University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering

CCSW-Internet of thing

Course Project “Smoke Detector”

Section:SC7

Prepared for : Dr.Qamar Naith

Name	Waad Mnyawi	Ather Alnami	Jana Jambi	Nihal Kutbi	Layan alnomani
ID	2110069	2111453	2110532	2115006	2110350

University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering

Idea of the project

IoT based smoke and gas detector using an MQ2 Sensor, ESP8266 microcontroller, and Blynk IoT Cloud. We have used the MQ2 Gas sensor module to detect Smoke, LPG, and carbon monoxide concentrations present in Air. MQ2 is a versatile sensor that can detect LPG, smoke, alcohol, propane, hydrogen, methane, carbon monoxide, etc. This makes the MQ2 Gas Sensor Module an excellent choice for building an indoor air quality monitoring system, a breathalyzer, or an early fire detection system.

This project has an OLED display to Display the Smoke, LPG, and Carbon Monoxide concentrations in PPM. The same data can be monitored on an Android app as well as Web Dashboard. We have two buttons that help to switch the monitoring screen between Smoke, LPG, and Carbon monoxide.

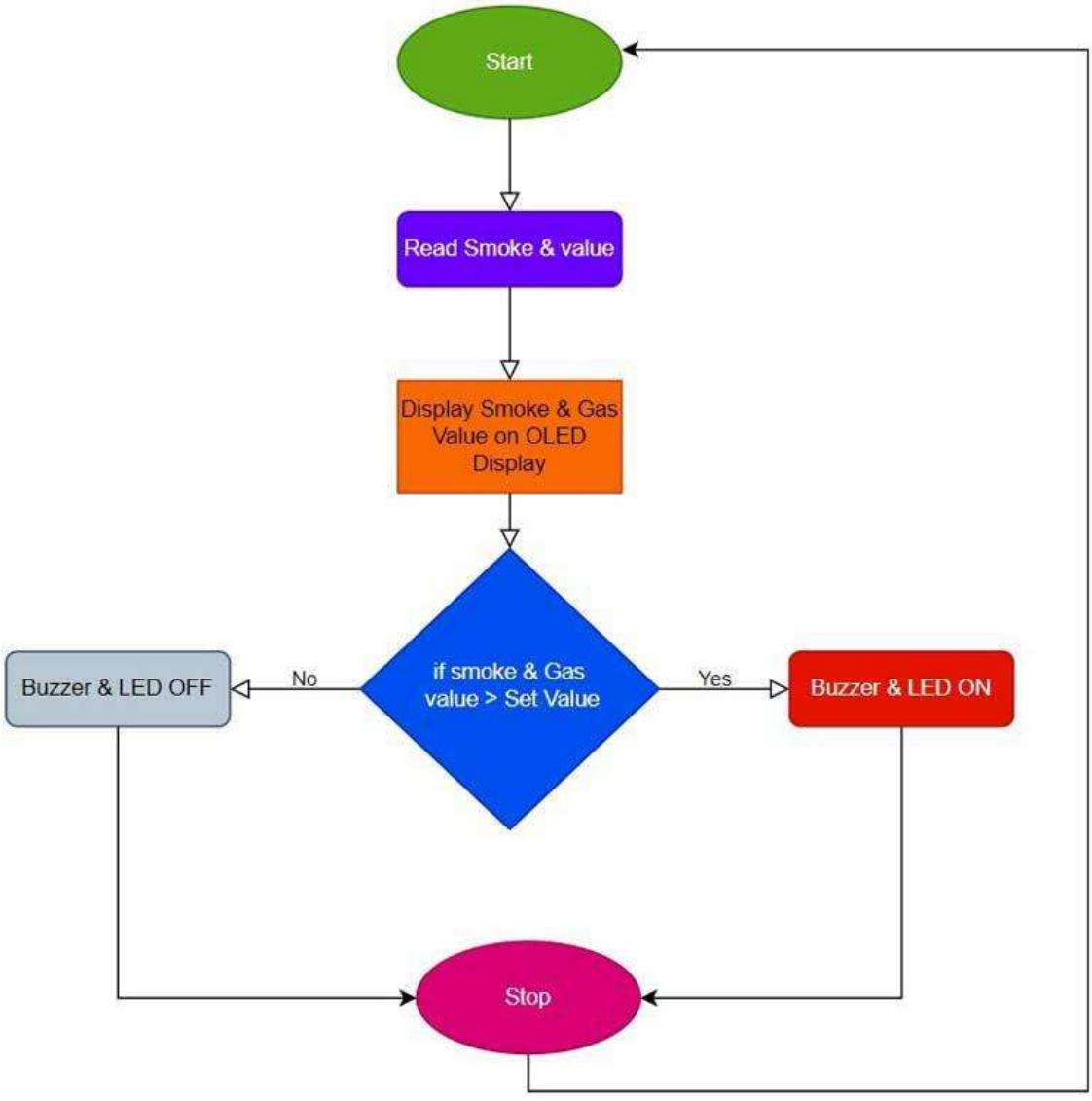
Overview :

The sensor detects smoke, LPG, and Carbon Monoxide values and sends them to ESP8266 Microcontroller. Then it processes these values and displays these values on the OLED display as well as on the Blynk IoT Platform. It also checks if these values are above the safe level then it sends a notification to the Mobile phone as well as buzzer starts alarming with a flashing LED.

University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering

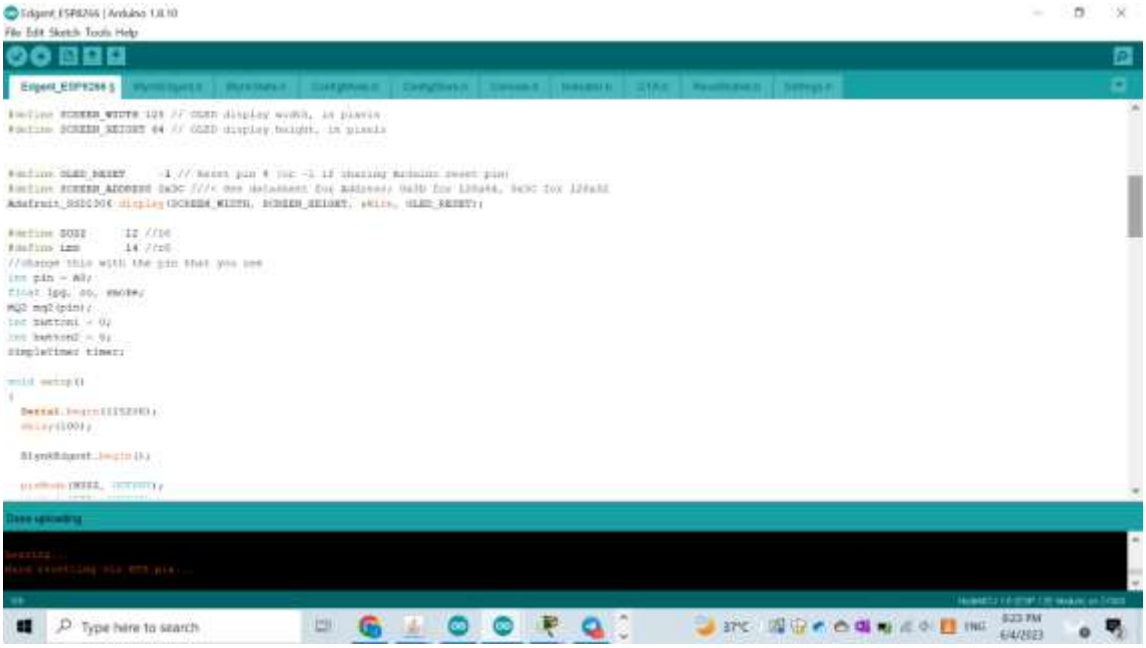


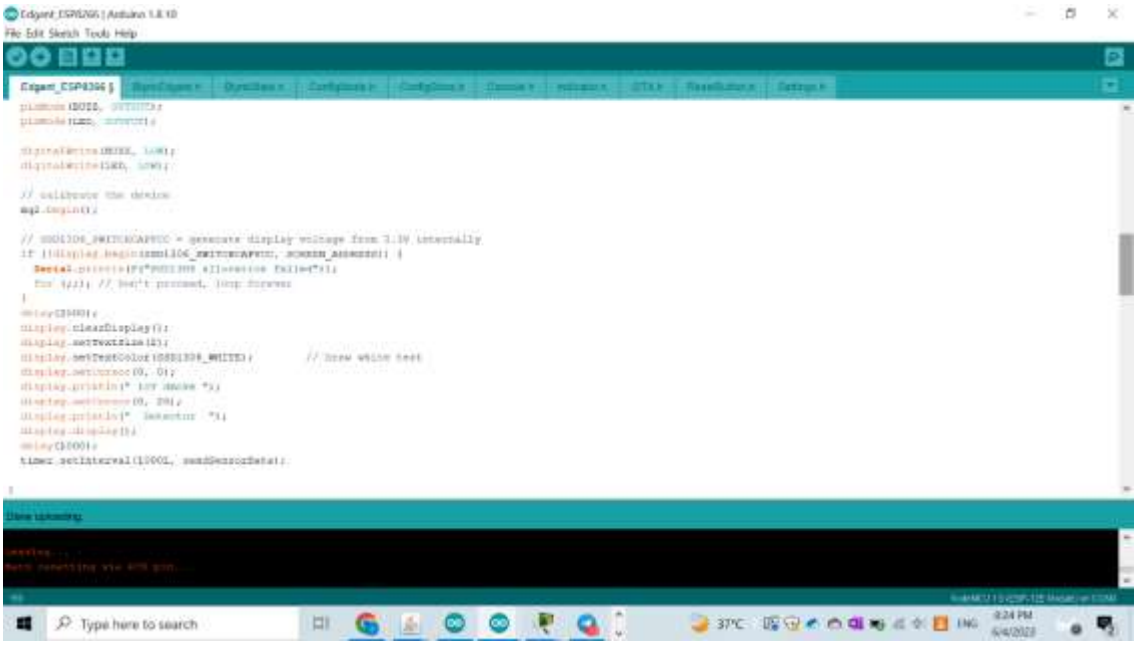
University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering

Source code using Ardinuo:

