

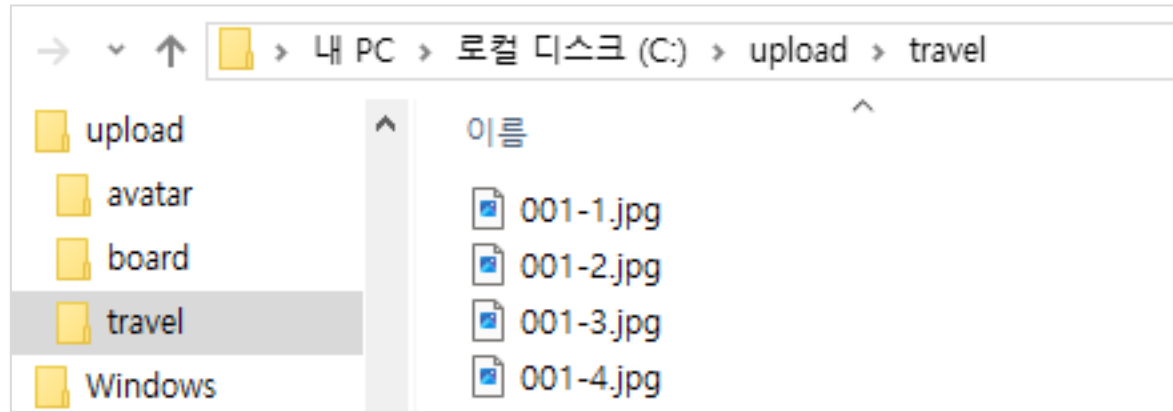
2025년 상반기 K-디지털 트레이닝

# Travel - 백엔드

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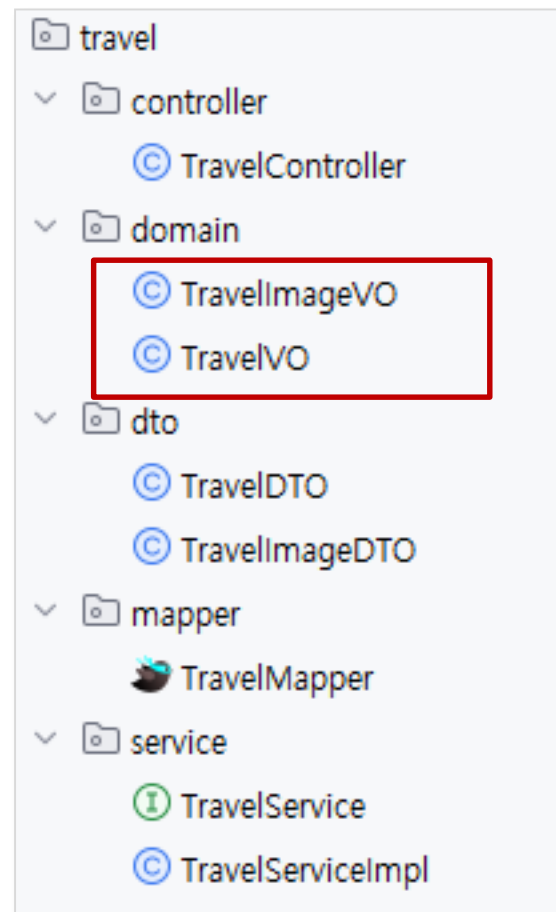
[KB] IT's Your Life

- ✓ travelapp를 이용해서 scoula\_db에 tbl\_table, tbl\_table\_image 테이블에 데이터를 임포트 하세요.
- ✓ travel 이미지를 아래 경로로 준비하세요.
  - c:/upload/travel에 이미지 복사



