HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY

(AUTONOMOUS)

Team ID	PNT2022TMID10014
Project Name	Project - IOT Gas Leakage Monitoring and Alerting System.

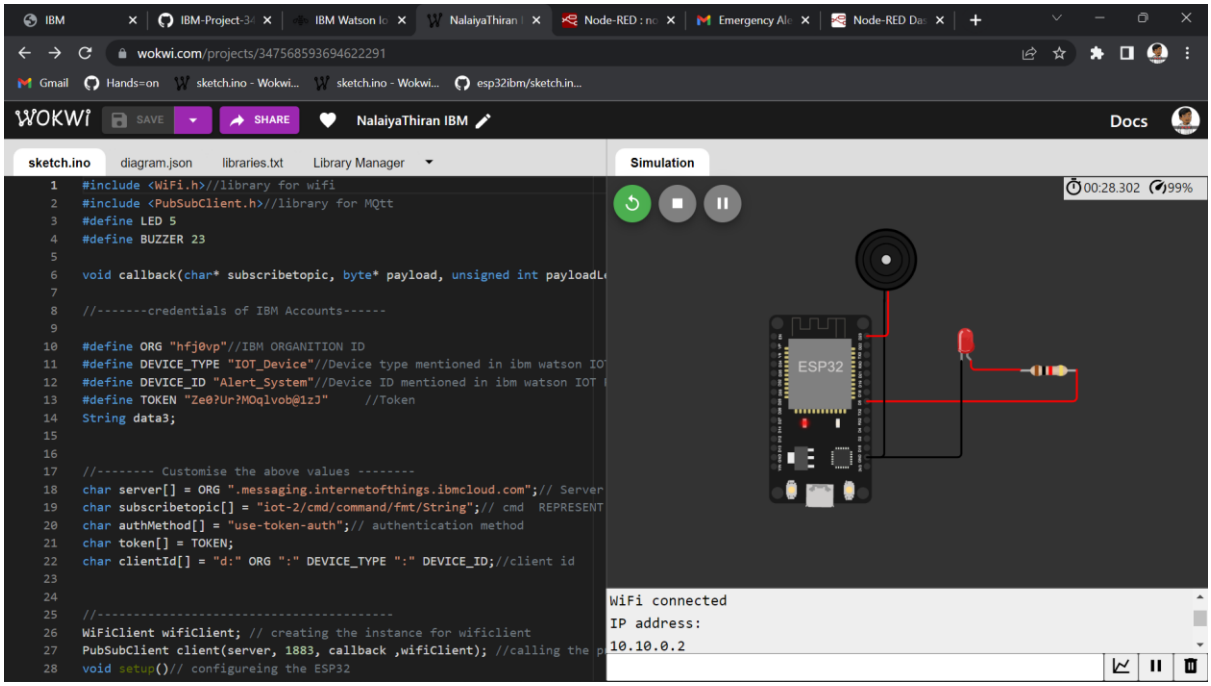
SPRINT 4:

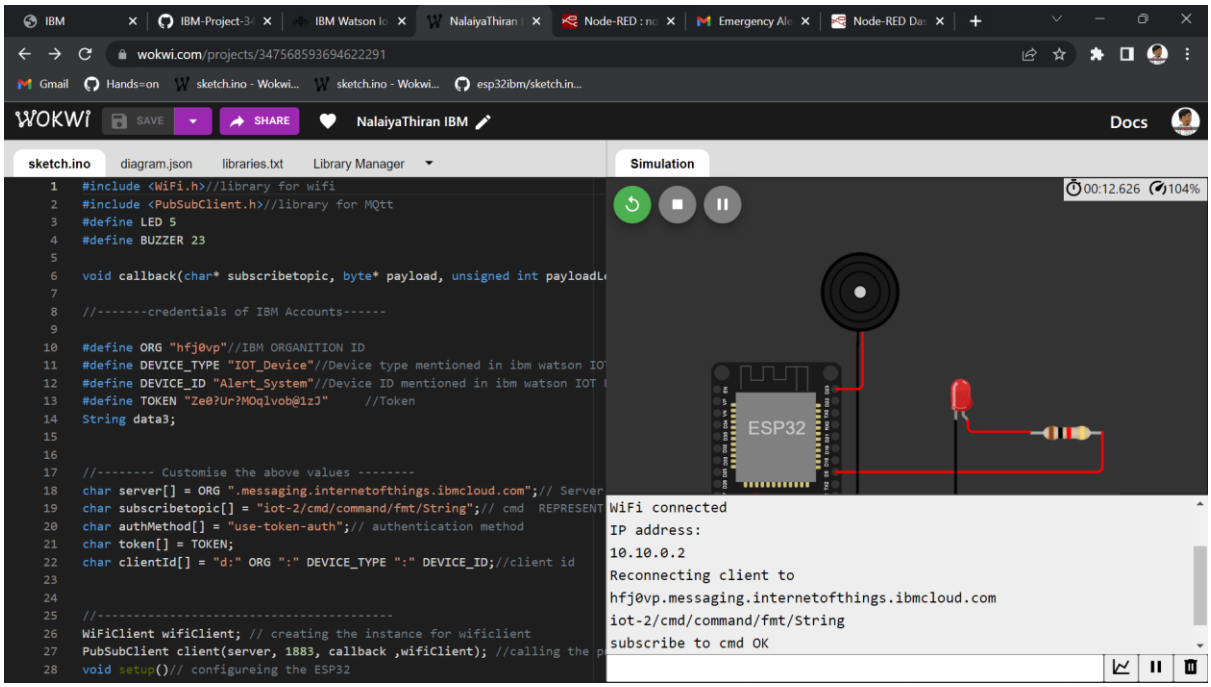
In this sprint we have developed an alarm system simulation using a led, buzzer and ESP32 microcontroller. The subscribe model device named Alert_System in IBM Watson IOT platform is connected to this simulation using device credentials. Thus the alarm gets toggles ON automatically when a gas leakage is detected. However, this alarm can be toggled ON and OFF manually from the Node Red Web Application dashboard by the admins.

