PROJECT TITLE:NOISE POLLUTION MONITORING

Project Definition:

The IoT-based Noise Pollution Monitoring System is a project aimed at developing a comprehensive solution for monitoring and managing noise pollution in urban and industrial environments. This system leverages the Internet of Things (IoT) technology to collect real-time noise data from multiple sensors strategically deployed in various locations. The project's primary objectives are to accurately measure noise levels, analyze data, and provide valuable insights to mitigate noise pollution effectively.

DESIGN THINKING:

Our solution is to enhance an IoT-based Noise Pollution Monitoring system that integrates hardware (IoT sensors), software (a web-based platform and a mobile app), and data analytics to measure, visualize, and analyze noise pollution in real-time. This solution will raise public awareness, facilitate regulatory compliance, and contribute to noise pollution mitigation.

IOT SENSOR TO DETECT NOISE:

This device informs the user about the noise level and whenever the noise level exceeds the limit, it automatically records the sound and its duration. This system finds wide advantage for labors in industry, which provides frequent warning information to the user if the noise limit exceeds.

PROCESSING OF INFORMATION:

When it comes to processing information for noise pollution monitoring, the collected data needs to be analyzed and interpreted. This can involve techniques such as signal processing, data filtering, and statistical analysis to extract meaningful insights and identify patterns or trends in the noise levels.

CREATING AN APP:

The connections are pretty simple, we just have to connect the sound sensor to one of the Analog pin and the LCD to the I2C pins. In the above diagram, we have connected the power pins of the sound sensor and LCD display to 3v3 and GND pin of NodeMCU.

CREATING PUBLIC AWARENESS:

We can create awareness by conducting events and activities in order to interact with people and make them to realise the seriousness of the issues

REGULATORY COMPLIANCE:

Maintain detailed records of noise assessments, control measures implemented, and any complaints or concerns raised by the community.