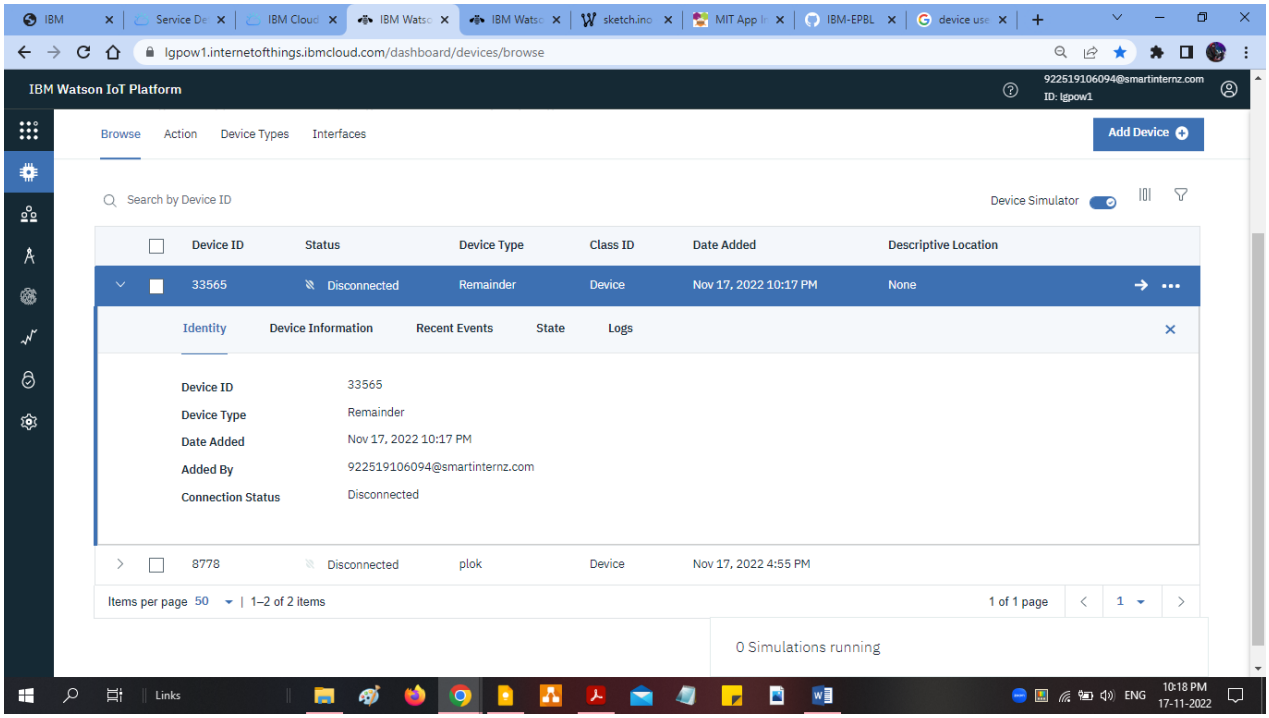
SPRINT – 1

Project Title:	Personal Assistance for Senior Who are Self Reliant
Team ID:	PNT2022TMID33565

Created IOT device configuration in IBM IOT Watson



Connected IBM IOT watson cloud with wokwi(nodemcu)

Wokwi url: https://wokwi.com/projects/348594509931610706

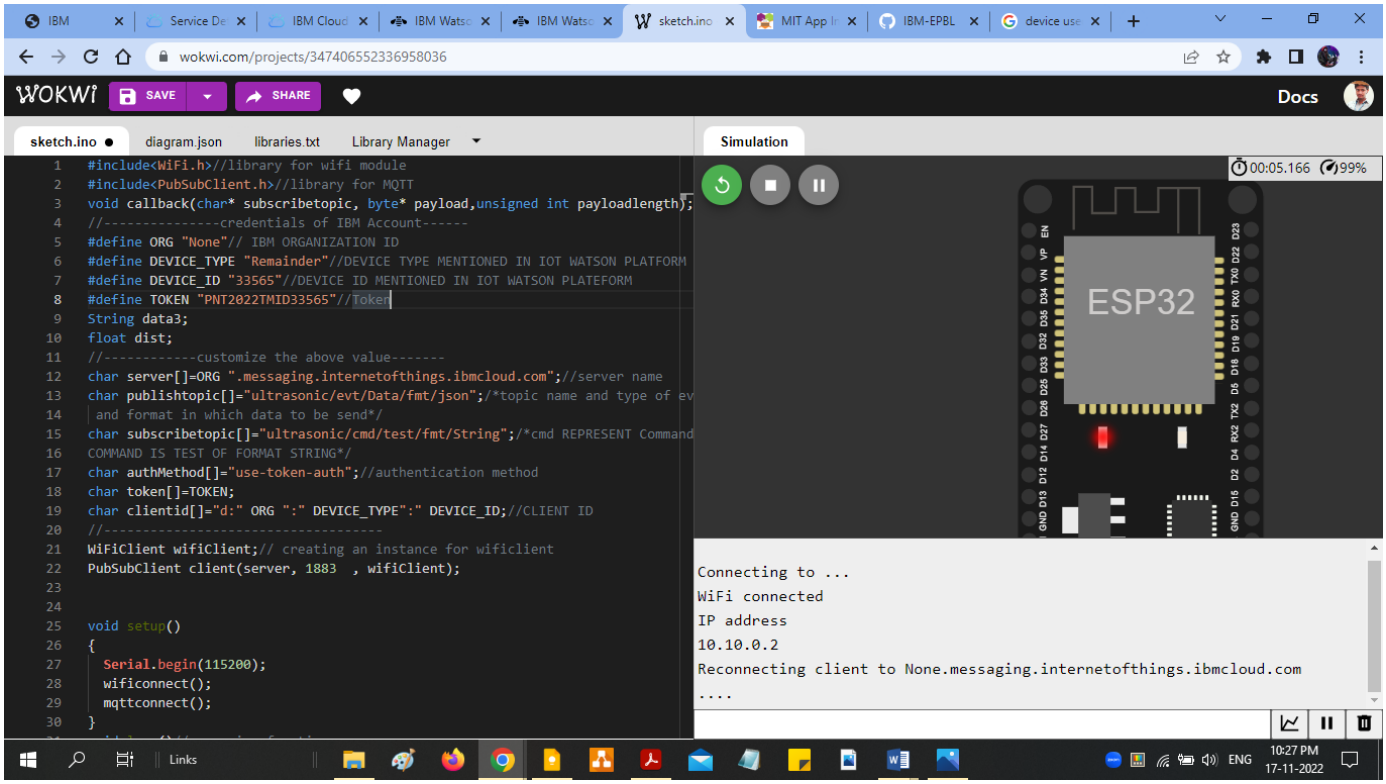
Code:

```
#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 "None"// IBM ORGANIZATION ID
#define DEVICE_TYPE "Remainder"//DEVICE TYPE MENTIONED IN IOT WATSON PLATFORM
#define DEVICE_ID "33565"//DEVICE ID MENTIONED IN IOT WATSON PLATEFORM
#define TOKEN "PNT2022TMID33565"//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*/
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){
    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");
  }
}
```


wokwi.com/projects/347406552336958036
WOKWI
SAVE
SHARE
Docs
sketch.ino
diagram.json
libraries.txt
Library Manager
Simulation
00:05.166
99%
ESP32
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Connecting to ...
WiFi connected
IP address
10.10.0.2
Reconnecting client to None.messaging.internetofthings.ibmcloud.com
....
Links
ENG
10:27 PM
17-11-2022