NOISE POLLUTION MONITORING

INTERNET OF THINGS

PROBLEM DEFINITION:

The IoT-based noise pollution project aims to collect real-time data on noise levels in various locations and use that information for analysis and potential mitigation. This project typically involves the deployment of sensors, data processing, and reporting mechanisms.

PROJECT OBJECTIVE:

The objective of an IoT (Internet of Things) based noise pollution project is to monitor, analyze, and potentially mitigate noise pollution in a given environment using connected sensors and devices. Noise pollution can have adverse effects on human health, well-being, and the environment, and an IoT-based solution can provide valuable insights and tools to address this issue.

Idea:

- **Deployment of sensors:**

  Sound sensors like **SMT32** in Arduino simulator are strategically placed in different areas of the city or region under study. These sensors capture sound levels and can differentiate between various types of noise sources, such as traffic, construction, or industrial activity

- **Integrate data:**

  The noise sensors collect data continuously and transmit it to a central server or cloud platform using wireless communication protocols like Wi-Fi, cellular. This ensures real-time monitoring capabilities.The collected noise data is processed and analyzed to identify noise trends, patterns, and sources of excessive noise pollution.

- **Monitoring :**

  If the sound detected by the sensor exceeds a certain threshold, the system will send out a notification. Implement a system of alerts that can inform the appropriate authorities when noise levels rise. Explore and put into effect techniques for reducing noise pollution, such as noise barriers,

adaptive traffic management, or changing construction methods. IoT data can be used to assess the effectiveness of these tactic.

Flowchart: