

NOISE POLLUTION MONITORING SYSTEM

DESCRIPTION:

A noise pollution monitoring system is a technology-driven solution designed to measure, record, and analyze ambient noise levels in a specific area.

COMPONENTS REQUIRED:

Noise sensor(LM393)

- LED
- Buzzer
- ESP8266 wifi module
- 16*2 LCD display
- Arduino uno
- Power Supply.
- Basic components like Bread board, Wires .

WORKING DESCRIPTION:

A Noise Pollution Monitoring System using IoT is a technology that employs Internet of Things (IoT) devices and sensors to continuously measure, collect, and analyze data related to noise levels in a specific environment. Here's a working description of such a system:

Arduino UNO:

Arduino used as the brain of the system, controlling sensor and data processing.

Noise Sensor:

Need a noise sensor to measure the sound levels.

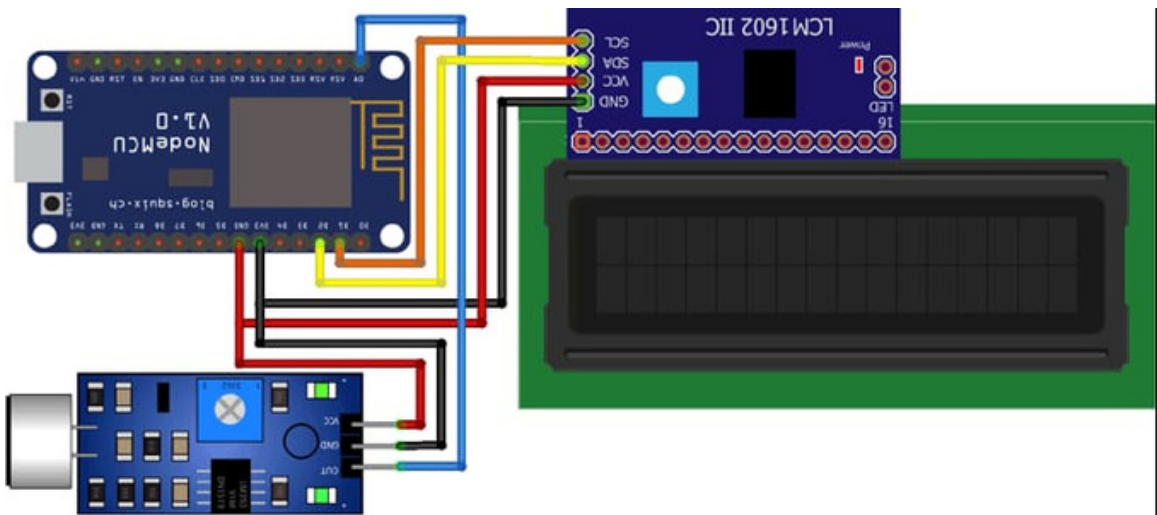
Wifi Module:

IoT systems require a way to transmit data to a central server or database. This can be achieved through various Wi-Fi

Alerting System:

The system can be set up to send alerts using buzzer when noise levels exceed predefined thresholds. These alerts can be in the form of notifications to relevant personnel or authorities.

CIRCUIT DIAGRAM:



Programm:

```
#define BLYNK_PRINT Serial
#include <WiFi.h>
#include <WiFiClient.h>
#include <BlynkSimpleEsp32.h>

int sound_sensor=34;
char auth[] = BLYNK_AUTH_TOKEN;
```

```
char ssid[] = "impulsetech"; // type your wifi name
char pass[] = "impulse567"; // type your wifi password
```

```
BlynkTimer timer;
```

```
void sendSensor()
{
    // Request temperature to all devices on the data line
    int sound_value=analogRead(sound_sensor);
    Serial.print("Sound sensor data: ");
    Serial.print(sound_value);
    delay(1000);
```

```
// You can send any value at any time.
// Please don't send more that 10 values per second.
    Blynk.virtualWrite(V0, sound_value);
    delay(500);
}
```

```
void setup()
{
```

```
    Serial.begin(9600);
```

```
    Blynk.begin(auth, ssid, pass);
    timer.setInterval(100L, sendSensor);
```

```
}
```

```
void loop()
{
  Blynk.run();
  timer.run();
}
```

Conclusion:

An IoT-based noise pollution monitoring system offers a promising solution to address the growing concern of noise pollution in urban environments. By leveraging sensors, data collection, and real-time analysis, it enables efficient tracking, analysis, and management of noise levels. This system not only provides valuable data for research and policy-making but also empowers communities to take informed actions to mitigate noise pollution, leading to improved quality of life and a healthier environment. As technology advances and data accumulates, the potential for smarter and more effective noise pollution control is on the horizon.