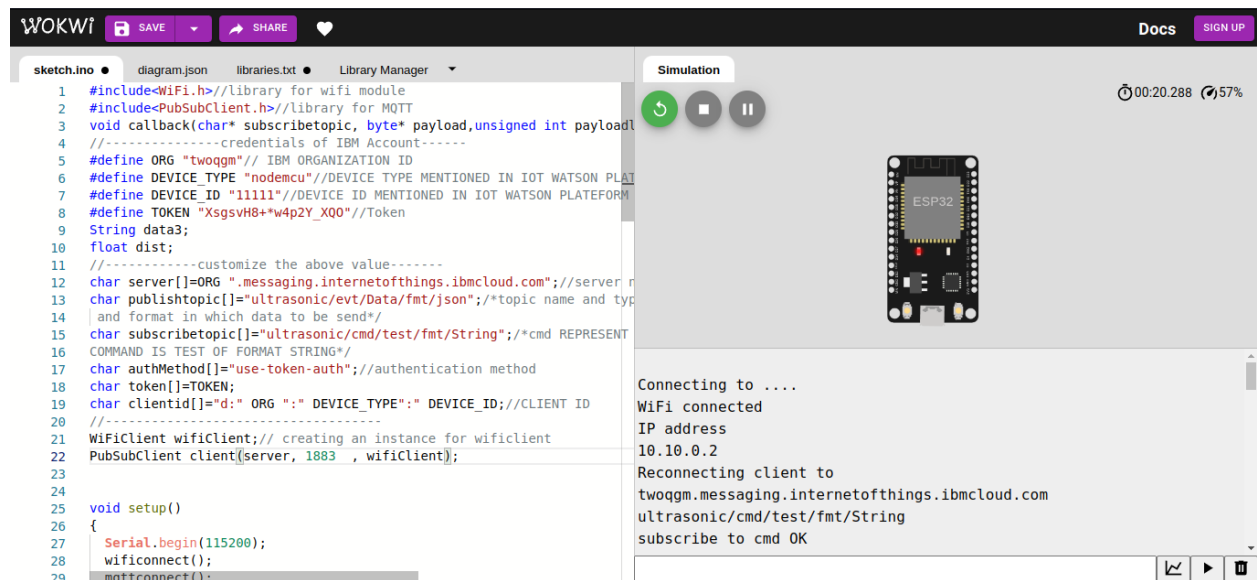


Code:

```
#include<WiFi.h>//library for wifi module
#include<PubSubClient.h>//library for MQTT
void callback(char* subscribetopic, byte* payload,unsigned int payloadlength);
//---------------credentials of IBM Account------
#define ORG "twoqgm"// IBM ORGANIZATION ID
#define DEVICE_TYPE "nodemcu"//DEVICE TYPE MENTIONED IN IOT WATSON PLATFORM
#define DEVICE_ID "11111"//DEVICE ID MENTIONED IN IOT WATSON PLATEFORM
#define TOKEN "XsgsvH8+*w4p2Y_XQO"//Token
String data3;
float dist;
//------------customize the above value-------
char server[]=ORG ".messaging.internetofthings.ibmcloud.com";//server name
char publishtopic[]="ultrasonic/evt/Data/fmt/json";/*topic name and type of event perform
 and format in which data to be send*/
char subscribetopic[]="ultrasonic/cmd/test/fmt/String";/*cmd REPRESENT Command tupe and
COMMAND IS TEST OF FORMAT STRING*/
```

```cpp
char authMethod[]="use-token-auth";//authentication method
char token[]=TOKEN;
char clientid[]="d:" ORG ":" DEVICE_TYPE":" DEVICE_ID;//CLIENT ID
//-----------------------------------
WiFiClient wifiClient;// creating an instance for wificlient
PubSubClient client(server, 1883  , wifiClient);



void setup()
{
  Serial.begin(115200);
  wificonnect();
  mqttconnect();
}
void loop()//recursive function
{
  if (!client.loop()){
    mqttconnect();
  }
}
/*.............................retriving 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();
  }
  else{
    Serial.println("Connected :)");
  }
}
void wificonnect()//function defenition for wificonnects
{
  Serial.println();
  Serial.print("Connecting to ");
  WiFi.begin("Wokwi-GUEST", "",6);//PASSING THE WIFI CREDIDENTIALS TO ESTABLISH
CONNECTION
  while (WiFi.status() !=WL_CONNECTED){
```

```cpp
    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");
  }
}
```