**Select IoT Devices:**

Choose suitable sensors for measuring air quality parameters such as pollution levels and particulate matter. Common sensors include PM2.5/PM10 sensors, gas sensors for pollutants like CO2, NO2, etc.

**Hardware Setup:**

Connect the selected sensors to your IoT devices (like Raspberry Pi, Arduino, ESP8266, etc.). Ensure the devices are powered and connected to the internet (via Wi-Fi, GSM, etc.).Write Python Script: Develop a Python script on the IoT device to read data from sensors. Use libraries like Adafruit\_IO, MQTT, or requests to send this data to your data-sharing platform.Sample Python code for sending data to a hypothetical API endpoint:import requests

Import sensor\_library # Import your sensor library here

Def read\_air\_quality\_data():

# Read data from sensors

Data = sensor\_library.read\_sensor\_data()

Return data

Def send\_data\_to\_platform(data):

Api\_endpoint = <http://your-data-sharing-api-endpoint>

Response = requests.post(api\_endpoint, json=data)

If response.status\_code == 200:

Print(“Data sent successfully!”)

Else:

Print(“Failed to send data.”)

If \_\_name\_\_ == “\_\_main\_\_”:

Air\_quality\_data = read\_air\_quality\_data()

Send\_data\_to\_platform(air\_quality\_data)

**Data-sharing Platform:**

Set up a data-sharing platform (could be a web server, cloud service, or IoT platform) with appropriate APIs to receive and store the data sent by your IoT devices.

**Security**:

Implement security measures like data encryption, secure APIs, and device authentication to protect your system from unauthorized access.

**Testing**:

Test your system thoroughly to ensure the sensors are providing accurate data and the Python script is sending the data correctly to your platform.

**Visualization and Analysis:**

On your data-sharing platform, create tools for visualizing and analyzing the received data. You can use various tools and libraries like Grafana, Plotly, or Matplotlib for data visualization.Remember, this is a high-level overview. The specifics might vary based on the sensors, hardware, and platform you choose. Good luck with your IoT air quality monitoring project! If you have more specific questions, feel free to ask.