자바 프로그래밍 1 분반

Lab 3

32241484 류지성

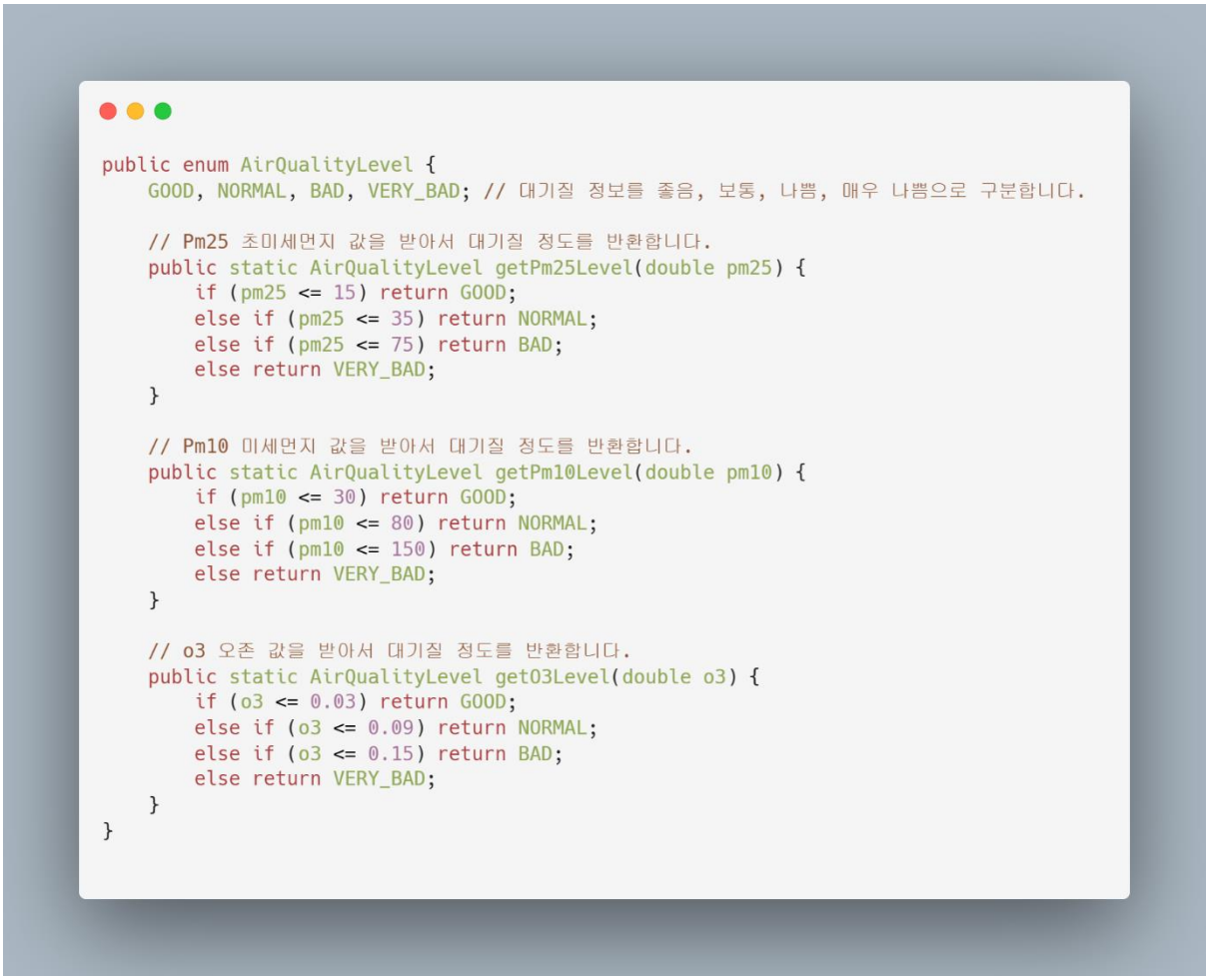
2025-04-11

```java
import java.time.LocalDateTime;

public class AirQuality {
    private LocalDateTime measurementDateTime; // 측정일시
    private String measurementStationName; // 측정소명
    private double pm25; // 초미세먼지 PM-2.5 (㎍/m3)
    private double pm10; // 미세먼지 PM-10 (㎍/m3)
    private double o3; // 오존 O3 (ppm)
    private double no2; // 이산화질소 NO2 (ppm)
    private double co; // 일산화탄소 CO (ppm)
    private double so2; // 아황산가스 SO2 (ppm)
    private AirQualityLevel pm25Level; // 초미세먼지의 대기질 정도
    private AirQualityLevel pm10Level; // 미세먼지의 대기질 정도
    private AirQualityLevel o3Level; // 오존의 대기질 정도

    // AirQuality 클래스의 생성자입니다. 각 측정값과 측정 정보를 초기화합니다. 데이터에서 주어진 필드만 인자로 받아서
생성자를 만듭니다.
    public AirQuality(LocalDateTime measurementDateTime, String measurementStationName, double pm25,
double pm10, double o3, double no2, double co, double so2) {
        this.measurementDateTime = measurementDateTime;
        this.measurementStationName = measurementStationName;
        this.pm25 = pm25;
        this.pm10 = pm10;
        this.o3 = o3;
        this.no2 = no2;
        this.co = co;
        this.so2 = so2;

        // enum 에 정의된 getLevel~ 을 사용하여 초미세먼지 level을 초기화합니다.
        this.pm25Level = AirQualityLevel.getPm25Level(pm25);
        this.pm10Level = AirQualityLevel.getPm10Level(pm10);
        this.o3Level = AirQualityLevel.getO3Level(o3);
    }
    // 속성 이름(String)을 받아서 해당 속성의 값을 반환하는 메서드입니다.
    public double getValueByProperty(String property) {
        return switch (property) {
            case "pm25" -> this.pm25;
            case "pm10" -> this.pm10;
            case "o3" -> this.o3;
            case "no2" -> this.no2;
            case "co" -> this.co;
            case "so2" -> this.so2;
            default -> throw new IllegalStateException("Unexpected value: " + property);
        };
    }
    // 속성 이름(String)을 받아서 해당 속성의 대기질 레벨을 반환하는 메서드입니다.
    public AirQualityLevel getLevelByProperty(String property) {
        return switch (property) {
            case "pm25" -> this.pm25Level;
            case "pm10" -> this.pm10Level;
            case "o3" -> this.o3Level;
            default -> throw new IllegalStateException("Unexpected value: " + property);
        };
    }

    //getters and setters

    @Override
    public String toString() {
        return "AirQuality{" +
                "measurementDateTime=" + measurementDateTime +
                ", measurementStationName='" + measurementStationName + '\'' +
                ", pm25=" + pm25 +
                ", pm10=" + pm10 +
                ", o3=" + o3 +
                ", no2=" + no2 +
                ", co=" + co +
                ", so2=" + so2 +
                ", pm25Level=" + pm25Level +
                ", pm10Level=" + pm10Level +
                ", o3Level=" + o3Level +
                '}';
    }
}
```