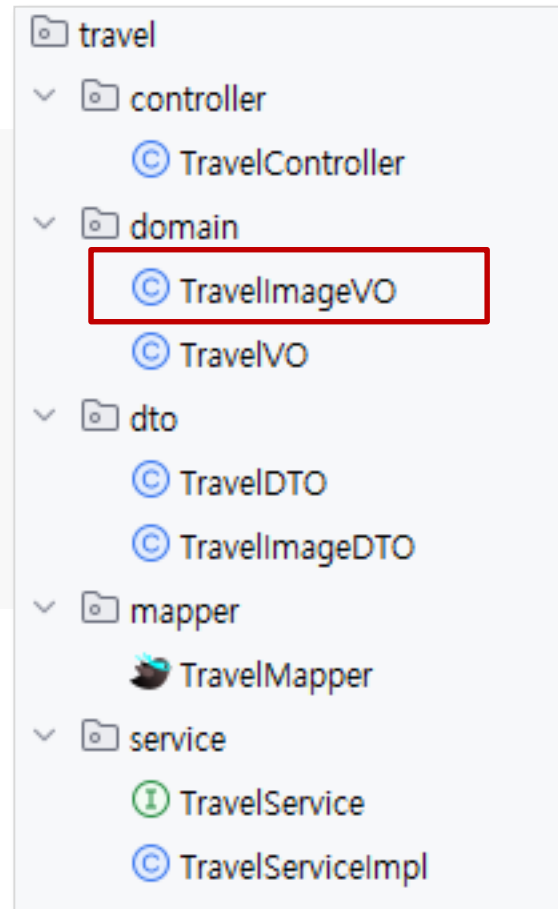
✓ Travel 앱을 위한 다음 VO 객체를 정의하세요.

- TravellImageVO.java
- TravelVO.java



## TravellImageVO.java

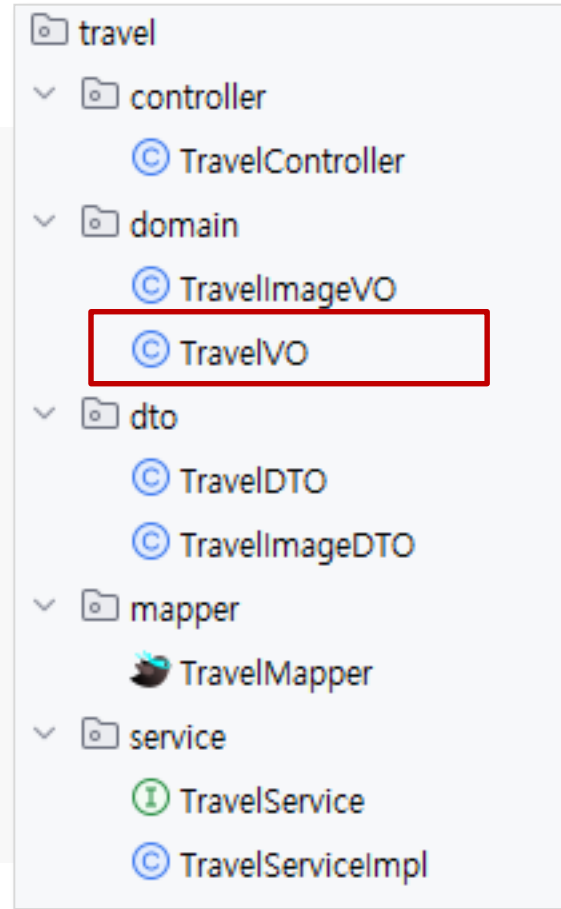
```
@Data
@Builder
@NoArgsConstructor
@AllArgsConstructor
public class TravelImageVO {
    private Long no;
    private String filename;
    private Long travelNo;
}
```



## TravelVO.java

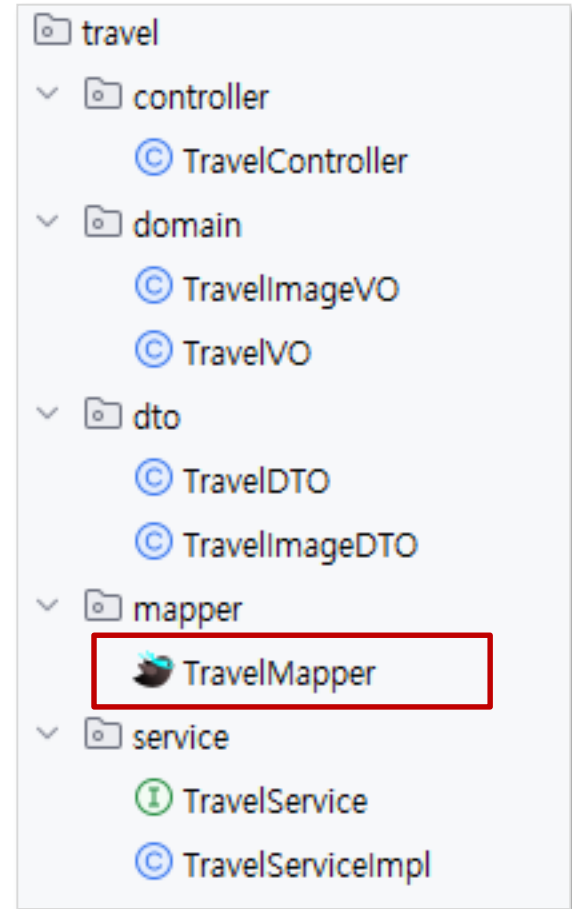
```
@Data
@Builder
@NoArgsConstructor
@AllArgsConstructor
public class TravelVO {
    private Long no;
    private String district;
    private String title;
    private String description;
    private String address;
    private String phone;

    private List<TravelImageVO> images;
}
```



## ✓ TravelMapper 인터페이스를 정의하세요.

- `int getTotalCount();`
- `List<String> getDistricts();`
- `List<TravelVO> getTravels();`
- `List<TravelVO> getPage(PageRequest pageRequest);`
- `List<TravelVO> getTravelsByDistrict(String district);`
- `TravelVO getTravel(Long no);`
- `List<TravellImageVO> getImages(Long travelNo);`
- `TravellImageVO getImage(Long no);`



## TravelMapper.java

```
@Mapper
public interface TravelMapper {
    int getTotalCount();

    List<String> getDistricts();    // 구역 목록 얻기

    List<TravelVO> getTravels();    // 목록 얻기

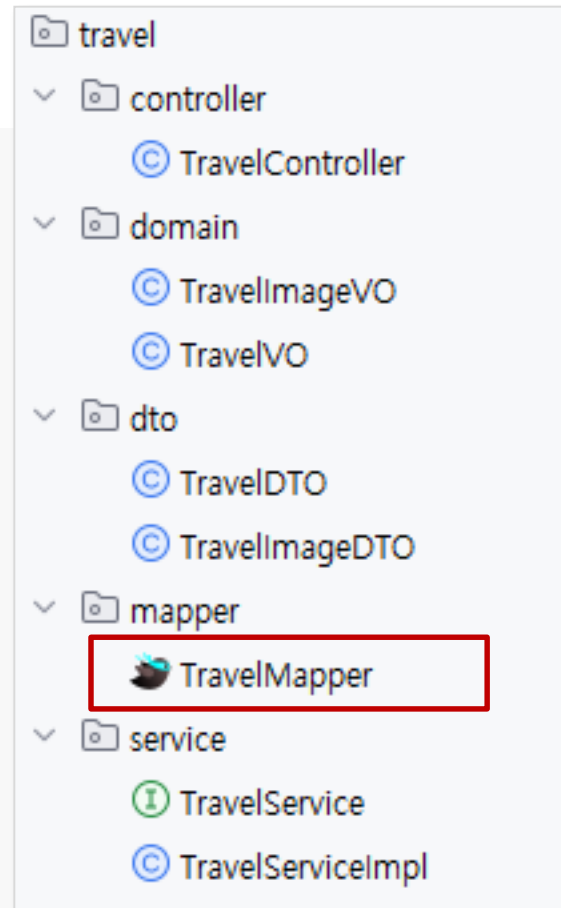
    List<TravelVO> getPage(PageRequest pageRequest);    // 페이지별 목록 얻기

    List<TravelVO> getTravelsByDistrict(String district);    // 해당 구역의 목록 얻기

    TravelVO getTravel(Long no);    // 특정 관광지 정보 얻기

    List<TravelImageVO> getImages(Long travelNo);    // 해당 관광지 이미지 목록 얻기

    TravelImageVO getImage(Long no);    // 이미지 정보 얻기
}
```



## ✓ 다음 조건을 만족하는 TravelMapper.xml을 정의하세요.

### ○ resultMap 구성

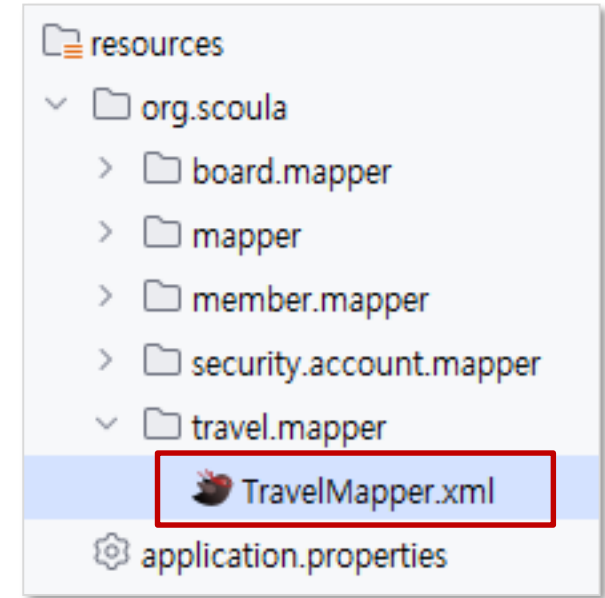
- 이미지 정보를 같이 얻어야 하므로 Join 필요

### ○ 비슷한 sql 문이 사용됨 (공통 부분이 존재)

- `List<TravelVO> getTravels();`
- `List<TravelVO> getTravelsByDistrict(String district);`
- `TravelVO getTravel(Long no);` // 특정 관광지 정보 얻기

### ○ getPage(PageRequest pageRequest)에서는 Join을 사용할 수 없음

- Join을 하면 추출할 개 수를 지정 할 수 없음
- TravelVO 목록만 추출
- Service에서 목록에 대해 TravellImageVO 추출



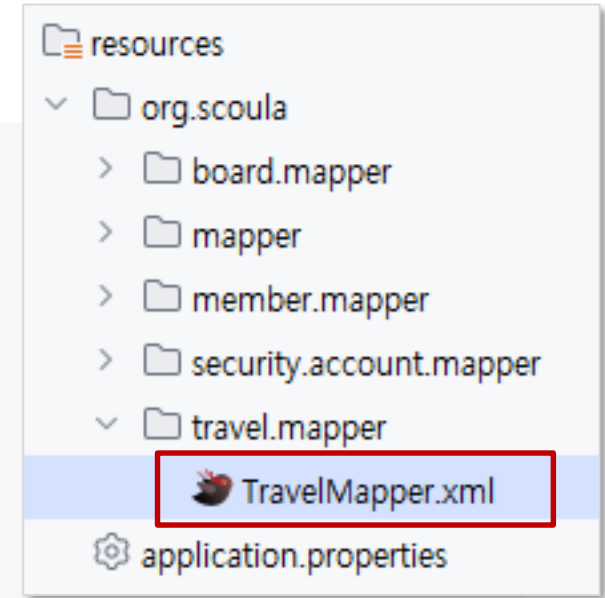


## TravelMapper.xml

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE mapper
    PUBLIC "-//mybatis.org//DTD Mapper 3.0//EN"
    "http://mybatis.org/dtd/mybatis-3-mapper.dtd">

<mapper namespace="org.scoula.travel.mapper.TravelMapper">
    <select id="getTotalCount" resultType="java.lang.Integer">
        SELECT count(*)
        FROM tbl_travel
    </select>

    <sql id="travel-select">
        SELECT t.*, ti.no AS tino, ti.filename, ti.travel_no
        FROM tbl_travel t
            LEFT OUTER JOIN tbl_travel_image ti
                ON t.no = ti.travel_no
    </sql>
```



## TravelMapper.xml

```
<select id="getDistricts" resultType="java.lang.String">
    SELECT DISTINCT(district)
    FROM tbl_travel
    ORDER BY district
</select>

<resultMap id="imagesMap" type="org.scoula.travel.domain.TravelImageVO">
    <id column="tino" property="no"/>
    <result column="filename" property="filename"/>
    <result column="travel_no" property="travelNo"/>
</resultMap>

<resultMap id="travelMap" type="org.scoula.travel.domain.TravelVO">
    <id column="no" property="no"/>
    <result column="district" property="district"/>
    <result column="title" property="title"/>
    <result column="description" property="description"/>
    <result column="address" property="address"/>
    <result column="phone" property="phone"/>
    <collection property="images" resultMap="imagesMap"/>
</resultMap>
```

## TravelMapper.xml

```
<select id="getTravels" resultMap="travelMap">
    <include refid="travel-select"/>
    ORDER BY district, title
</select>

<select id="getPage" resultMap="travelMap">
    SELECT *
    FROM tbl_travel
    ORDER BY district, title LIMIT #{offset}, #{amount}
</select>

<select id="getTravelsByDistrict" resultMap="travelMap">
    <include refid="travel-select"/>
    WHERE district = #{district}
    ORDER BY district
</select>

<select id="getTravel" resultMap="travelMap">
    <include refid="travel-select"/>
    WHERE t.no = #{no}
</select>
```

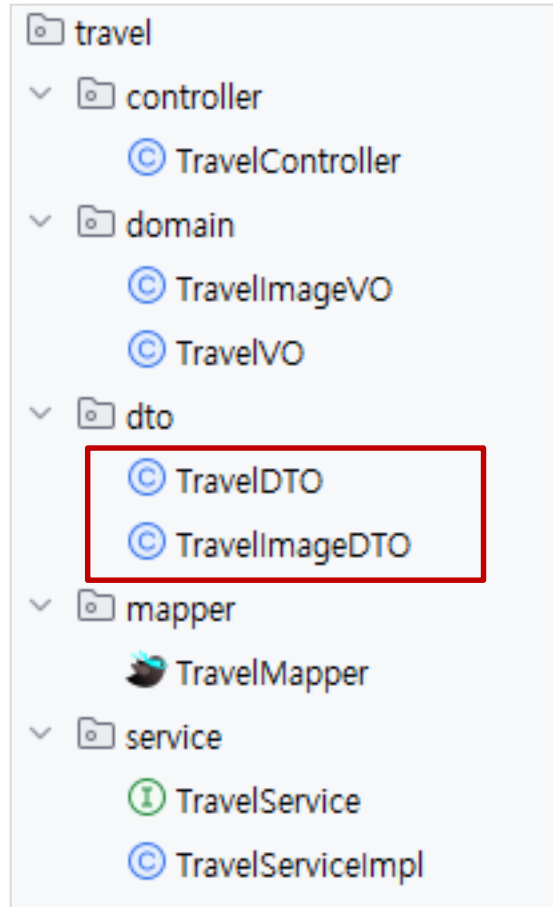
## TravelMapper.xml

```
<select id="getImages" resultType="org.scoula.travel.domain.TravelImageVO">
    SELECT *
    FROM tbl_travel_image
    WHERE travel_no = #{travelNo}
</select>

<select id="getImage" resultType="org.scoula.travel.domain.TravelImageVO">
    SELECT *
    FROM tbl_travel_image
    WHERE no = #{no}
</select>
</mapper>
```

## ✓ 다음 DTO 클래스를 정의하세요.

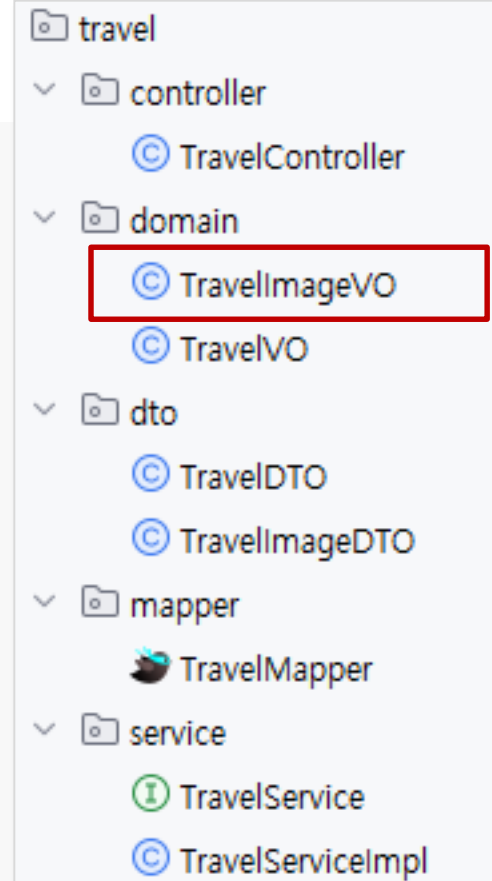
- TravellImageDTO.java
- TravelDTO.java



## TravellImageDTO.java

```
@Data
@NoArgsConstructor
@AllArgsConstructor
@Builder
public class TravelImageDTO {
    private static final String BASE = "c:/upload/travel/";
    private long no;
    private String filename;
    private long travelNo;

