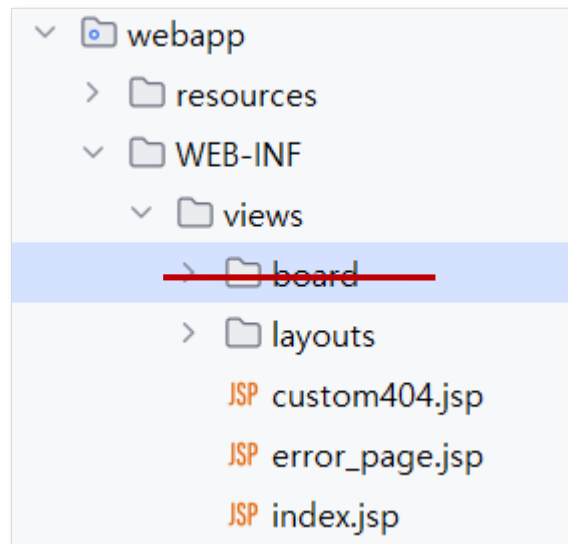


2025년 상반기 K-디지털 트레이닝

Rest Controller & OpenAPI

[KB] IT's Your Life

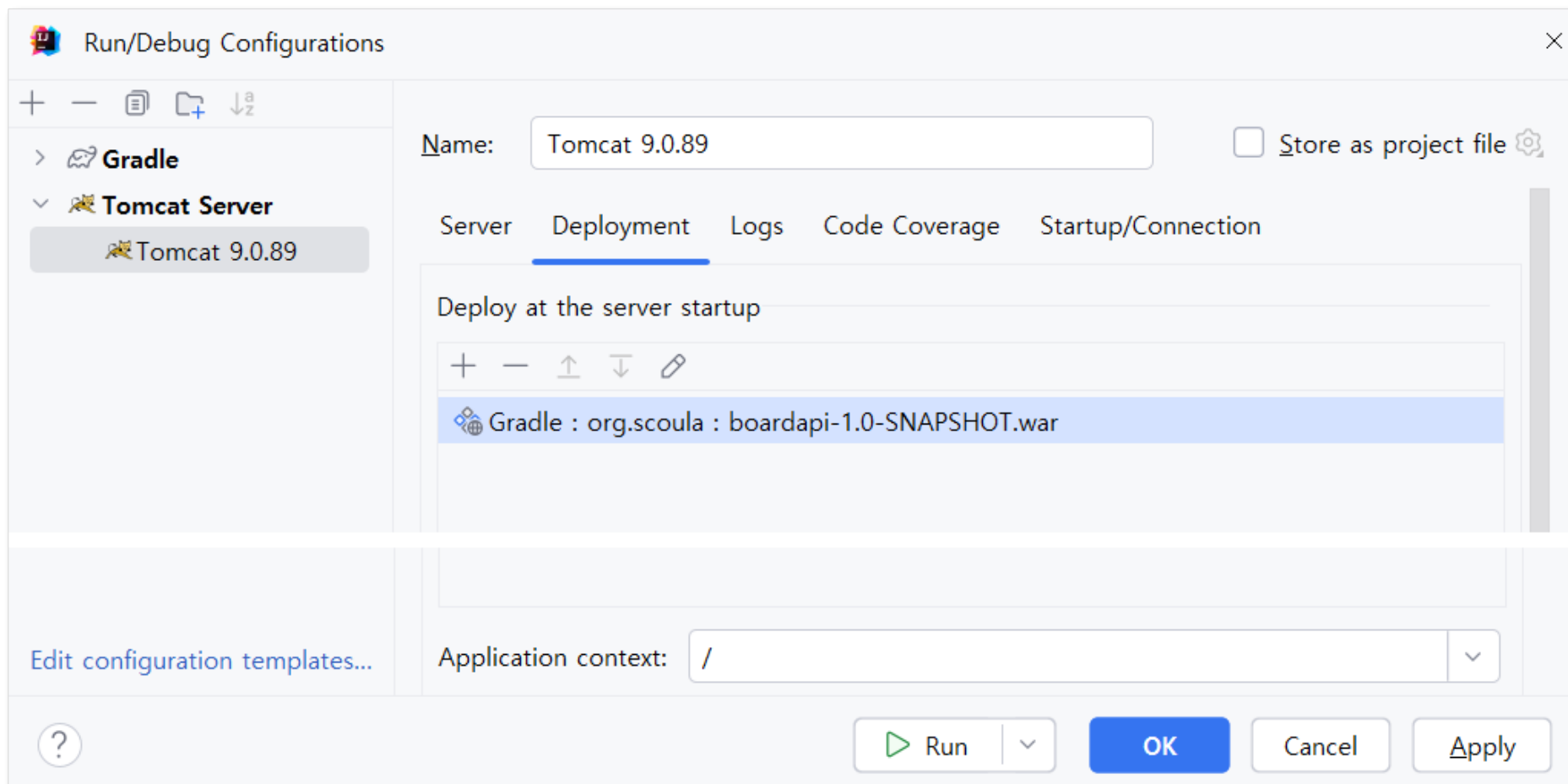
- ✓ 다음 과정으로 새로운 프로젝트를 생성하세요.
 - board 프로젝트를 boardapi로 복사
 - settings.gradle
rootProject.name = "boardapi"
 - org.scoula.board.controller.BoardController.java 삭제
 - board 뷰 삭제
 - HomeController수정



✓ 다음과 같이 Tomcat 실행 설정을 수정하세요.

○ Deployment

- ArtifactId 추가
- Application context: /



HomeController.java

```
package org.scoula.controller;

import lombok.extern.slf4j.Slf4j;
import org.springframework.stereotype.Controller;
import org.springframework.web.bind.annotation.GetMapping;

@Controller
@Slf4j
public class HomeController {

    @GetMapping("/")
    public String home() {
        log.info("=====> HomController /");
        return "index";          // View의 이름
    }
}
```

- ✓ Board API를 위한 구조로 BoardService를 수정하세요.
 - insert, update, delete 모두 BoardDTO 리턴

BoardService.java

```
public interface BoardService {  
    public List<BoardDTO> getList();  
  
    public BoardDTO get(Long no);  
  
    public BoardDTO create(BoardDTO board);  
  
    public BoardDTO update(BoardDTO board);  
  
    public BoardDTO delete(Long no);  
  
    public BoardAttachmentVO getAttachment(Long no);  
  
    public boolean deleteAttachment(Long no);  
}
```

BoardServiceImpl.java

```
public class BoardServiceImpl implements BoardService {  
    ...  
    @Transactional // 2개 이상의 insert 문이 실행될 수 있으므로 트랜잭션 처리 필요  
    @Override  
    public BoardDTO create(BoardDTO board) {  
        log.info("create....." + board);  
  
        BoardVO boardVO= board.toVo();  
        mapper.create(boardVO);  
  
        // 파일 업로드 처리  
        List<MultipartFile> files = board.GetFiles();  
        if(files != null && !files.isEmpty()) {  
            upload(boardVO.getNo(), files);  
        }  
  
        return get(boardVO.getNo());  
    }  
}
```

BoardServiceImpl.java

```
...

@Override
public BoardDTO update(BoardDTO board) {
    log.info("update....." + board);
    mapper.update(board.toVo());

    return get(board.getNo());
}

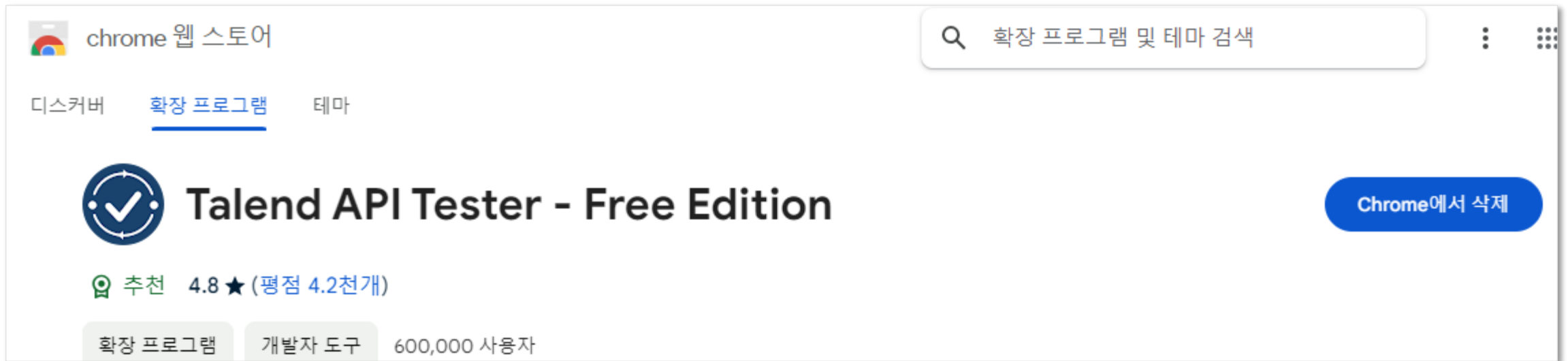
@Override
public BoardDTO delete(Long no) {
    log.info("delete...." + no);
    BoardDTO board = get(no);

    mapper.delete(no);
    return board;
}
}
```


- ✓ 크롬의 확장 프로그램 Talend API Tester을 설치하세요.

✓ Talend API Tester

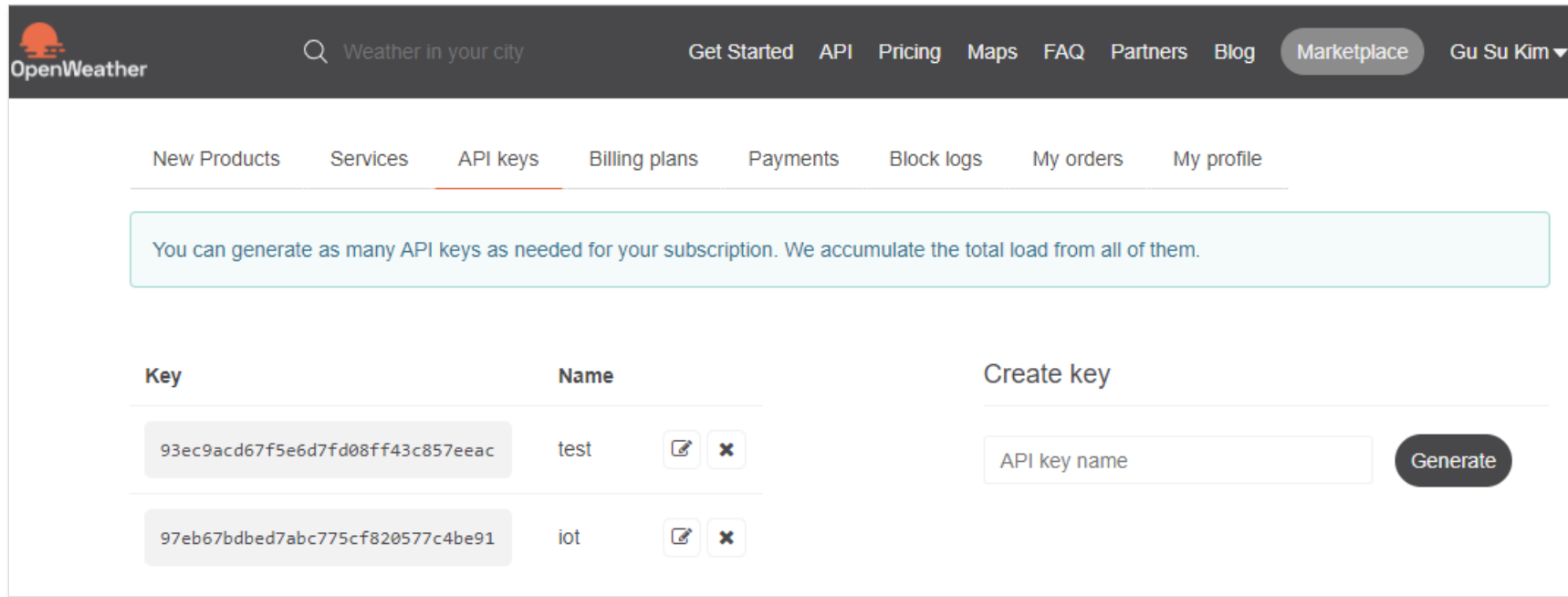
- Rest API 호출 테스트를 할 수 있는 크롬 확장 프로그램
- 구글: "talend api 확장" 검색



- ✓ openweather 사이트에서 API키를 발급받으세요.
 - <https://openweathermap.org/>

✓ openweather 사이트에서 API키를 발급받으세요.

- <https://openweathermap.org/>
- 회원가입 -> 로그인
- API키 발급
 - 회원 가입시 자동 발급



- ✔ openweather api를 사용하여 서울의 날씨를 확인하세요.
 - 온도는 섭씨로 처리
 - 해당 날씨에 대한 아이콘을 얻는 url을 작성하고, 확인

✓ api 호출

○ 섭씨 요청하기

<http://api.openweathermap.org/data/2.5/weather?q=seoul&units=metric&APPID=xxxxxxxxx&lang=kr>

✓ 결과 json

```
{
  "coord": { "lon": 126.9778, "lat": 37.5683 },
  "weather": [
    { "id": 800, "main": "Clear", "description": "맑음", "icon": "01d" }
  ],
  "base": "stations",
  "main": {
    "temp": 272.82,
    "feels_like": 268.77,
    "temp_min": 272.15,
    "temp_max": 273.15,
    "pressure": 1028,
    "humidity": 34
  },
  "visibility": 10000,
  "wind": { "speed": 1.03, "deg": 120 },
  "clouds": { "all": 0 },
  "dt": 1612420804,
```

✓ 결과 json

```
"sys": {  
  "type": 1,  
  "id": 8105,  
  "country": "KR",  
  "sunrise": 1612391603,  
  "sunset": 1612429114  
},  
"timezone": 32400,  
"id": 1835848,  
"name": "Seoul",  
"cod": 200  
}
```


✓ 날씨 아이콘 URL

- <http://openweathermap.org/img/w/{icon}.png>

```
{  
  "coord": { "lon": 126.9778, "lat": 37.5683 },  
  "weather": [  
    { "id": 800, "main": "Clear", "description": "맑음", "icon": "01d" }  
  ],  
  "base": "stations",  
  ...  
}
```



- <http://openweathermap.org/img/w/01d.png>

- ☑ RoboPOGOGenerator 플러그인을 설치하고, 앞에서 받은 날씨 json으로 DTO 객체를 생성하세요
 - - 패키지: org.scoula.weather.dto
 - 루트 클래스명: WeatherDTO

✓ Json to Java Object

○ DTO Generator 플러그인

- File > Settings... > Plugins
- pojo 검색

The screenshot shows the IntelliJ IDEA Settings window with the 'Plugins' tab selected. The search bar contains 'pojo', and the results list several plugins. The 'RoboPOJOGenerator' plugin is highlighted, showing it is already installed. Other plugins like 'POJO to JSON', 'PojoToJson', 'POJO Generator', 'Json2Pojo', 'POJO to JSON', and 'Awesome Pojo Generator' are listed with their download sizes, ratings, and authors. The right pane shows the details for the 'RoboPOJOGenerator' plugin, including its version (2.3.3) and a description of its functionality.

RoboPOJOGenerator
Vadim Shchenev Plugin homepage ↗
Installed 2.3.3

Overview What's New Reviews Additional Info

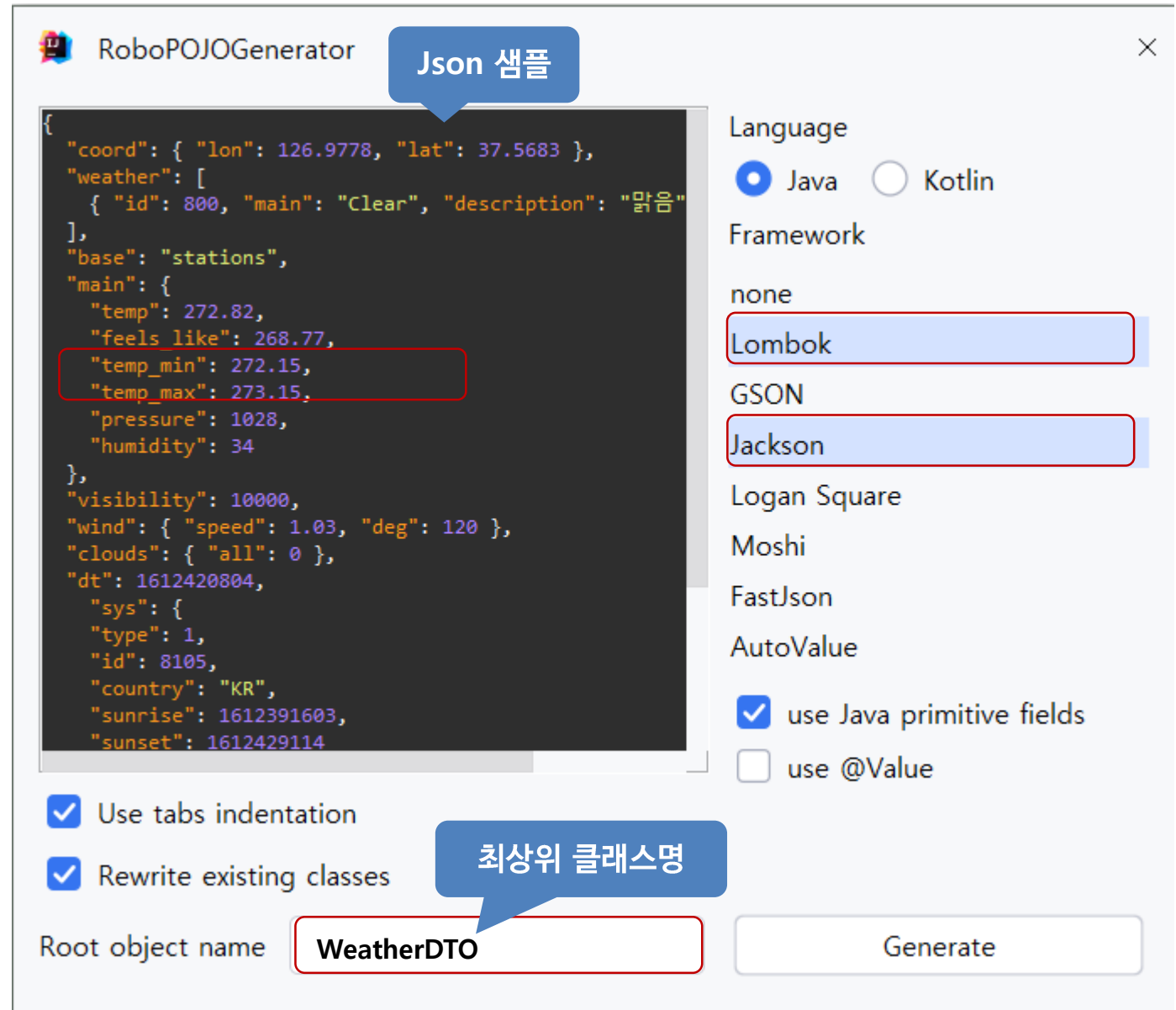
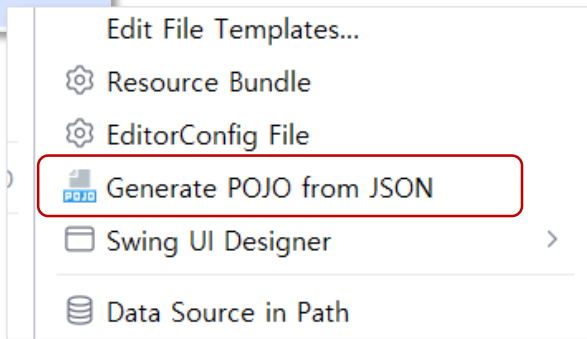
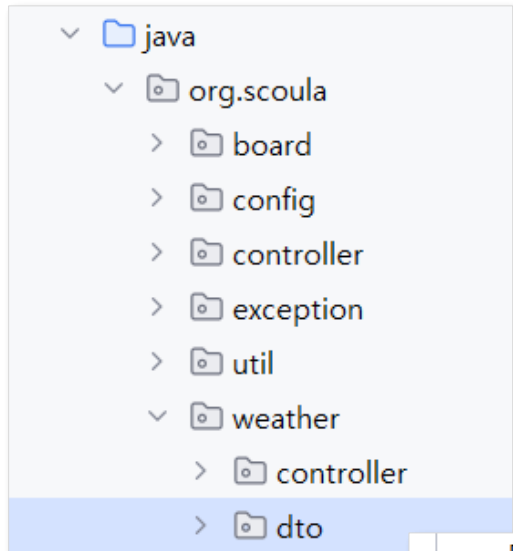
IntelliJ Idea and Android Studio plugin for JSON to POJO transformation.

