DEMO

Introduction:
Diagram:
Tasks:

Task 1

- **Hardware Configuratuion.**
  - Installation of Pi Os in the gateway.
  - Connecting all the sensors to ESP32.
  - Fixing Esp32 on the breadboard and completing the wiring of sensors.
  - **Responsible team members:**
    - Prashanth K.
    - Prathyum Ramesh

Task 2

- **Reading Data from Sensors.**
  - Configured Arduino IDE and Esp32 by installing all dependencies
  - Writing code for collecting the data from individual sensors.
  - Integrating all the sensor code in to one `.INO` file.
  - Processed the incoming data from sensors and producing required results.
  - **Responsible team members:**
    - Prathyum Ramesh
    - Rupesh
    - Prashanth

Task 3

- **Reading Data from Cloud API**
  - Registering in `https://openweathermap.org/` and generating API Key.
  - Arduino Code for collecting data from the cloud using the API key.
  - **Responsible team members:**
    - Mohammadreza
    - Somrita

Task 4

- **Connecting to TTN**
  - Registering the lora gateway in TTN `www.thethingsnetwork.org` .

- Registering the `TTGO Esp32` in TTN.
- **Responsible team members:**
  - Prathyum Ramesh
  - Somrita
  - Rupesh
  - Prashanth
  - Mohammadreza

Task 5

- **Communication between `TTGO Esp32` and LORA gateway via `TTN` .**
  - Setting up MQTT protocol to enable message transfer.
  - **Responsible team members:**
    - TBD

Task 6

- **Resilience**
  - Overriding the faulty sensors data with the API data from cloud.
  - Saving the data from sensors until we get an `ACK` from PI and resend after a period of time if we dont receive the `ACK` .
  - **Responsible team members:**
    - TBD