AirQuality 메서드 입니다. 측정일시, 측정장소, 초미세먼지, 미세먼지, 오존, 이산화질소, 일산화탄소, 아황산 가스를 멤버로 가지고 있고, 초미세먼지, 미세먼지, 오존의 각 대기질 정도 또한 멤버로 가지고 있습니다. 생성자는 파싱할 때 내용을 담기 편하도록 원본 데이터의 순서대로 배치했습니다. Level에 대한 멤버들은 AirQualityLevel Enum 에 정의된 메서드를 통하여 초기화를 해줍니다. getValueByProperty 랑 getLevelByProperty 메서드가 있는데, 각각은 원하는 속성을 문자열로 받아서 그에 맞는 값이나 공기질 단계를 반환하는 메서드 입니다. Getter and setter는 공간이 부족하여 생략했습니다.

```java
import java.time.LocalDateTime;
import java.time.format.DateTimeFormatter;

public class AirQualityParser {
    // 날짜 및 시간 형식을 지정하기 위한 DateTimeFormatter 를 선언하고 초기화합니다.
    private static final DateTimeFormatter formatter = DateTimeFormatter.ofPattern("yyyy-MM-dd HH:mm");
    // 2차원 String 배열 형태의 데이터를 파싱하여 AirQuality 객체 배열로 변환하는 메서드입니다.
    public static AirQuality[] parse(String[][] data) {
        // 입력된 데이터의 길이를 저장합니다.
        int len = data.length;
            // 파싱된 AirQuality 객체들을 저장할 배열을 입력 데이터 길이-1 만큼 생성합니다.
        AirQuality[] airQuality = new AirQuality[len-1];
        // 첫 번째 요소는 평균을 나타내기 때문에 파싱할 때 제외하고 해줍니다.
        for (int i = 1; i < len; i++) {
            airQuality[i] = new AirQuality(
                    // 날짜 및 시간 데이터를 LocalDateTime 객체로 파싱합니다.
                    LocalDateTime.parse(data[i][0], formatter),
                    // 측정 지역 정보를 저장합니다.
                    data[i][1],
                    // pm25, pm10, o3, no2, co, so2 의 데이터를 순서대로 double 형으로 파싱하여 저장합니다.
                    Double.parseDouble(data[i][2]),
                    Double.parseDouble(data[i][3]),
                    Double.parseDouble(data[i][4]),
                    Double.parseDouble(data[i][5]),
                    Double.parseDouble(data[i][6]),
                    Double.parseDouble(data[i][7])
            );
        }
        // 파싱이 완료된 AirQuality 객체 배열을 반환합니다.
        return airQuality;
    }
}
```

