

엔티티 설계

Spring Thyme Seed Starter Manager

- <https://www.thymeleaf.org/doc/tutorials/3.0/thymeleafspring.html#integrating-thymeleaf-with-spring>



Seed Starter List

Date planted	Covered	Type	Features	Rows		
03/20/2011	yes	Wood	Seed starter-specific substrate, PH Corrector used	1	Thymus vulgaris	10
				2	Thymus pseudolaginosus	15
				3	Thymus x citriodorus	20
03/25/2011	no	Plastic	Fertilizer used	1	Thymus herba-barona	5
				2	Thymus serpyllum	10

Add new Seed Starter

Seed Starter data

Date planted (MM/dd/yyyy)

Covered☐

Type

Features

☐ Seed starter-specific substrate

☐ Fertilizer used

☐ PH Corrector used

Rows

Row	Variety	Seeds per cell	
1	<input type="text" value="Thymus vulgaris"/>	<input type="text"/>	<div>Add rowRemove row</div>

ADD SEED STARTER

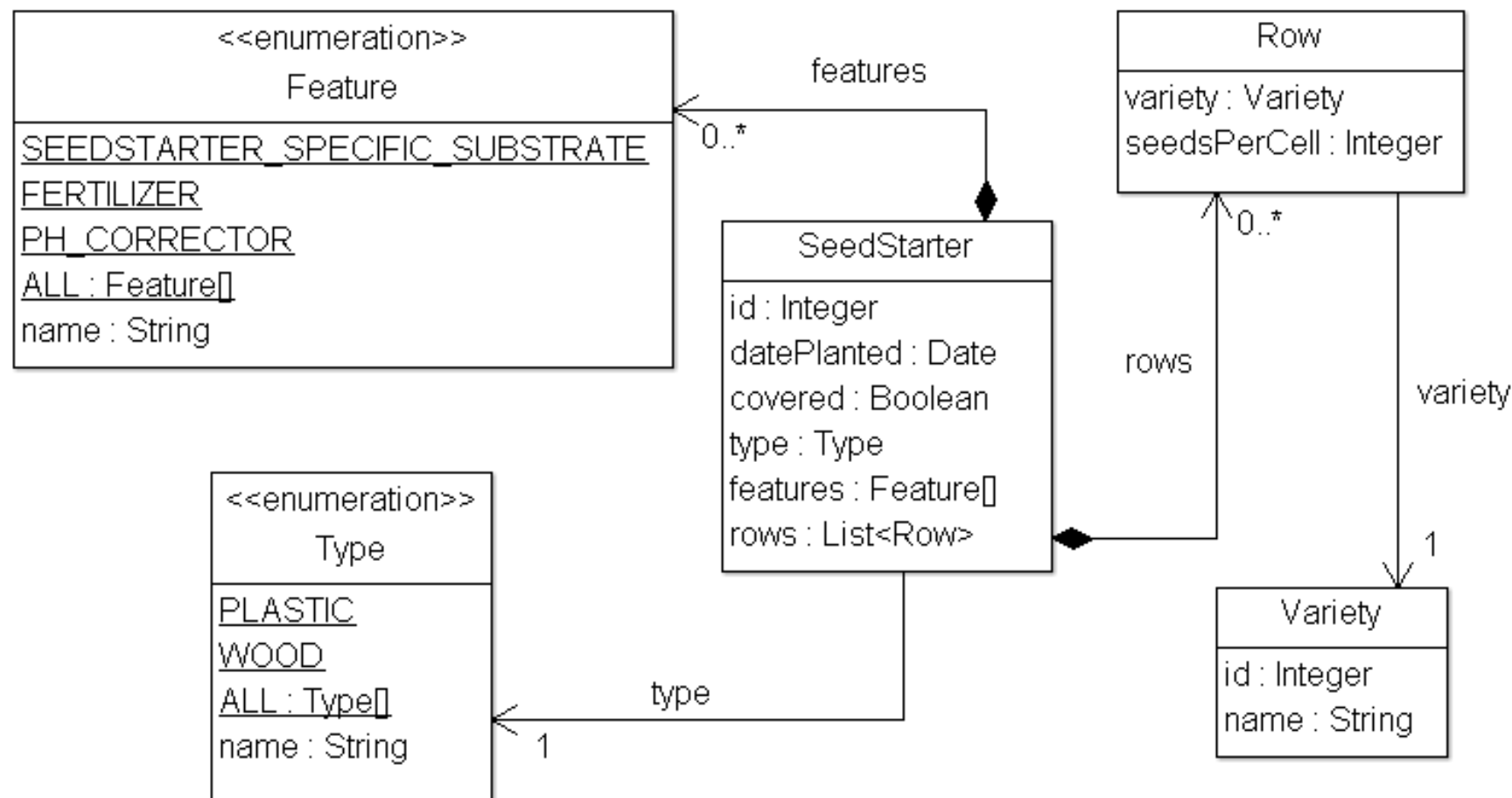
Spring Thyme Seed Starter Manager

- <https://www.thymeleaf.org/doc/tutorials/3.0/thymeleafspring.html#integrating-thymeleaf-with-spring>



