IBM PROJECT

Project Name: Air Quality Monitoring

Phase:3

```
# Import necessary libraries

Import sensor_library  # This could be a library for your specific sensors

Import database_library  # For storing data

Import notification_library  # For sending alerts




# Initialize sensors

Air_quality_sensor = sensor_library.AirQualitySensor()

Temperature_sensor = sensor_library.TemperatureSensor()

Humidity_sensor = sensor_library.HumiditySensor()
```

```
# Create a database connection

Db = database_library.Database()



# Main monitoring loop

While True:

    # Read data from sensors

    Air_quality = air_quality_sensor.measure_air_quality()

    Temperature = temperature_sensor.measure_temperature()

    Humidity = humidity_sensor.measure_humidity()



    # Store data in the database

    Db.save_data(air_quality, temperature, humidity)
```

```
    # Check air quality threshold

    If air_quality > 100:  # Example threshold value

        # Send a notification

        Notification_library.send_alert("Poor air quality detected!")



    # Wait for a specific interval before the next reading

    Time.sleep(1800)  # 30 minutes (in seconds)
```

Explanation:

1.Import libraries: You import the necessary libraries for sensor data, database operations, and notifications.

2.Initialize sensors: Create instances of sensors (e.g., air quality sensor, temperature sensor, humidity sensor) from the sensor library.

3.Create a database connection: Connect to a database (not shown in detail) to store the sensor data.

4.Main monitoring loop: Continuously run a loop to monitor air quality.

5.Read sensor data: Use the sensors to measure air quality, temperature, and humidity.

6.Store data: Store the collected data in the database for later analysis.

7.Check air quality threshold: Compare the air quality reading to a predefined threshold and trigger an alert if it exceeds the threshold.

8.Send a notification: If air quality is poor, send an alert using the notification library.

9.Wait for a specific interval: Pause for a set period before taking the next sensor reading.