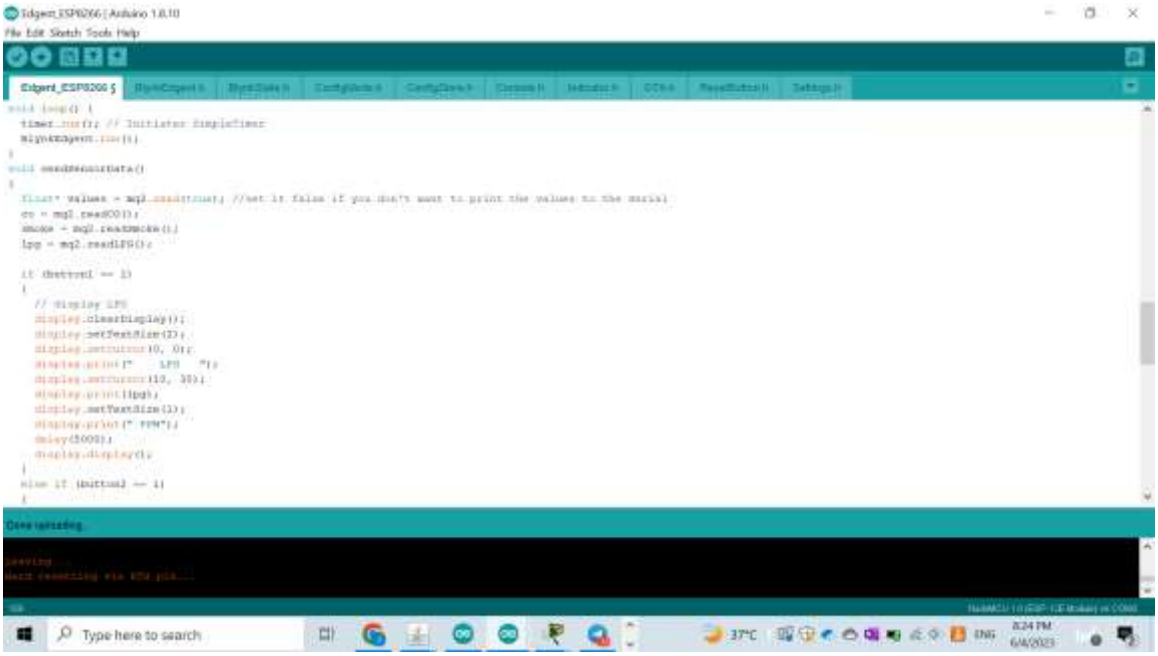


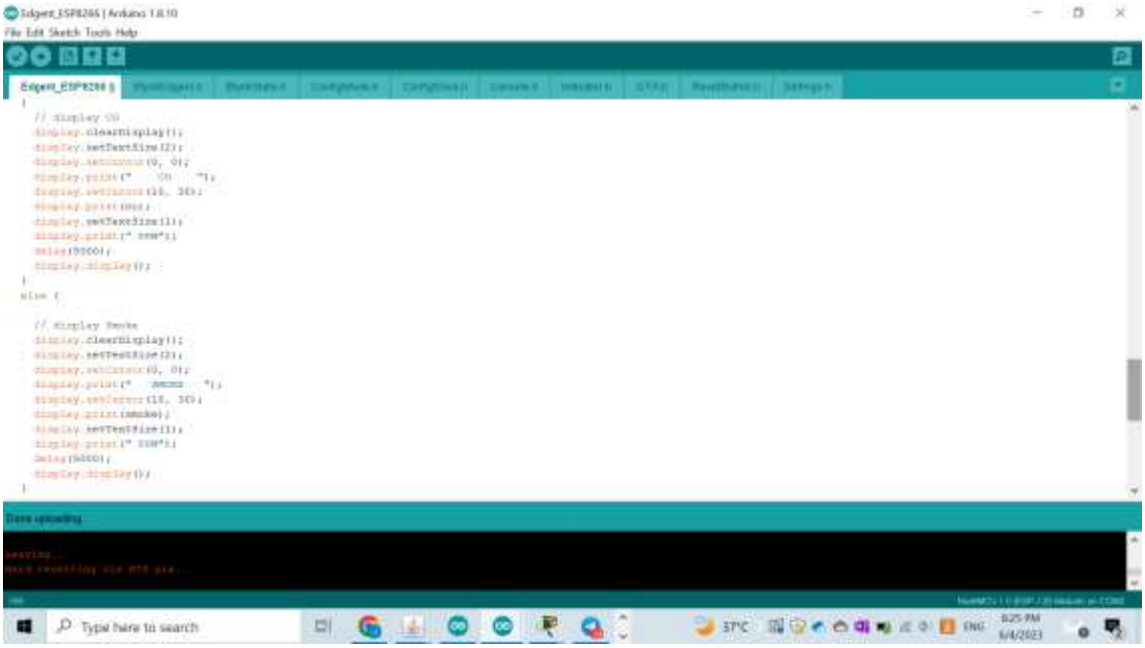


University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering

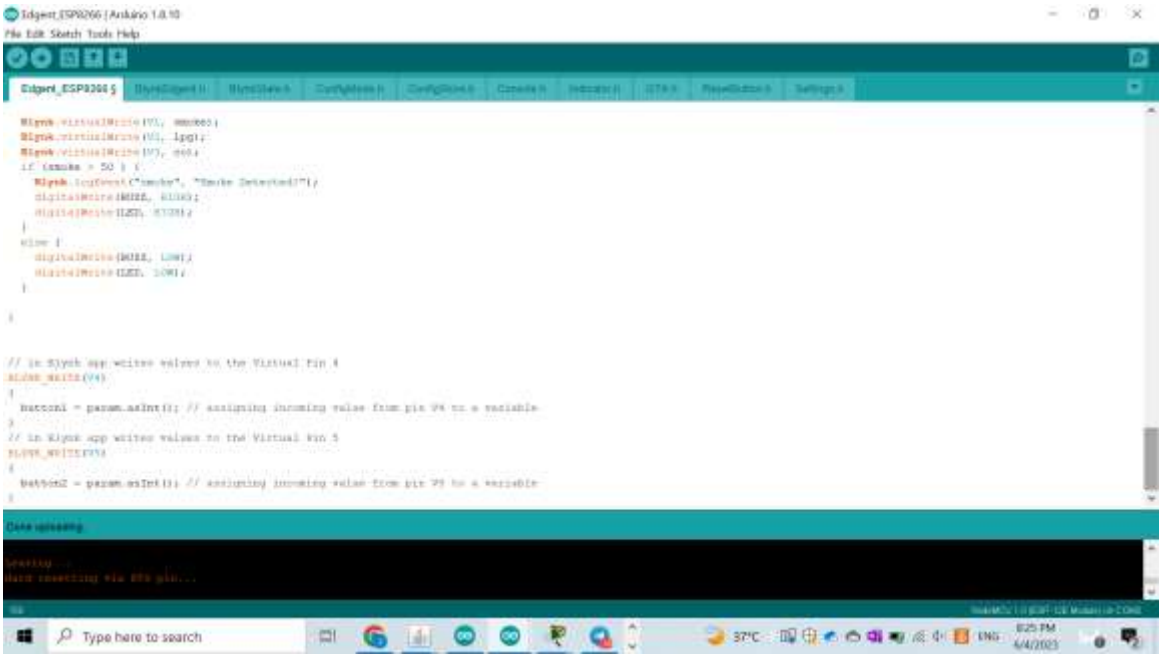


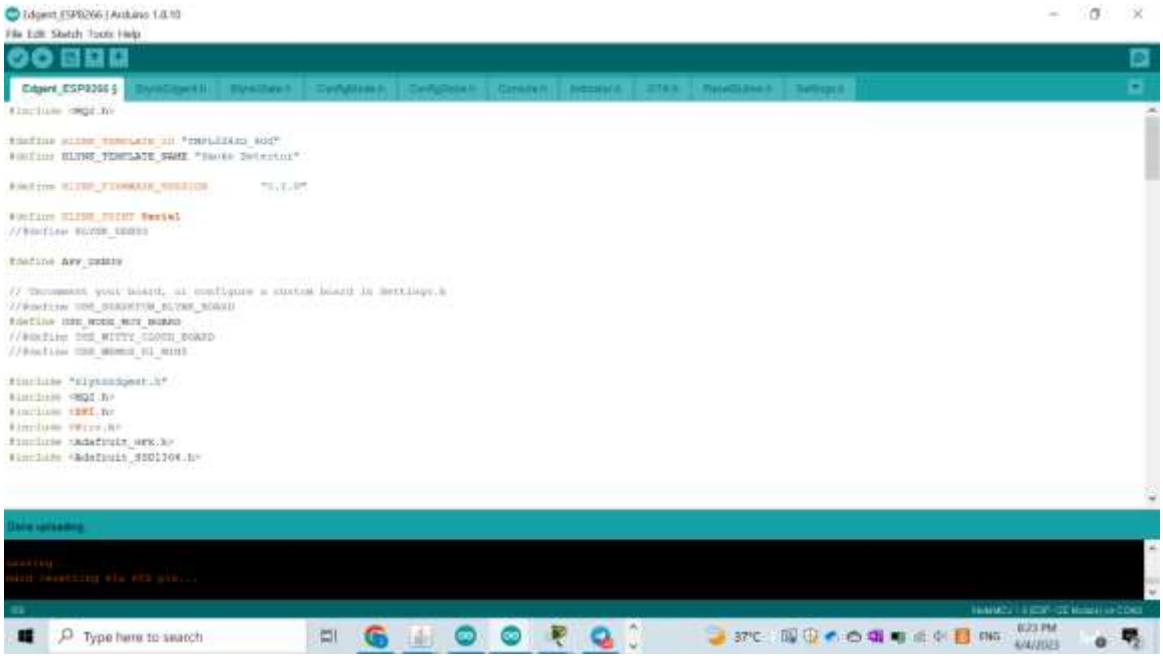