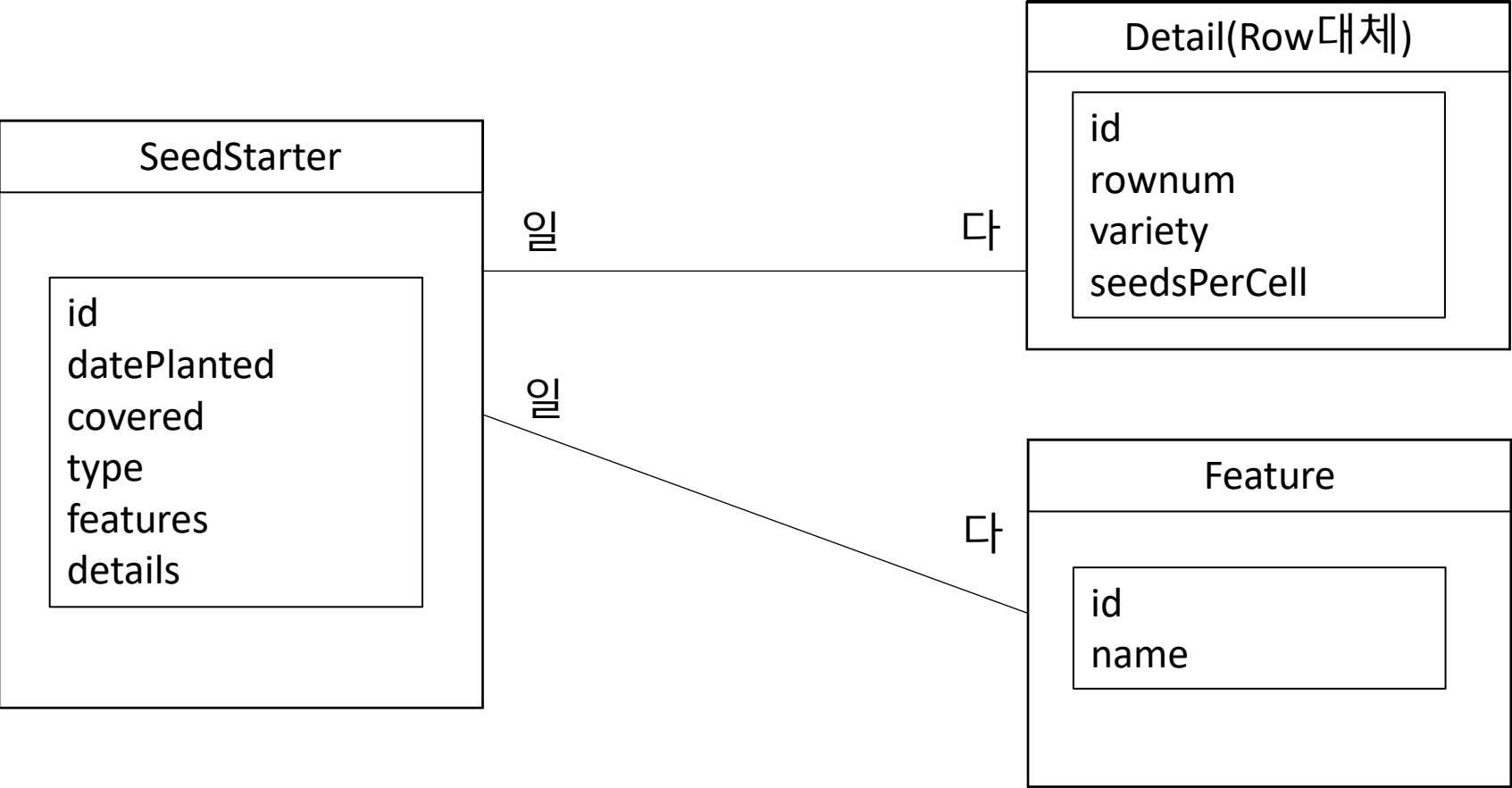
Spring Thyme Seed Starter Manager

- ERD



Spring Thyme Seed Starter Manager

- 수정된 ERD



Spring Thyme Seed Starter Manager

- 프로젝트 준비

- <https://start.spring.io/>

Project

☒ Maven Project ☐ Gradle Project

Language

☒ Java ☐ Kotlin ☐ Groovy

Spring Boot

☐ 2.7.0 (SNAPSHOT) ☐ 2.6.3 (SNAPSHOT) ☒ 2.6.2 ☐ 2.5.9 (SNAPSHOT)
☐ 2.5.8

Project Metadata

Group

Artifact

Name

Description

Package name

Packaging ☒ Jar ☐ War

Java ☐ 17 ☒ 11 ☐ 8

Dependencies

ADD DEPENDENCIES... CTRL + B

Spring Web WEB

Build web, including RESTful, applications using Spring MVC. Uses Apache Tomcat as the default embedded container.

Thymeleaf TEMPLATE ENGINES

A modern server-side Java template engine for both web and standalone environments. Allows HTML to be correctly displayed in browsers and as static prototypes.

Spring Data JPA SQL

Persist data in SQL stores with Java Persistence API using Spring Data and Hibernate.

MySQL Driver SQL

MySQL JDBC and R2DBC driver.

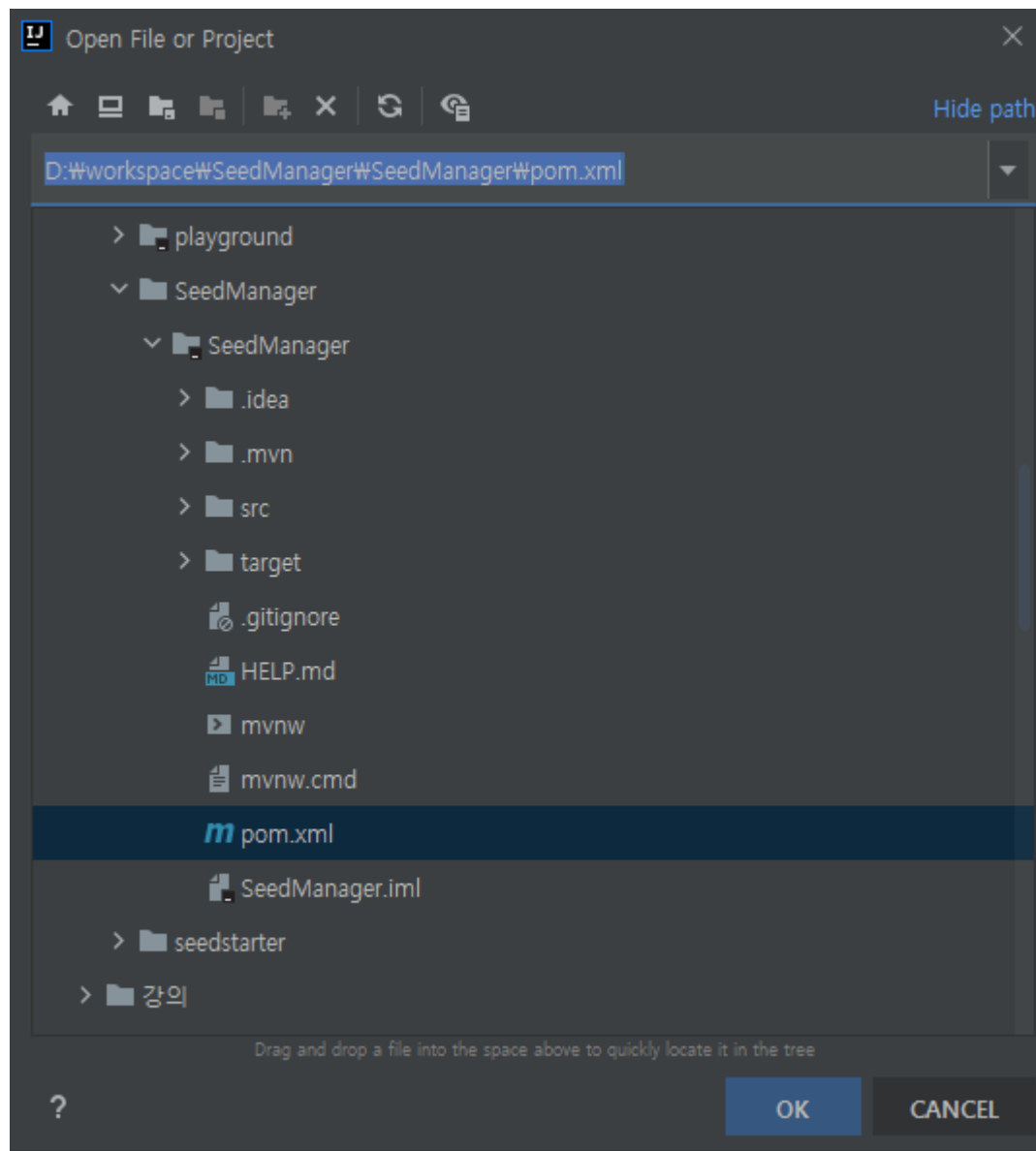
Lombok DEVELOPER TOOLS

Java annotation library which helps to reduce boilerplate code.