    public static TravelImageDTO of(TravelImageVO vo) {
        return TravelImageDTO.builder()
            .no(vo.getNo())
            .filename(vo.getFilename())
            .travelNo(vo.getTravelNo())
            .build();
    }
}
```



## TravellImageDTO.java

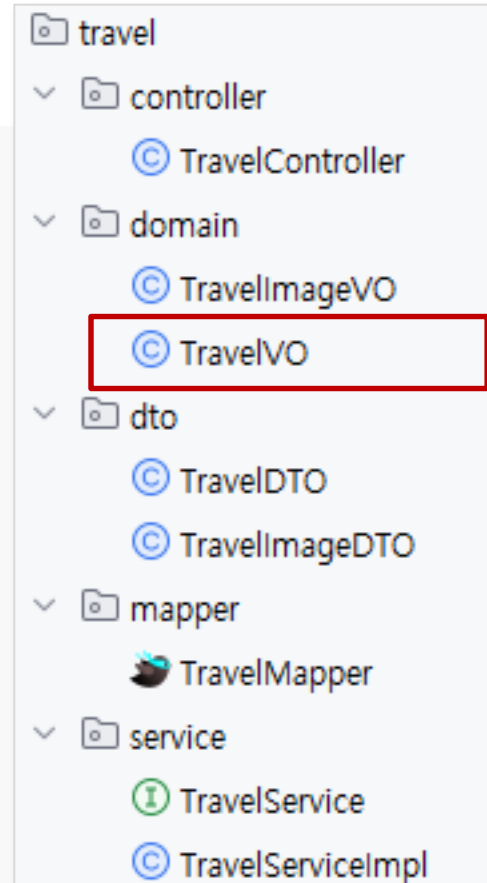
```
@JsonIgnore // JSON 변환에서 제외
public String getPath() {
    return BASE + filename;
}

// 프론트엔드에서 사용할 url 프로퍼티
public String getUrl() {
    return "/api/travel/image/" + no;
}
}
```

## TravelDTO.java

```
@Data
@NoArgsConstructor
@AllArgsConstructor
@Builder
public class TravelDTO {
    List<MultipartFile> imageFiles;

    private long no;
    private String district;
    private String title;
    private String description;
    private String address;
    private String phone;
    private List<TravelImageDTO> images;
```

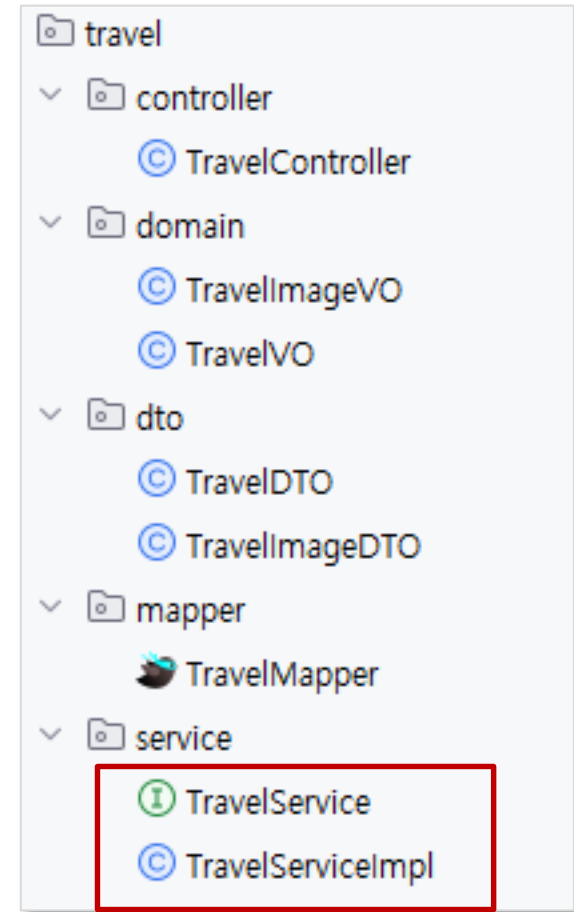




## TravelDTO.java

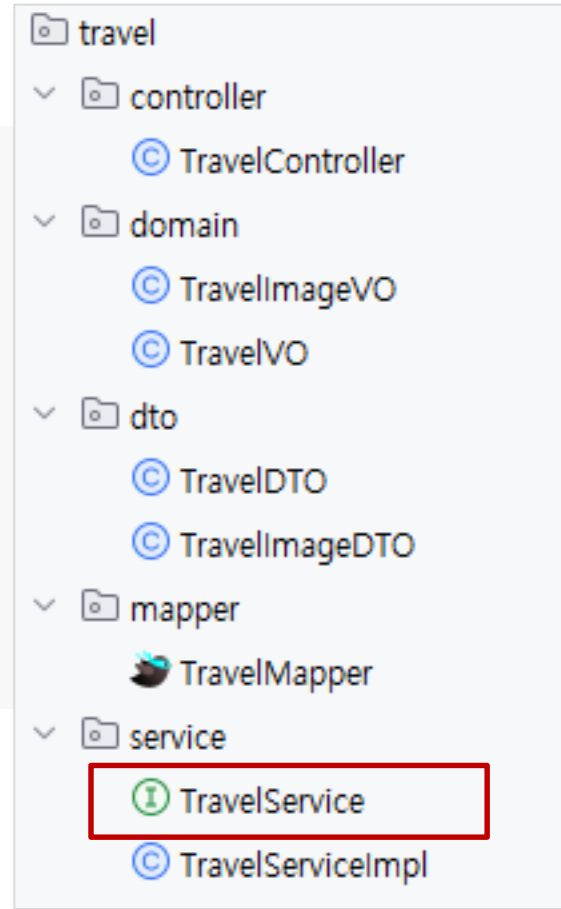
```
public static TravelDTO of(TravelVO vo) {  
    TravelDTO travel = TravelDTO.builder()  
        .no(vo.getNo())  
        .district(vo.getDistrict())  
        .title(vo.getTitle())  
        .description(vo.getDescription())  
        .address(vo.getAddress())  
        .phone(vo.getPhone())  
        .build();  
  