University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering



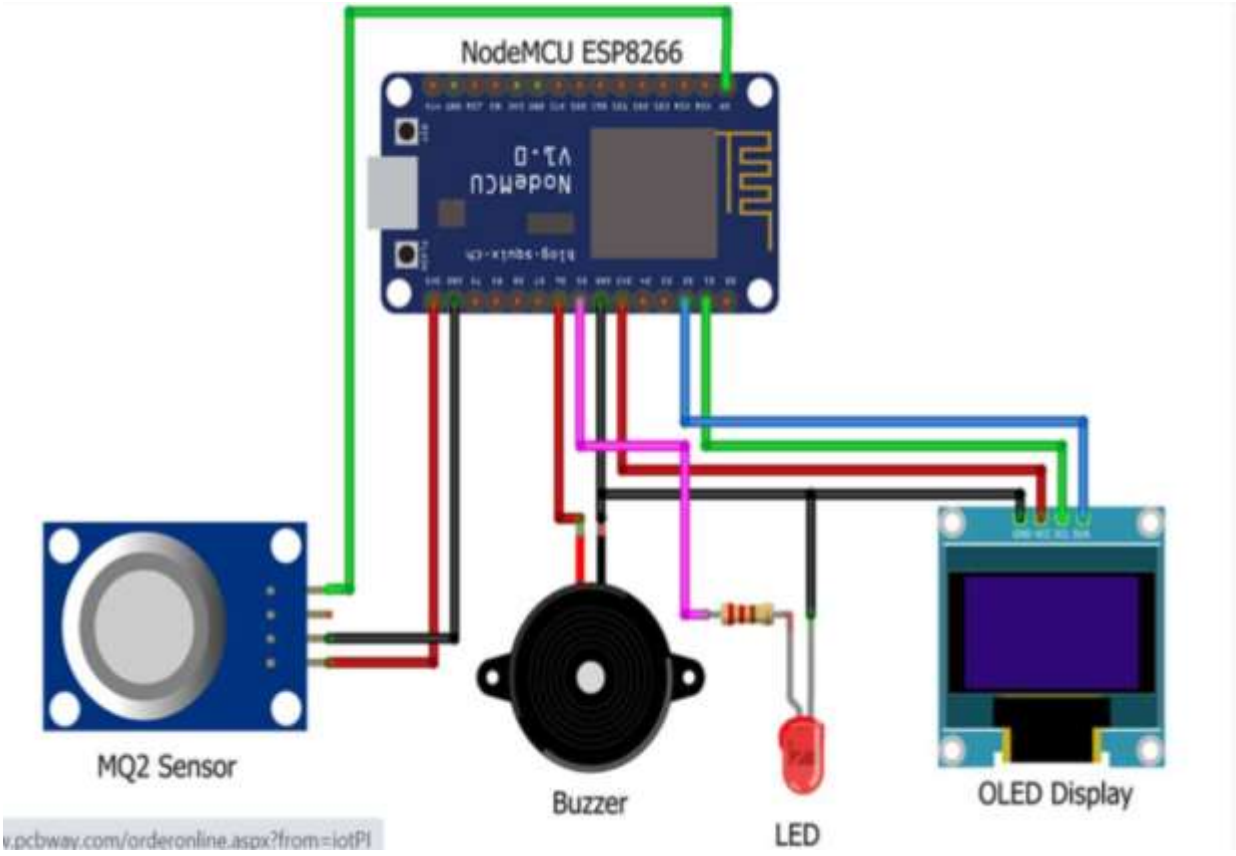


University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering

Circuit diagram :

