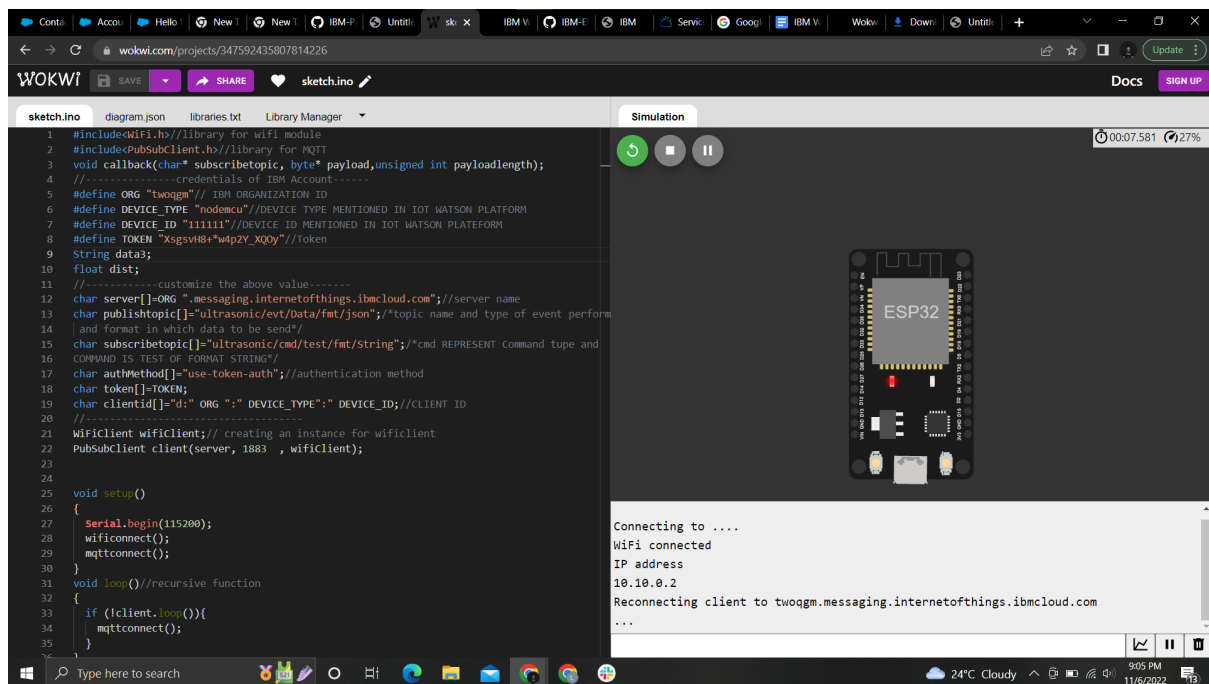


Connected IBM watson cloud with node mcu:



```
#include<WiFi.h>//library for wifi module
#include<PubSubClient.h>//library for MQTT
void callback(char* subscribtopic, 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 "111111"//DEVICE ID MENTIONED IN IOT WATSON PLATFORM
#define TOKEN "XsgsvH8+*w4p2Y_XQOy"//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 subscribtopic[]="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 CREDENTIALS 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");
  }
}
}

```