    if (vo.getImages() != null) {  
        travel.setImages(vo.getImages().stream().map(TravelImageDTO::of).toList());  
    }  
  
    return travel;  
}
```

- ✓ 다음 메서드를 TravelService 인터페이스와 구현체를 정의하세요.
  - Page<TravelDTO> getPage(PageRequest pageRequest);
  - List<TravelDTO> getList();
  - TravelDTO get(Long no);
  - TravelImageDTO getImage(Long no);
  - boolean deleteImage(Long no);



## TravelService.java

```
public interface TravelService {  
    Page<TravelDTO> getPage(PageRequest pageRequest);  
  
    List<TravelDTO> getList();  
  
    TravelDTO get(Long no);  
  
    TravelImageDTO getImage(Long no);  
  
    boolean deleteImage(Long no);  
}
```



## TravelService.java

```
@Log4j2
@Service
@RequiredArgsConstructor
public class TravelServiceImpl implements TravelService {
    final TravelMapper mapper;

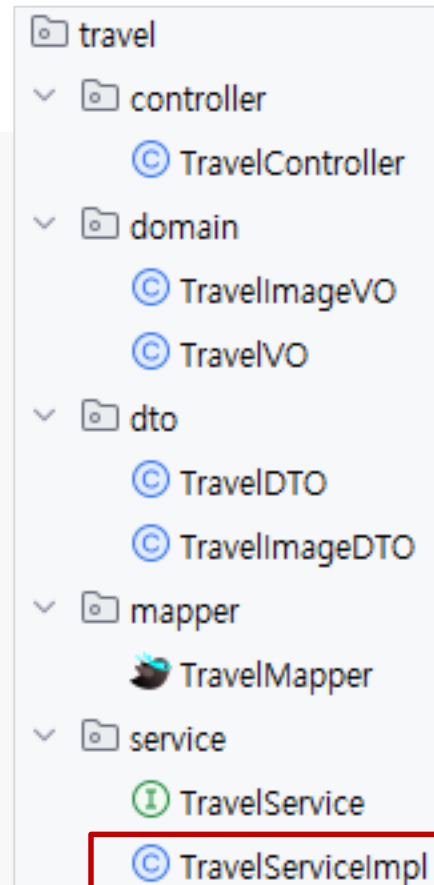
    @Override
    public Page<TravelDTO> getPage(PageRequest pageRequest) {

        List<TravelDTO> travels = mapper.getPage(pageRequest)
            .stream().map(TravelDTO::of).toList();

        travels.forEach(travel -> {
            List<TravelImageDTO> images = mapper.getImages(
                travel.getNo()).stream().map(TravelImageDTO::of).toList();
            travel.setImages(images);
        });

        int totalCount = mapper.getTotalCount();

        return Page.of(pageRequest, totalCount, travels);
    }
}
```



## TravelService.java

```
@Override
public List<TravelDTO> getList() {
    List<TravelVO> travels = mapper.getTravels();
    return travels.stream().map(TravelDTO::of).toList();
}

@Override
public TravelDTO get(Long no) {
    TravelVO travel = mapper.getTravel(no);
    if (travel == null) {
        throw new NoSuchElementException();
    }
    return TravelDTO.of(travel);
}