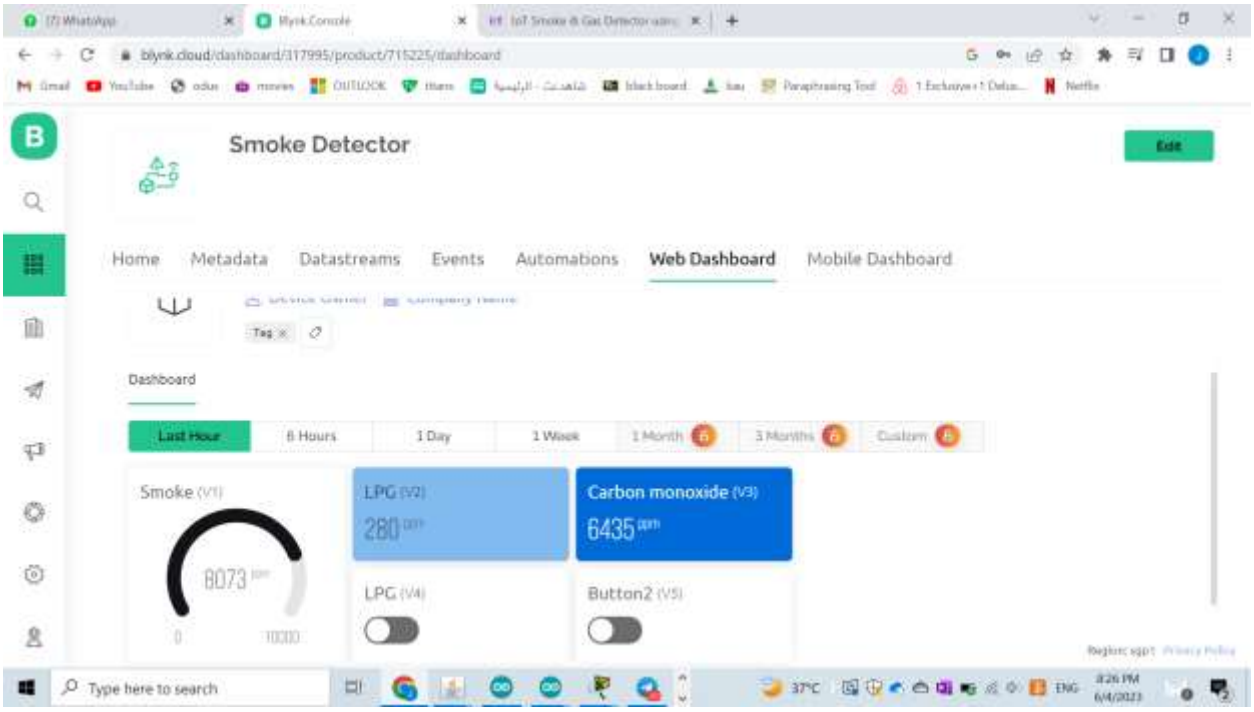


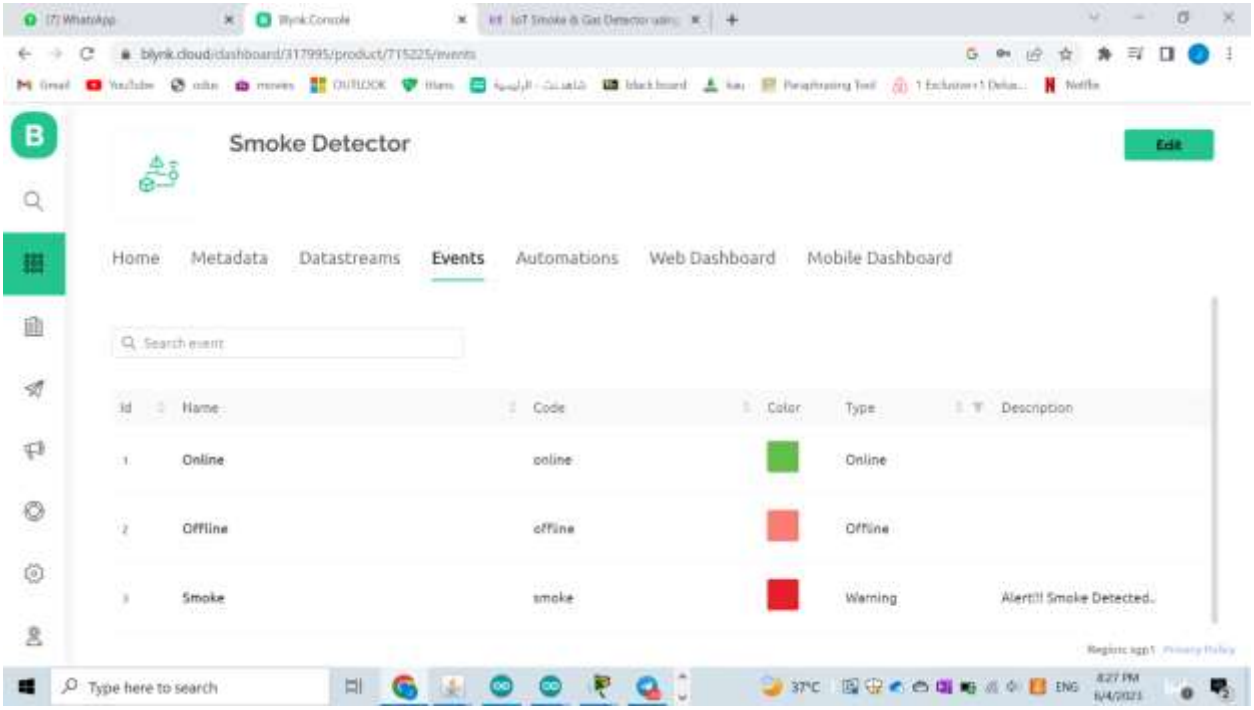
University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering

Setting sensor using Blynk IOT :



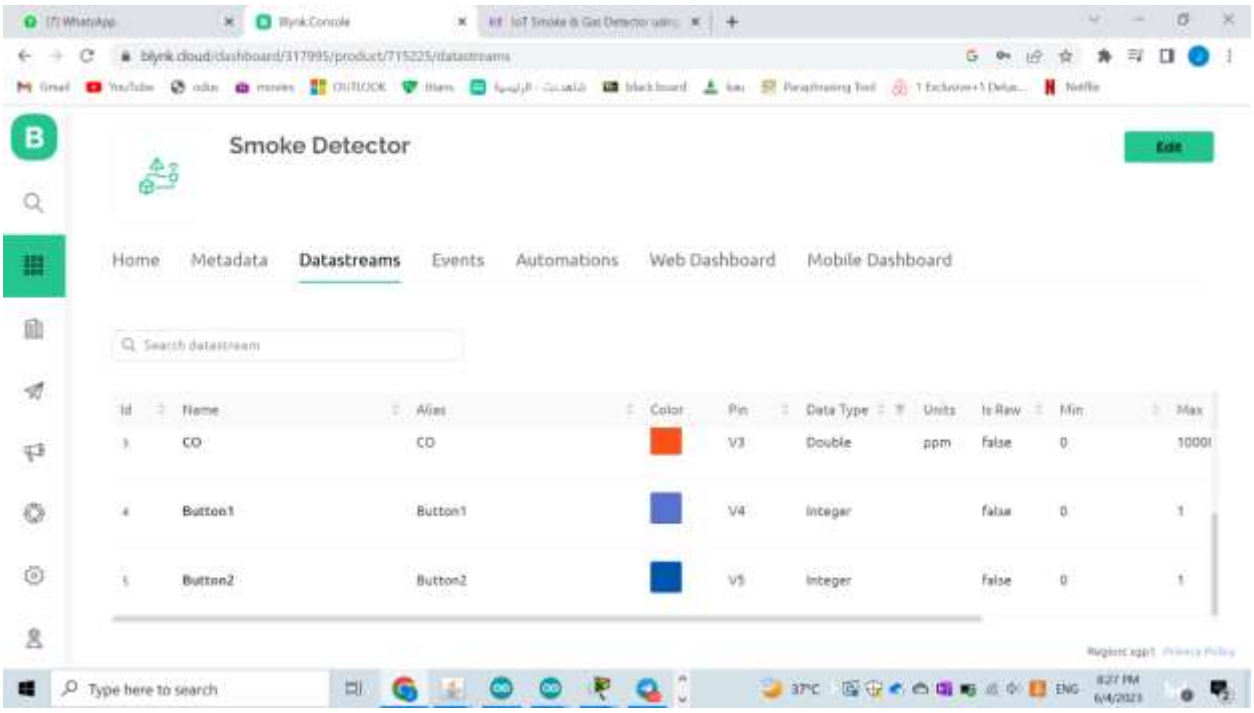


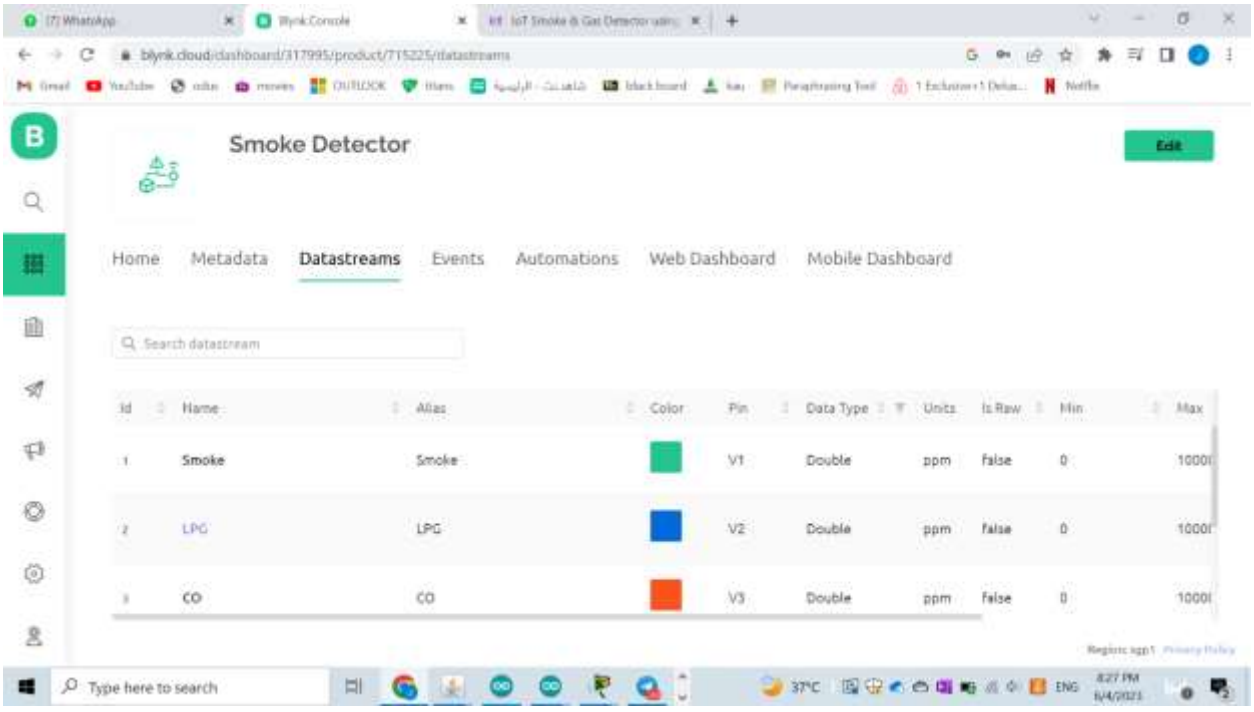
University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering

u



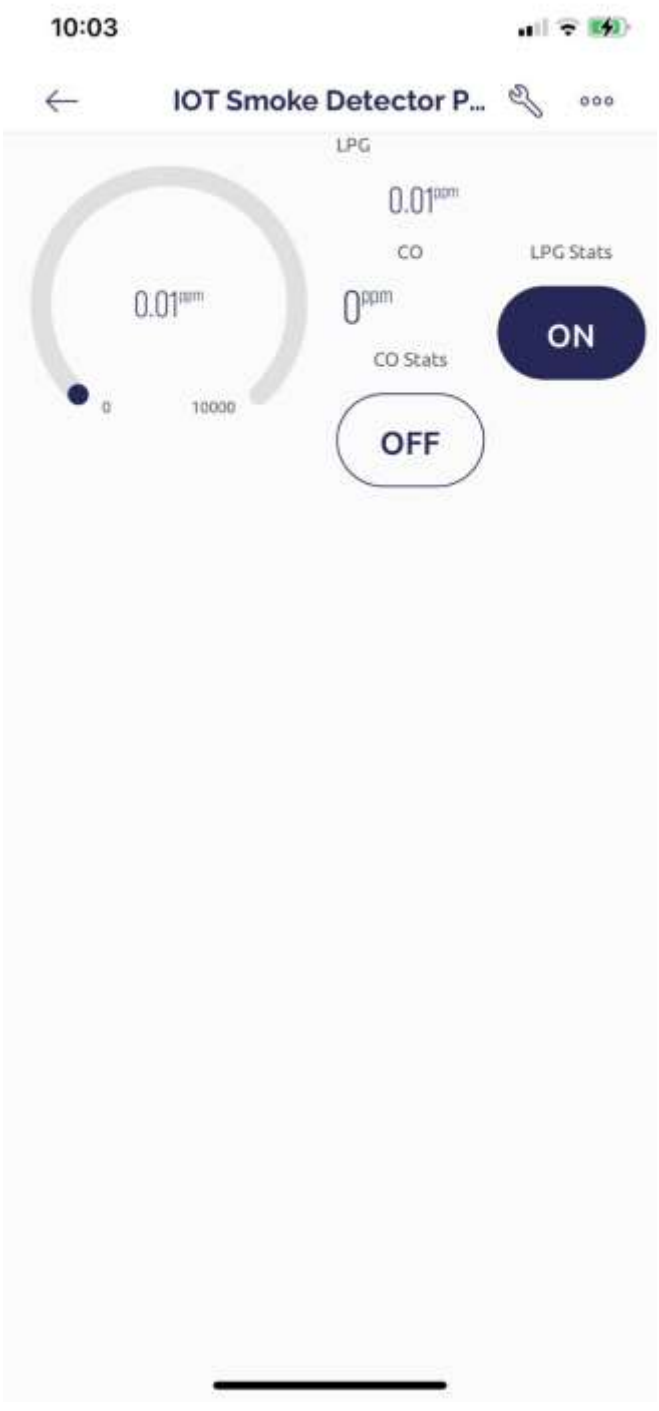


University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering

Blynk IOT APP Dashboard :