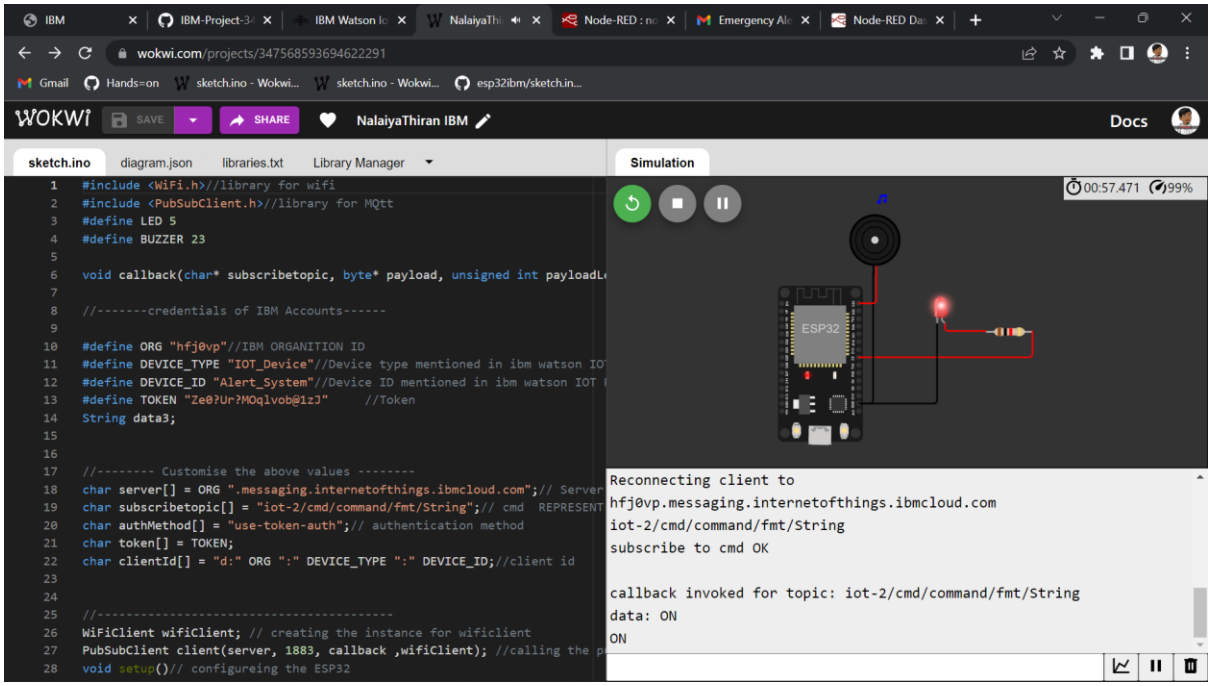
WOKWI WEBSITE LINK:

https://wokwi.com/projects/347568593694622291

SCREENSHOTS:



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WOKWI
SAVE
SHARE
NalaiyaThiran IBM
Docs
sketch.ino
diagram.json
libraries.txt
Library Manager
Simulation
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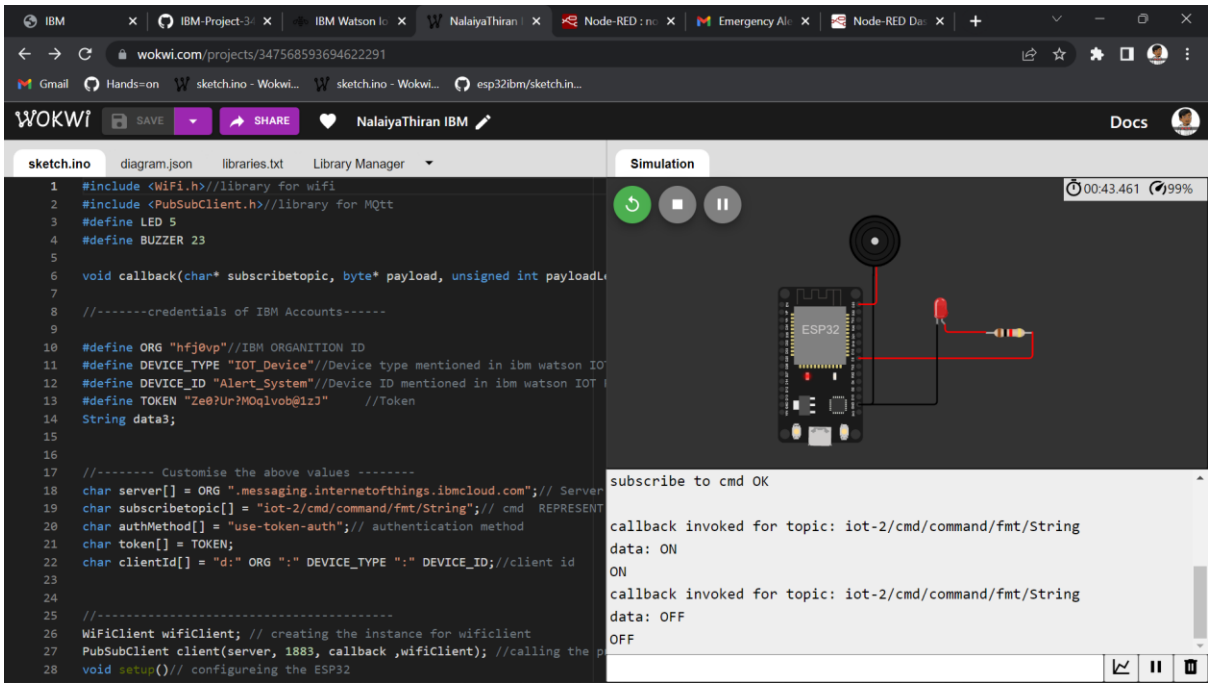
99%
ESP32
#include <WiFi.h>//library for wifi
#include <PubSubClient.h>//library for MQtt
#define LED 5
#define BUZZER 23
void callback(char* subscribetopic, byte* payload, unsigned int payloadL
//-------credentials of IBM Accounts------
#define ORG "hfj0vp"//IBM ORGANITION ID
#define DEVICE_TYPE "IOT_Device"//Device type mentioned in ibm watson IO
#define DEVICE_ID "Alert_System"//Device ID mentioned in ibm watson IOT
#define TOKEN "Ze0?Ur?MOqlvob@1zJ" //Token
String data3;
//-------- Customise the above values --------
char server[] = ORG ".messaging.internetofthings.ibmcloud.com";// Server
char subscribetopic[] = "iot-2/cmd/command/fmt/String";// cmd REPRESENT
char authMethod[] = "use-token-auth";// authentication method
char token[] = TOKEN;
char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id
//---
WiFiClient wifiClient; // creating the instance for wificlient
PubSubClient client(server, 1883, callback ,wifiClient); //calling the p
void setup()// configureing the ESP32
Reconnecting client to
hfj0vp.messaging.internetofthings.ibmcloud.com
iot-2/cmd/command/fmt/String
subscribe to cmd OK
callback invoked for topic: iot-2/cmd/command/fmt/String
data: ON
ON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WOKWI
SAVE
SHARE
NalaiyaThiran IBM
Docs
sketch.ino
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Library Manager
Simulation
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99%
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void setup()// configureing the ESP32
subscribe to cmd OK
callback invoked for topic: iot-2/cmd/command/fmt/String
data: ON
ON
callback invoked for topic: iot-2/cmd/command/fmt/String
data: OFF
OFF