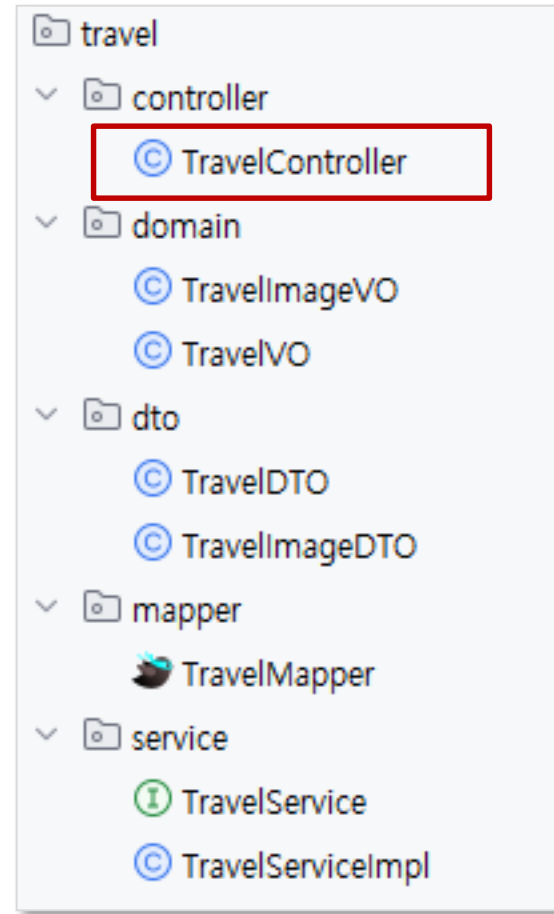
@Override
public TravelImageDTO getImage(Long no) {
    TravelImageVO image = mapper.getImage(no);
    return TravelImageDTO.of(image);
}
}
```

## TravelService.java

```
@Override  
public boolean deleteImage(Long no) {  
    return false;  
}
```

✓ 다음 URL을 처리하는 TravelController를 정의하세요.

- /api/travel
- /api/travel/{no}
- /api/travel/image/{no}

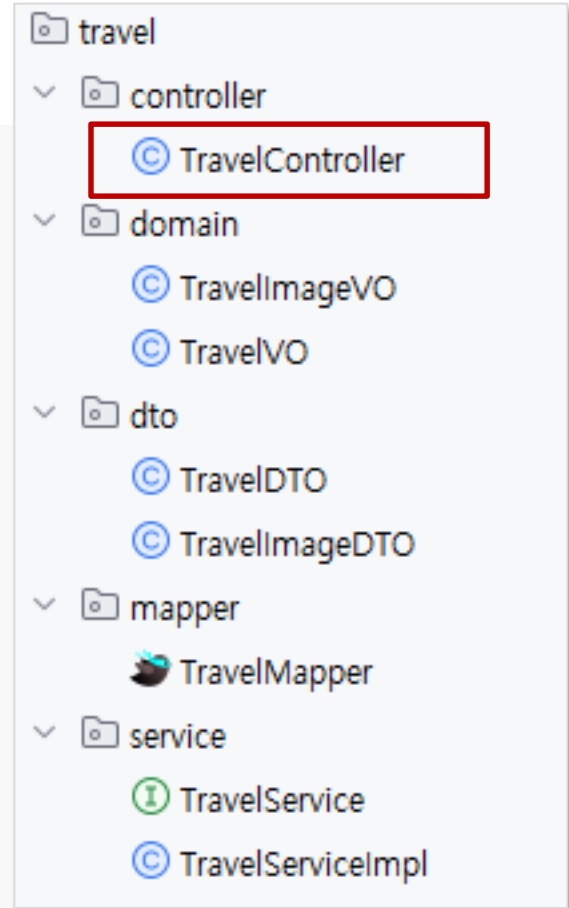


## TravelController.java

```
@RestController
@RequiredArgsConstructor
@Log4j2
@RequestMapping("/api/travel")
public class TravelController {
    final TravelService service;

    @GetMapping("")
    public ResponseEntity<Page> getTravels(PageRequest pageRequest) {
        return ResponseEntity.ok(service.getPage(pageRequest));
    }

    @GetMapping("/{no}")
    public ResponseEntity<TravelDTO> getTravels(@PathVariable("no") Long no) {
        return ResponseEntity.ok(service.get(no));
    }
}
```





## TravelController.java

```
@GetMapping("/image/{no}")
public void viewImage(@PathVariable Long no, HttpServletResponse response) {
    TravelImageDTO image = service.getImage(no);
    File file = new File(image.getPath());
    UploadFiles.downloadImage(response, file);
}

}
```

- ✔ TravelController에 Swagger를 이용하여 문서화 하세요.
  - 정답 제공 없음