**CODETECH Task-2**

**Intern Details**

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

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

* **Task Assigned**:
  + Home Automation system
* **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:** Home Automation System

**Feature Implemented in Task-2 :**

* 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\_task2*

**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 Home Automation 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 Home Automation project using IOT successfully demonstrated how basic appliances like lights and fans can be controlled through serial commands using microcontroller. By leveraging Arduino and simple digital I/O control , the system offers a low-cost and scalable solution for smart home environments. This project lays the foundation for integrating more advanced features such as Wi-Fi/Bluetooth control , mobile integrating, and sensor automation in future.