**CODETECH Task-4**

**Intern Details**

* **Name**: M.THRISHA
* **Domain**: Internet of things(iot)
* **Member Type**: Individual

**TASK-1** **Progress Overview**

* **Task Assigned**:
  + IOT Air Quality Monitor
* **Work Done:**
  + Set up the platform for IOT Arduino.
  + Created folder for code using Arduino.
  + Implemented all the connections .
  + Tested by visual studio code using c ++.
  + Added some specific features .
  + Pushed Arduino code to GitHub repo.

**Project Details**

**Project Title:** IOT Air Quality Monitor

**Feature Implemented in Task-4 :**

* Project folder structure.
* Well-formatted Arduino code.
* Instructions given in command type

**Guidelines Followed:**

1. Kept commits meaningful and atomic.
2. Used by c++ code to changes by other users.
3. Clean and modular folder structure.
4. Committed and pushed changes with proper messages.

**GitHub Repository**

**GitHub Repository Link:**

*https://github.com/ThirumaleshFSD/codetech\_air\_quality*

**Project Approach**

* **What were your thoughts when approaching the task?**

To create a clean and scalable to the approaching with asking detailed information on ChatGPT usage .

* **How did you plan to tackle the problem?**

Started by designing a simple schema for IOT Air Quality Monitor first clear approach on microcontrollers and discuss with my friend .

* **What steps did you take while working on the task?**
  + Setup project folder.
  + Installed dependencies.
  + Designed Arduino pins to connections.
  + Created Arduino code.
  + Pushed code to GitHub.
* **What did you learn from this process?**
  + Structuring the iot projects.
  + Writing code properly for our task requirement.
  + Connecting with code to Arduino .
  + Testing the code with completing the task

**Conclusion :**

The IoT-based Air Quality Monitor presents an effective and scalable solution for real-time environmental monitoring. By integrating sensors, connectivity, and data analytics, the system enables continuous tracking of key air quality parameters such as PM2.5, CO₂, temperature, and humidity. This technology not only enhances public awareness of pollution levels but also supports data-driven decision-making for health, safety, and environmental policy. As urbanization and industrial activities continue to impact air quality, such IoT solutions play a vital role in promoting sustainable living and proactive health management. Continued development and deployment of these systems can lead to smarter, cleaner, and more resilient communities.