



Noise Pollution Monitoring

Phase 4 submission

Phase 4: **Development Part 2**

Topic: Noise Pollution Monitoring

Introduction:

Noise pollution is unwanted sound, it needs to be controlled to make the workplace comfortable. This chapter analyses noise mathematically and the effects of multiple sources are examined. Two noises of exactly the same level can have a combined noise level that is 3 dB higher than the individual values. Noise or sound level monitoring or measurement is a process to measure the magnitude of Noise in industries and residential area. Data collected from Noise level monitoring & Testing helps us to understand trends and action can be taken to reduce noise pollution. It can cause hearing loss, tinnitus, and other health problems. Noise pollution can also affect wildlife and ecosystems by disrupting communication, feeding, and breeding patterns. Noise monitoring can help to identify areas where noise levels exceed the legal limits and take measures to reduce them. This allows authorities to monitor noise pollution in different areas and take action against it. Also authorities can keep a watch on the noise pollution near schools, hospitals and no honking areas, and if system detects air quality and noise issues it alerts authorities so they can take measures to control the issue.

Overview:

Noise monitoring networks mainly suffer from the lack of spatial resolution. They can primarily be used for sources with known spatial uniformity. Typical examples are airport noise, where the runway determines takeoff and landing and thus representative points for monitoring highway noise, where the constant intensity and mixture of vehicles along the highway guarantee that a measurement is representative for at least a longer stretch of the highway; railway noise, where the stretch with uniform traffic may be even longer. Classical monitoring fails quite quickly in urban area where traffic on several smaller streets determines the noise climate and buildings screen some of these sources. Currently, larger cities operate a limited number of full-blown measurements stations that give little coverage. Recent advances in computer networks, cheap microphone, and powerful signal processing may lead to a different situation in near future.

Creating a real-time Noise Pollution Monitoring by using HTML Program to Web Development:

```
html
<!DOCTYPE html>
<html>
<head>
  <title>Noise Pollution Monitoring</title>
</head>
<body>
  <h1>Noise Pollution Monitoring</h1>

  <div id="noiseLevel">
    <p>Noise Level: <span id="currentNoise">0 dB</span></p>
  </div>

  <button id="startMonitoring">Start Monitoring</button>
  <button id="stopMonitoring">Stop Monitoring</button>
```

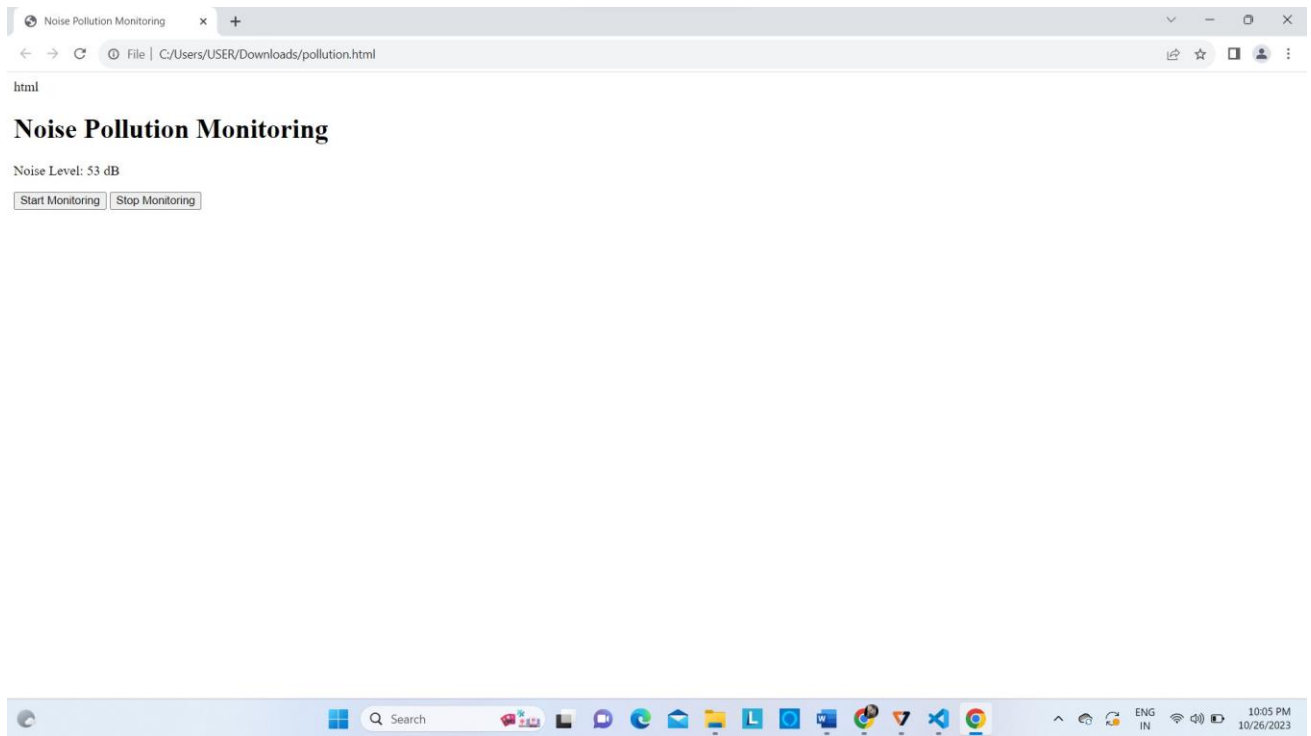
```
<script>
  const currentNoiseDisplay = document.getElementById("currentNoise");
  const startMonitoringButton = document.getElementById("startMonitoring");
  const stopMonitoringButton = document.getElementById("stopMonitoring");
  let monitoringInterval;

  // Add event listeners to start and stop monitoring
  startMonitoringButton.addEventListener("click", startMonitoring);
  stopMonitoringButton.addEventListener("click", stopMonitoring);

  function startMonitoring() {
    monitoringInterval = setInterval(updateNoiseLevel, 1000); // Update noise level every
second
  }

  function stopMonitoring() {
    clearInterval(monitoringInterval);
  }

  function updateNoiseLevel() {
    // You would need to implement a method to fetch the noise level here
    // For simplicity, let's assume it's a random value between 50 and 80 dB
    const noiseLevel = Math.floor(Math.random() * (80 - 50 + 1)) + 50;
    currentNoiseDisplay.textContent = noiseLevel + " dB";
  }
</script>
</body>
</html>
```



Mobile app Developmet to measure the Noise Pollution Monitoring:

