import java.util.\*;

// Observer interface

interface Observer {

void update(float temperature, float humidity, float pressure);

}

// Subject interface

interface Subject {

void registerObserver(Observer observer);

void removeObserver(Observer observer);

void notifyObservers();

}

// Concrete Subject

class WeatherData implements Subject {

private List<Observer> observers;

private float temperature;

private float humidity;

private float pressure;

public WeatherData() {

observers = new ArrayList<>();

}

public void registerObserver(Observer observer) {

observers.add(observer);

}

public void removeObserver(Observer observer) {

observers.remove(observer);

}

public void notifyObservers() {

for (Observer observer : observers) {

observer.update(temperature, humidity, pressure);

}

}

public void measurementsChanged() {

notifyObservers();

}

public void setMeasurements(float temperature, float humidity, float pressure) {

this.temperature = temperature;

this.humidity = humidity;

this.pressure = pressure;

measurementsChanged();

}

}

// Concrete Observer

class CurrentConditionsDisplay implements Observer {

private float temperature;

private float humidity;

private Subject weatherData;

public CurrentConditionsDisplay(Subject weatherData) {

this.weatherData = weatherData;

weatherData.registerObserver(this);

}

public void update(float temperature, float humidity, float pressure) {

this.temperature = temperature;

this.humidity = humidity;

display();

}

public void display() {

System.out.println("Current conditions: " + temperature

+ "F degrees and " + humidity + "% humidity");

}

}

// Client code to test Observer Pattern

public class WeatherStation {

public static void main(String[] args) {

WeatherData weatherData = new WeatherData();

CurrentConditionsDisplay currentDisplay = new CurrentConditionsDisplay(weatherData);

weatherData.setMeasurements(80, 65, 30.4f);

weatherData.setMeasurements(82, 70, 29.2f);

weatherData.setMeasurements(78, 90, 29.2f);

}

}