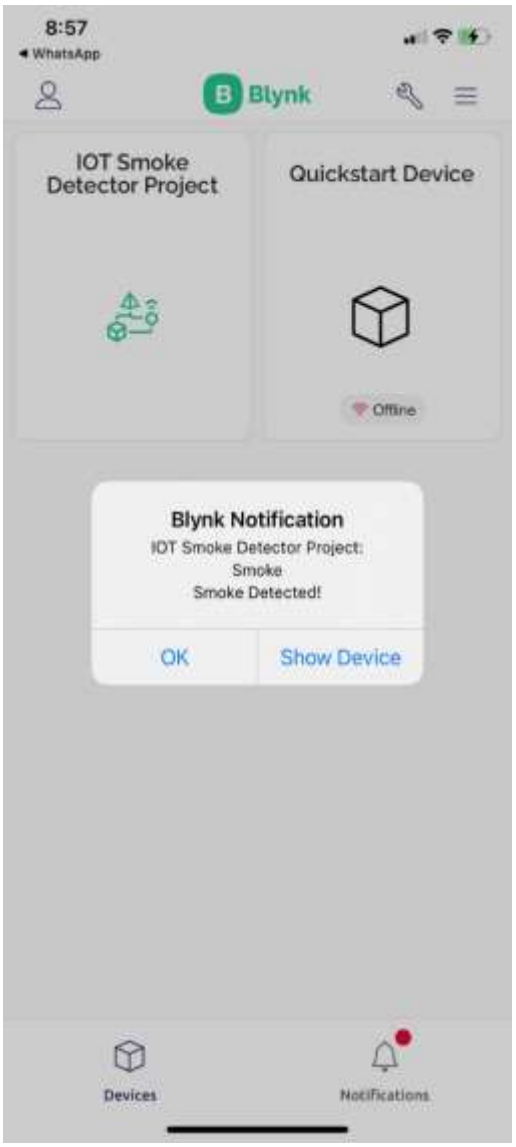
University of Jeddah

College of Computer Science and Engineering

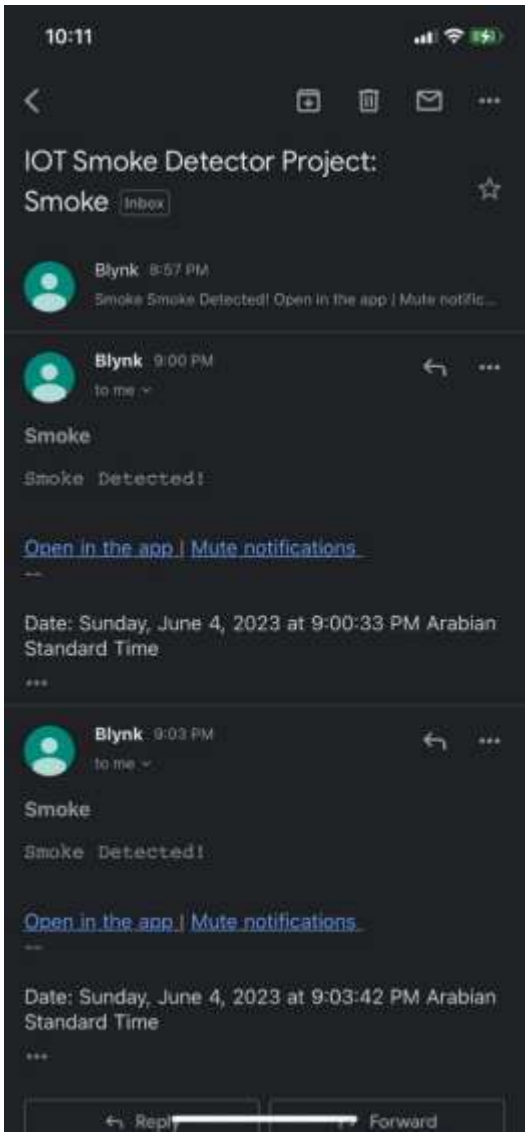
Department of Software Engineering

Alert Notification:

1- Blynk app



2- Email

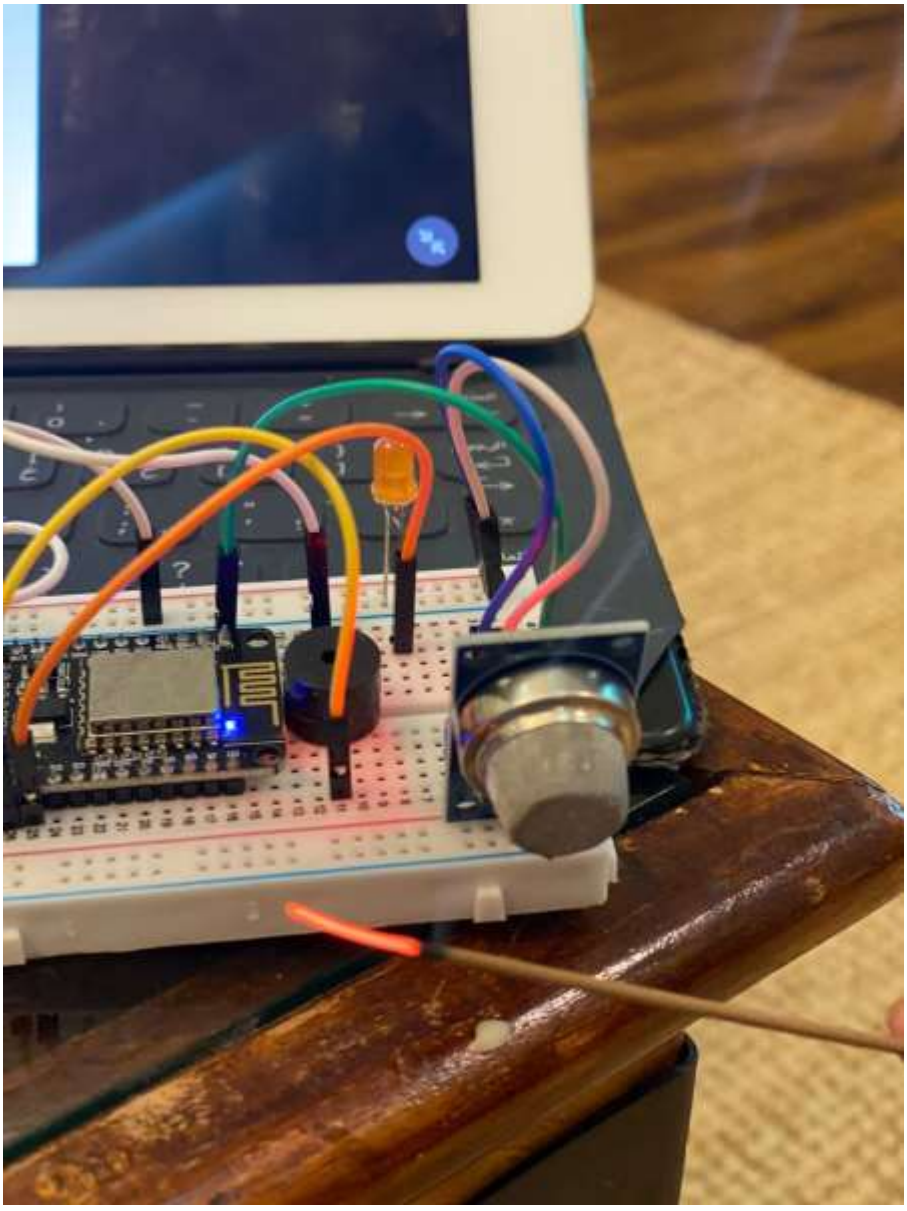


University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering

Sensor:



University of Jeddah

College of Computer Science and Engineering

Department of Software Engineering

Video link:

https://drive.google.com/file/d/1TUCyODqsPLuW-v9kiVDDJL0WADRucaaH/view?usp=sharing