AirQualityParser 클래스 입니다. 이 클래스는 유틸리티 클래스로 주어진 String[][] 의 데이터를 파싱하여 AirQuality[] 를 반환합니다.



```java
public enum AirQualityLevel {
    GOOD, NORMAL, BAD, VERY_BAD; // 대기질 정보를 좋음, 보통, 나쁨, 매우 나쁨으로 구분합니다.

    // Pm25 초미세먼지 값을 받아서 대기질 정도를 반환합니다.
    public static AirQualityLevel getPm25Level(double pm25) {
        if (pm25 <= 15) return GOOD;
        else if (pm25 <= 35) return NORMAL;
        else if (pm25 <= 75) return BAD;
        else return VERY_BAD;
    }

    // Pm10 미세먼지 값을 받아서 대기질 정도를 반환합니다.
    public static AirQualityLevel getPm10Level(double pm10) {
        if (pm10 <= 30) return GOOD;
        else if (pm10 <= 80) return NORMAL;
        else if (pm10 <= 150) return BAD;
        else return VERY_BAD;
    }

    // o3 오존 값을 받아서 대기질 정도를 반환합니다.
    public static AirQualityLevel getO3Level(double o3) {
        if (o3 <= 0.03) return GOOD;
        else if (o3 <= 0.09) return NORMAL;
        else if (o3 <= 0.15) return BAD;
        else return VERY_BAD;
    }
}
```

위 코드는 AirQualityLevel enum 입니다. GOOD, NORMAL, BAD, VERY_BAD 으로 좋음, 보통, 나쁨, 매우 나쁨을 표현합니다. 초미세먼지, 미세먼지, 오존에 관해서만 자세한 분류가 나와있기에 이 세 가지에 대해서 Level 을 반환하는 메서드들을 만들어서, 초기화 과정에서 수치를 입력하면 그에 해당하는 대기 수준을 알 수 있습니다.

아래 코드는 AirQualityFinder 클래스 입니다. 기본적인 find 함수는 파싱한 AirQuality[와 원하는 초미세먼지와 미세먼지의 범위를 인자로 받습니다. 이후에 몇 개의 값이 해당될 지 모르기 때문에 동적배열인 ArrayList 를 선언해줍니다. 파싱한 data 들을 전부 순회하면서 해당되는 범위 내에 속하면 ArrayList 에 추가를 합니다. 최종적으로는 .toArray 메서드를 사용하여 AirQuality[] 형태로 변환하여 반환합니다. toArray에 new AirQuality[0]을 전달하는 이유는 반환될 배열의 타입을 지정하기 위해서입니다. findByRange 는 double 형의 값을 가진 AirQuality 의 멤버들에 대해서 범위를 전달 받아서 위와 같은 find 를 하는 메서드이고, findByLevel 은 특정 멤버의 대기 수준을 통해 위와 같이 find 하는 메서드입니다.

```java
import java.util.ArrayList;
import java.util.List;

public class AirQualityFinder {
    // pm25 의 범위와 pm10 의 범위를 받아서 둘의 범위를 모두 만족하는 결과 값만 배열에 담아서 반환합니다.
    public static AirQuality[] find(AirQuality[] data, double minPm25, double maxPm25, double minPm10,
double maxPm10) {
        // 결과를 저장할 ArrayList 를 생성합니다.
        List<AirQuality> resultList = new ArrayList<>();

        // 입력된 AirQuality 배열을 순회합니다.
        for(AirQuality aq : data) {
            // 현재 AirQuality 객체에서 pm25 값을 가져옵니다.
            double pm25 = aq.getPm25();
            // 현재 AirQuality 객체에서 pm10 값을 가져옵니다.
            double pm10 = aq.getPm10();

            // 값이 주어진 범위 내에 있는지 확인합니다.
            boolean isPm25InRange = minPm25 <= pm25 && pm25 <= maxPm25;
            boolean isPm10InRange = minPm10 <= pm10 && pm10 <= maxPm10;

            // pm25 랑 pm10 이 모두 주어진 범위 내에 있다면 결과 리스트에 추가합니다.
            if (isPm25InRange && isPm10InRange) {
                resultList.add(aq);
            }
        }
        // 결과 리스트를 AirQuality 배열로 변환하여 반환합니다.
        return resultList.toArray(new AirQuality[0]);
    }

    // 특정 속성(property)의 값이 주어진 범위(min ~ max) 내에 있는 AirQuality 객체들을 찾아 배열로 반환합니다.
    public static AirQuality[] findByRange(AirQuality[] data, String property, double min, double max)
{
        // 결과를 저장할 ArrayList 를 생성합니다.
        List<AirQuality> resultList = new ArrayList<>();

        // 입력된 AirQuality 배열을 순회합니다.
        for(AirQuality aq : data) {
            // 주어진 속성 이름(property)을 이용하여 현재 AirQuality 객체의 값을 가져옵니다.
            double value = aq.getValueByProperty(property);

            // 가져온 값이 주어진 범위 내에 있는지 확인합니다.
            boolean isInRange = min <= value && value <= max;

            // 값이 범위 내에 있다면 결과 리스트에 추가합니다.
            if (isInRange) {
                resultList.add(aq);
            }
        }
        // 결과 리스트를 AirQuality 배열로 변환하여 반환합니다.
        return resultList.toArray(new AirQuality[0]);
    }
    // 특정 속성(property)의 값이 주어진 공기질 정도와 동일한 AirQuality 객체들을 찾아 배열로 반환합니다.
    public static AirQuality[] findByLevel(AirQuality[] data, String property, AirQualityLevel level) {
        // 결과를 저장할 ArrayList 를 생성합니다.
        List<AirQuality> resultList = new ArrayList<>();

        // 입력된 AirQuality 배열을 순회합니다.
        for(AirQuality aq : data) {
            // 주어진 속성 이름(property)을 이용하여 현재 AirQuality 객체의 AirQualityLevel 을 가져옵니다.
            AirQualityLevel value = aq.getLevelByProperty(property);

            // 가져온 AirQualityLevel 이 주어진 level 과 동일한지 확인합니다.
            if (value == level) {
                resultList.add(aq);
            }
        }

        // 결과 리스트를 AirQuality 배열로 변환하여 반환합니다.
        return resultList.toArray(new AirQuality[0]);
    }
}
```

```java
public class Lab3 {
    // 클래스당 여러개 있을 필요 없으니 static 으로 2차원 String 배열 data 를 초기화해줍니다.
    public static String[][] data = {
            {"2025-04-10 08:00", "평균", "39", "54", "0.0176", "0.0320", "0.57", "0.0029"},
            ...
            {"2025-04-10 08:00", "중랑구", "34", "53", "0.0158", "0.0281", "0.53", "0.0025"}};

    public static void main(String[] args) {

        // AirQuality 인스턴스 배열을 선언하고, AirQualityParser클래스의 parse 메서드를 사용하여 data 를 파싱하여
넣어줍니다.
        AirQuality[] airQualityData = AirQualityParser.parse(data) ;

        // 제대로 파싱 되었는지 각 요소들을 출력해봅니다. 오버라이딩 된 toString 메서드가 호출되어 실행됩니다.
        for(var ac : airQualityData) {
            System.out.println(ac);
        }
        System.out.print("\n");


        // 필터링 된 데이터를 담을 배열을 선언합니다.
        AirQuality[] filteredData;

        // pm25는 30~40 사이, pm10은 40~50 사이의 값을 충족시키는 결과만 반환합니다.
        System.out.println("Pm25, Pm10 필터가 적용된 결과.");
        filteredData = AirQualityFinder.find(airQualityData, 30 , 40, 40, 50);
        for(var ac : filteredData) {
            System.out.println(ac);
        }
        System.out.print("\n");
        // Pm25 특정 범위에 해당하는 값을 찾아 출력합니다.
        System.out.println("Pm25의 범위에 해당하는 값 찾기");
        filteredData = AirQualityFinder.findByRange(airQualityData, "pm25", 20, 30);
        for(var ac : filteredData) {
            System.out.println(ac);
        }
        System.out.print("\n");
        // Pm10 특정 범위에 해당하는 값을 찾아 출력합니다.
        System.out.println("Pm10의 범위에 해당하는 값 찾기");
        filteredData = AirQualityFinder.findByRange(airQualityData, "pm10", 45, 50);
        for(var ac : filteredData) {
            System.out.println(ac);
        }
        System.out.print("\n");
        // 오존(o3) 특정 범위에 해당하는 값을 찾아 출력합니다.
        System.out.println("오존의 범위에 해당하는 값 찾기");
        filteredData = AirQualityFinder.findByRange(airQualityData, "o3", 0.02, 0.03);
        for(var ac : filteredData) {
            System.out.println(ac);
        }
        System.out.print("\n");
        // 이산화 질소(no2) 특정 범위에 해당하는 값을 찾아 출력합니다.
        System.out.println("이산화 질소의 범위에 해당하는 값 찾기");
        filteredData = AirQualityFinder.findByRange(airQualityData, "no2", 0.02, 0.025);
        for(var ac : filteredData) {
            System.out.println(ac);
        }
        System.out.print("\n");
        // 일산화 탄소(co) 특정 범위에 해당하는 값을 찾아 출력합니다.
        System.out.println("일산화 탄소의 범위에 해당하는 값 찾기");
        filteredData = AirQualityFinder.findByRange(airQualityData, "co", 0.5, 0.55);
        for(var ac : filteredData) {
            System.out.println(ac);
        }
        System.out.print("\n");
        // 아황산 가스(so2) 특정 범위에 해당하는 값을 찾아 출력합니다.
        System.out.println("아황산 가스의 범위에 해당하는 값 찾기");
        filteredData = AirQualityFinder.findByRange(airQualityData, "so2", 0.002, 0.0025);
        for(var ac : filteredData) {
            System.out.println(ac);
        }
        System.out.print("\n");
        // 초미세먼지가 특정 수준에 해당하는 값을 찾아 출력합니다.
        System.out.println("초미세먼지가 나쁨 인 값 찾기");
        filteredData = AirQualityFinder.findByLevel(airQualityData, "pm25", AirQualityLevel.BAD);
        for(var ac : filteredData) {
            System.out.println(ac);
        }
        System.out.print("\n");
        // 미세먼지가 특정 수준에 해당하는 값을 찾아 출력합니다.
        System.out.println("미세먼지가 보통 인 값 찾기");
        filteredData = AirQualityFinder.findByLevel(airQualityData, "pm10", AirQualityLevel.NORMAL);
        for(var ac : filteredData) {
            System.out.println(ac);
        }
        System.out.print("\n");
        // 오조이 특정 수준에 해당하는 값을 찾아 출력합니다.
        System.out.println("오존이 좋음 인 값 찾기");
        filteredData = AirQualityFinder.findByLevel(airQualityData, "o3", AirQualityLevel.GOOD);
        for(var ac : filteredData) {
            System.out.println(ac);
        }
        System.out.print("\n");
    }
}
```

Lab3 클래스 입니다. main 함수가 정의되어있어 프로그램의 진입점이 됩니다. Data 는 너무 길어져서 중간에 자른 형태로 캡쳐했습니다. AirQuality 인스턴스 배열을 선언하고, AirQualityParser클래스의 parse 메서드를 사용하여 data 를 파싱하여 넣어줍니다. 제대로 파싱이 되었는지 파싱된 데이터들을 순회하면서 출력을 해줍니다. 이후에는 filteredData 를 선언하여 find 함수의 반환값을 받아줍니다. AirQualityFinder 클래스의 find 메서드를 사용하여 pm25는 30~40 사이, pm10은 40~50 사이의 값을 충족시키는 결과를 받아 출력합니다. 이후에는 findByRange, findByLevel 으로 해당하는 값들을 찾아 볼 수 있습니다. 아래는 실행 결과 입니다.

c:\Users\Lenovo\Documents\GitHub\Learning-Java\Lab3\src>cd "c:\Users\Lenovo\Documents\GitHub\Learning-Java\Lab3\src\" && javac-d ../bin Lab3.java && java-cp ../bin Lab3 AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='평균', pm25=39.0, pm10=54.0, o3=0.0176, no2=0.032, co=0.57, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강남구', pm25=44.0, pm10=59.0, o3=0.0177, no2=0.0356, co=0.5, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강동구', pm25=41.0, pm10=56.0, o3=0.0116, no2=0.0387, co=0.77, so2=0.0026, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강북구', pm25=31.0, pm10=40.0, o3=0.0282, no2=0.0204, co=0.49, so2=0.0024, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강서구', pm25=41.0, pm10=61.0, o3=0.0095, no2=0.0422, co=0.56, so2=0.0039, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='관악구', pm25=32.0, pm10=42.0, o3=0.0141, no2=0.0407, co=0.62, so2=0.0029, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='광진구', pm25=38.0, pm10=52.0, o3=0.0165, no2=0.0361, co=0.59, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='구로구', pm25=50.0, pm10=57.0, o3=0.017, no2=0.0299, co=0.47, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='금천구', pm25=36.0, pm10=55.0, o3=0.0102, no2=0.0481, co=0.56, so2=0.0031, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='노원구', pm25=36.0, pm10=51.0, o3=0.0161, no2=0.0333, co=0.58, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='도봉구', pm25=34.0, pm10=50.0, o3=0.0272, no2=0.0225, co=0.61, so2=0.0033, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='동대문구', pm25=41.0, pm10=60.0, o3=0.0207, no2=0.0261, co=0.56, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='동작구', pm25=39.0, pm10=54.0, o3=0.0269, no2=0.0296, co=0.49, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='마포구', pm25=40.0, pm10=46.0, o3=0.0219, no2=0.0233, co=0.5, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='서대문구', pm25=42.0, pm10=52.0, o3=0.0162, no2=0.0255, co=0.74, so2=0.0041, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='서초구', pm25=47.0, pm10=68.0, o3=0.0143, no2=0.0363, co=0.5, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성동구', pm25=42.0, pm10=56.0, o3=0.0143, no2=0.0354, co=0.52, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성북구',

pm25=33.0, pm10=49.0, o3=0.0239, no2=0.0235, co=0.66, so2=0.0031, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='송파구', pm25=32.0, pm10=49.0, o3=0.0139, no2=0.0413, co=0.51, so2=0.0038, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='양천구', pm25=43.0, pm10=62.0, o3=0.01, no2=0.0422, co=0.6, so2=0.0032, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='영등포구', pm25=42.0, pm10=51.0, o3=0.0149, no2=0.0342, co=0.55, so2=0.0026, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='용산구', pm25=41.0, pm10=56.0, o3=0.0155, no2=0.0323, co=0.56, so2=0.0034, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='은평구', pm25=38.0, pm10=53.0, o3=0.0108, no2=0.0272, co=0.68, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='종로구', pm25=43.0, pm10=59.0, o3=0.0246, no2=0.0243, co=0.56, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중구', pm25=43.0, pm10=53.0, o3=0.028, no2=0.0225, co=0.56, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중랑구', pm25=34.0, pm10=53.0, o3=0.0158, no2=0.0281, co=0.53, so2=0.0025, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} Pm25, Pm10 필터가 적용된 결과.

AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강북구', pm25=31.0, pm10=40.0, o3=0.0282, no2=0.0204, co=0.49, so2=0.0024, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='관악구', pm25=32.0, pm10=42.0, o3=0.0141, no2=0.0407, co=0.62, so2=0.0029, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='도봉구', pm25=34.0, pm10=50.0, o3=0.0272, no2=0.0225, co=0.61, so2=0.0033, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='마포구', pm25=40.0, pm10=46.0, o3=0.0219, no2=0.0233, co=0.5, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성북구', pm25=33.0, pm10=49.0, o3=0.0239, no2=0.0235, co=0.66, so2=0.0031, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='송파구', pm25=32.0, pm10=49.0, o3=0.0139, no2=0.0413, co=0.51, so2=0.0038, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} Pm25의 범위에 해당하는 값 찾기 Pm10의 범위에 해당하는 값 찾기

AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='도봉구', pm25=34.0, pm10=50.0, o3=0.0272, no2=0.0225, co=0.61, so2=0.0033, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='마포구', pm25=40.0, pm10=46.0, o3=0.0219, no2=0.0233, co=0.5, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성북구', pm25=33.0, pm10=49.0, o3=0.0239, no2=0.0235, co=0.66, so2=0.0031, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='송파구', pm25=32.0, pm10=49.0, o3=0.0139, no2=0.0413, co=0.51, so2=0.0038, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} 오존의 범위에 해당하는 값 찾기

AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강북구', pm25=31.0, pm10=40.0, o3=0.0282, no2=0.0204, co=0.49, so2=0.0024, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='도봉구', pm25=34.0, pm10=50.0, o3=0.0272, no2=0.0225, co=0.61, so2=0.0033, pm25Level=NORMAL,

pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='동대문구', pm25=41.0, pm10=60.0, o3=0.0207, no2=0.0261, co=0.56, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='동작구', pm25=39.0, pm10=54.0, o3=0.0269, no2=0.0296, co=0.49, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='마포구', pm25=40.0, pm10=46.0, o3=0.0219, no2=0.0233, co=0.5, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성북구', pm25=33.0, pm10=49.0, o3=0.0239, no2=0.0235, co=0.66, so2=0.0031, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='종로구', pm25=43.0, pm10=59.0, o3=0.0246, no2=0.0243, co=0.56, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중구', pm25=43.0, pm10=53.0, o3=0.028, no2=0.0225, co=0.56, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} 이산화 질소의 범위에 해당하는 값 찾기 AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강북구', pm25=31.0, pm10=40.0, o3=0.0282, no2=0.0204, co=0.49, so2=0.0024, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='도봉구', pm25=34.0, pm10=50.0, o3=0.0272, no2=0.0225, co=0.61, so2=0.0033, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='마포구', pm25=40.0, pm10=46.0, o3=0.0219, no2=0.0233, co=0.5, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성북구', pm25=33.0, pm10=49.0, o3=0.0239, no2=0.0235, co=0.66, so2=0.0031, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='종로구', pm25=43.0, pm10=59.0, o3=0.0246, no2=0.0243, co=0.56, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중구', pm25=43.0, pm10=53.0, o3=0.028, no2=0.0225, co=0.56, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} 일산화 탄소의 범위에 해당하는 값 찾기 AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강남구', pm25=44.0, pm10=59.0, o3=0.0177, no2=0.0356, co=0.5, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='마포구', pm25=40.0, pm10=46.0, o3=0.0219, no2=0.0233, co=0.5, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='서초구', pm25=47.0, pm10=68.0, o3=0.0143, no2=0.0363, co=0.5, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성동구', pm25=42.0, pm10=56.0, o3=0.0143, no2=0.0354, co=0.52, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='송파구', pm25=32.0, pm10=49.0, o3=0.0139, no2=0.0413, co=0.51, so2=0.0038, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='영등포구', pm25=42.0, pm10=51.0, o3=0.0149, no2=0.0342, co=0.55, so2=0.0026, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중랑구', pm25=34.0, pm10=53.0, o3=0.0158, no2=0.0281, co=0.53, so2=0.0025, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} 아황산 가스의 범위에 해당하는 값 찾기 AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강남구', pm25=44.0, pm10=59.0, o3=0.0177, no2=0.0356, co=0.5, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강북구', pm25=31.0, pm10=40.0, o3=0.0282, no2=0.0204, co=0.49, so2=0.0024, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00,

measurementStationName='동대문구', pm25=41.0, pm10=60.0, o3=0.0207, no2=0.0261, co=0.56, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='서초구', pm25=47.0, pm10=68.0, o3=0.0143, no2=0.0363, co=0.5, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성동구', pm25=42.0, pm10=56.0, o3=0.0143, no2=0.0354, co=0.52, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중구', pm25=43.0, pm10=53.0, o3=0.028, no2=0.0225, co=0.56, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중랑구', pm25=34.0, pm10=53.0, o3=0.0158, no2=0.0281, co=0.53, so2=0.0025, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} 초미세먼지가 나쁨 인 값 찾기

AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='평균', pm25=39.0, pm10=54.0, o3=0.0176, no2=0.032, co=0.57, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강남구', pm25=44.0, pm10=59.0, o3=0.0177, no2=0.0356, co=0.5, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강동구', pm25=41.0, pm10=56.0, o3=0.0116, no2=0.0387, co=0.77, so2=0.0026, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강서구', pm25=41.0, pm10=61.0, o3=0.0095, no2=0.0422, co=0.56, so2=0.0039, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='광진구', pm25=38.0, pm10=52.0, o3=0.0165, no2=0.0361, co=0.59, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='구로구', pm25=50.0, pm10=57.0, o3=0.017, no2=0.0299, co=0.47, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='금천구', pm25=36.0, pm10=55.0, o3=0.0102, no2=0.0481, co=0.56, so2=0.0031, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='노원구', pm25=36.0, pm10=51.0, o3=0.0161, no2=0.0333, co=0.58, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='동대문구', pm25=41.0, pm10=60.0, o3=0.0207, no2=0.0261, co=0.56, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='동작구', pm25=39.0, pm10=54.0, o3=0.0269, no2=0.0296, co=0.49, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='마포구', pm25=40.0, pm10=46.0, o3=0.0219, no2=0.0233, co=0.5, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='서대문구', pm25=42.0, pm10=52.0, o3=0.0162, no2=0.0255, co=0.74, so2=0.0041, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='서초구', pm25=47.0, pm10=68.0, o3=0.0143, no2=0.0363, co=0.5, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성동구', pm25=42.0, pm10=56.0, o3=0.0143, no2=0.0354, co=0.52, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='양천구', pm25=43.0, pm10=62.0, o3=0.01, no2=0.0422, co=0.6, so2=0.0032, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='영등포구', pm25=42.0, pm10=51.0, o3=0.0149, no2=0.0342, co=0.55, so2=0.0026, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='용산구', pm25=41.0, pm10=56.0, o3=0.0155, no2=0.0323, co=0.56, so2=0.0034, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='은평구', pm25=38.0, pm10=53.0, o3=0.0108, no2=0.0272, co=0.68, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL,

o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='종로구', pm25=43.0, pm10=59.0, o3=0.0246, no2=0.0243, co=0.56, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중구', pm25=43.0, pm10=53.0, o3=0.028, no2=0.0225, co=0.56, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} 미세먼지가 보통 인 값 찾기 AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='평균', pm25=39.0, pm10=54.0, o3=0.0176, no2=0.032, co=0.57, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강남구', pm25=44.0, pm10=59.0, o3=0.0177, no2=0.0356, co=0.5, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강동구', pm25=41.0, pm10=56.0, o3=0.0116, no2=0.0387, co=0.77, so2=0.0026, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강북구', pm25=31.0, pm10=40.0, o3=0.0282, no2=0.0204, co=0.49, so2=0.0024, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강서구', pm25=41.0, pm10=61.0, o3=0.0095, no2=0.0422, co=0.56, so2=0.0039, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='관악구', pm25=32.0, pm10=42.0, o3=0.0141, no2=0.0407, co=0.62, so2=0.0029, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='광진구', pm25=38.0, pm10=52.0, o3=0.0165, no2=0.0361, co=0.59, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='구로구', pm25=50.0, pm10=57.0, o3=0.017, no2=0.0299, co=0.47, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='금천구', pm25=36.0, pm10=55.0, o3=0.0102, no2=0.0481, co=0.56, so2=0.0031, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='노원구', pm25=36.0, pm10=51.0, o3=0.0161, no2=0.0333, co=0.58, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='도봉구', pm25=34.0, pm10=50.0, o3=0.0272, no2=0.0225, co=0.61, so2=0.0033, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='동대문구', pm25=41.0, pm10=60.0, o3=0.0207, no2=0.0261, co=0.56, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='동작구', pm25=39.0, pm10=54.0, o3=0.0269, no2=0.0296, co=0.49, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='마포구', pm25=40.0, pm10=46.0, o3=0.0219, no2=0.0233, co=0.5, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='서대문구', pm25=42.0, pm10=52.0, o3=0.0162, no2=0.0255, co=0.74, so2=0.0041, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='서초구', pm25=47.0, pm10=68.0, o3=0.0143, no2=0.0363, co=0.5, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성동구', pm25=42.0, pm10=56.0, o3=0.0143, no2=0.0354, co=0.52, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성북구', pm25=33.0, pm10=49.0, o3=0.0239, no2=0.0235, co=0.66, so2=0.0031, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='송파구', pm25=32.0, pm10=49.0, o3=0.0139, no2=0.0413, co=0.51, so2=0.0038, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='양천구', pm25=43.0, pm10=62.0, o3=0.01, no2=0.0422, co=0.6, so2=0.0032, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD}

AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='영등포구', pm25=42.0, pm10=51.0, o3=0.0149, no2=0.0342, co=0.55, so2=0.0026, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='용산구', pm25=41.0, pm10=56.0, o3=0.0155, no2=0.0323, co=0.56, so2=0.0034, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='은평구', pm25=38.0, pm10=53.0, o3=0.0108, no2=0.0272, co=0.68, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='종로구', pm25=43.0, pm10=59.0, o3=0.0246, no2=0.0243, co=0.56, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중구', pm25=43.0, pm10=53.0, o3=0.028, no2=0.0225, co=0.56, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중랑구', pm25=34.0, pm10=53.0, o3=0.0158, no2=0.0281, co=0.53, so2=0.0025, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} 오존이 좋음 인 값 찾기 AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='평균', pm25=39.0, pm10=54.0, o3=0.0176, no2=0.032, co=0.57, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강남구', pm25=44.0, pm10=59.0, o3=0.0177, no2=0.0356, co=0.5, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강동구', pm25=41.0, pm10=56.0, o3=0.0116, no2=0.0387, co=0.77, so2=0.0026, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강북구', pm25=31.0, pm10=40.0, o3=0.0282, no2=0.0204, co=0.49, so2=0.0024, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='강서구', pm25=41.0, pm10=61.0, o3=0.0095, no2=0.0422, co=0.56, so2=0.0039, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='관악구', pm25=32.0, pm10=42.0, o3=0.0141, no2=0.0407, co=0.62, so2=0.0029, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='광진구', pm25=38.0, pm10=52.0, o3=0.0165, no2=0.0361, co=0.59, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='구로구', pm25=50.0, pm10=57.0, o3=0.017, no2=0.0299, co=0.47, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='금천구', pm25=36.0, pm10=55.0, o3=0.0102, no2=0.0481, co=0.56, so2=0.0031, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='노원구', pm25=36.0, pm10=51.0, o3=0.0161, no2=0.0333, co=0.58, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='도봉구', pm25=34.0, pm10=50.0, o3=0.0272, no2=0.0225, co=0.61, so2=0.0033, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='동대문구', pm25=41.0, pm10=60.0, o3=0.0207, no2=0.0261, co=0.56, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='동작구', pm25=39.0, pm10=54.0, o3=0.0269, no2=0.0296, co=0.49, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='마포구', pm25=40.0, pm10=46.0, o3=0.0219, no2=0.0233, co=0.5, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='서대문구', pm25=42.0, pm10=52.0, o3=0.0162, no2=0.0255, co=0.74, so2=0.0041, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='서초구', pm25=47.0, pm10=68.0, o3=0.0143, no2=0.0363, co=0.5, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL,

o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성동구', pm25=42.0, pm10=56.0, o3=0.0143, no2=0.0354, co=0.52, so2=0.0025, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='성북구', pm25=33.0, pm10=49.0, o3=0.0239, no2=0.0235, co=0.66, so2=0.0031, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='송파구', pm25=32.0, pm10=49.0, o3=0.0139, no2=0.0413, co=0.51, so2=0.0038, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='양천구', pm25=43.0, pm10=62.0, o3=0.01, no2=0.0422, co=0.6, so2=0.0032, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='영등포구', pm25=42.0, pm10=51.0, o3=0.0149, no2=0.0342, co=0.55, so2=0.0026, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='용산구', pm25=41.0, pm10=56.0, o3=0.0155, no2=0.0323, co=0.56, so2=0.0034, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='은평구', pm25=38.0, pm10=53.0, o3=0.0108, no2=0.0272, co=0.68, so2=0.0028, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='종로구', pm25=43.0, pm10=59.0, o3=0.0246, no2=0.0243, co=0.56, so2=0.0029, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중구', pm25=43.0, pm10=53.0, o3=0.028, no2=0.0225, co=0.56, so2=0.0024, pm25Level=BAD, pm10Level=NORMAL, o3Level=GOOD} AirQuality{measurementDateTime=2025-04-10T08:00, measurementStationName='중랑구', pm25=34.0, pm10=53.0, o3=0.0158, no2=0.0281, co=0.53, so2=0.0025, pm25Level=NORMAL, pm10Level=NORMAL, o3Level=GOOD}