Generates Java, Java Records and Kotlin POJO files from JSON: GSON, FastJSON, AutoValue (GSON), Logan Square, Jackson, Lombok, empty annotations template. Supports: primitive

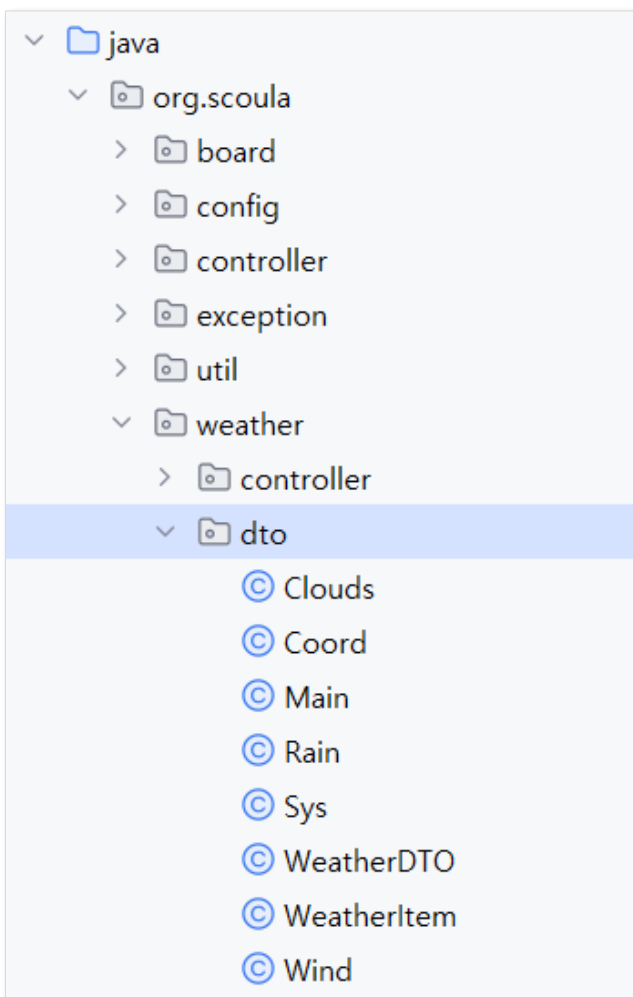
OK Cancel Apply

✓ 변환하기

- 대상 패키지 선택 >>
New > Generate POJO from JSON



✓ 변환 결과



```
@Data
public class WeatherDTO{
    private int visibility;
    private int timezone;
    private Main main;
    private Clouds clouds;
    private Sys sys;
    private int dt;
    private Coord coord;
    private List<WeatherItem> weather;
    private String name;
    private int cod;
    private int id;
    private String base;
    private Wind wind;
}
```