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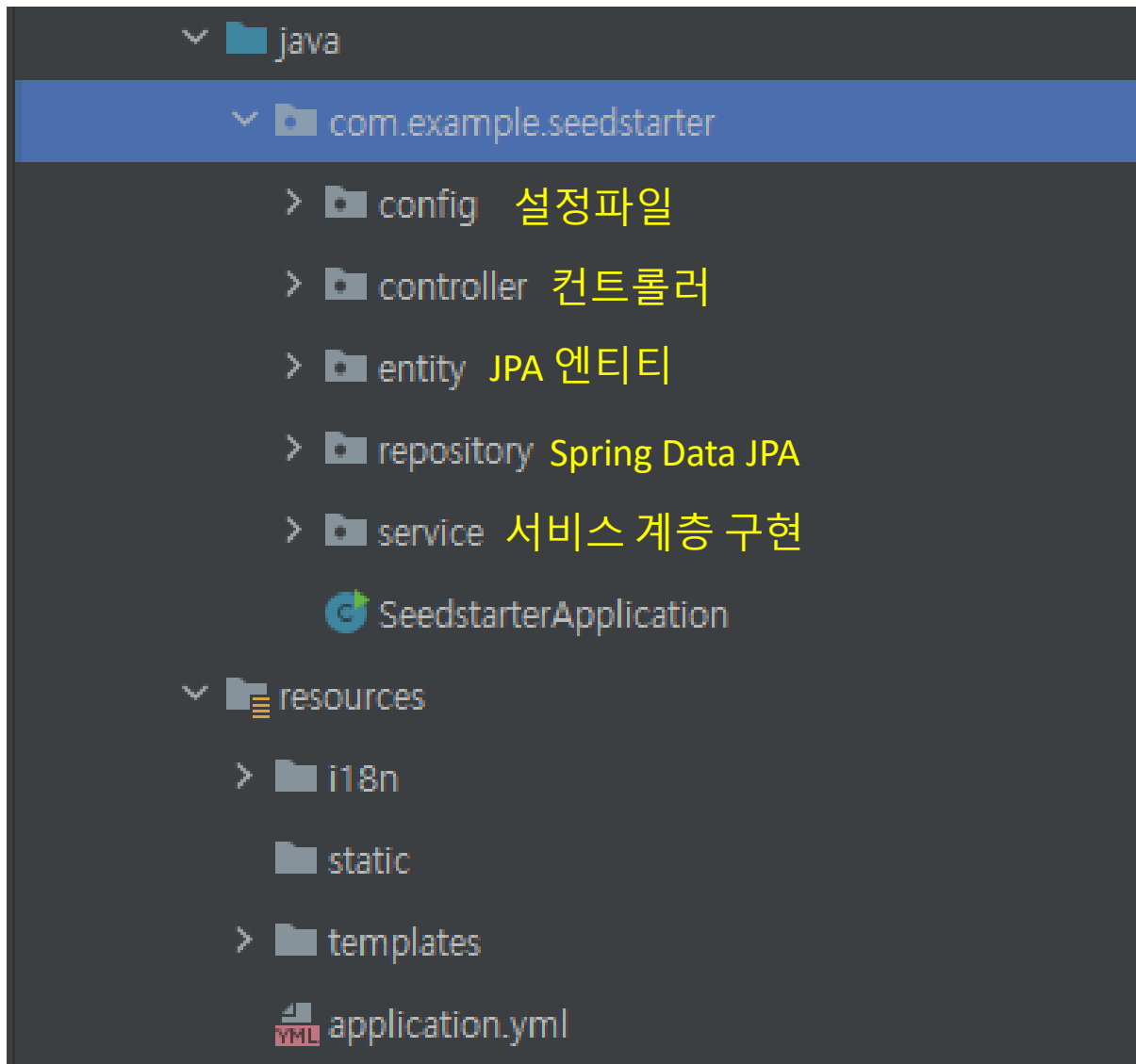
• 프로젝트 준비

- 인텔리제이에서 pom.xml 선택
- 프로젝트로 열기



엔티티 설계

• 프로젝트 구조 만들기



repository와 entity를 같은 폴더에 두는 것도 고려해 볼만함

엔티티 설계

엔티티 설계

- SeedStarter 엔티티

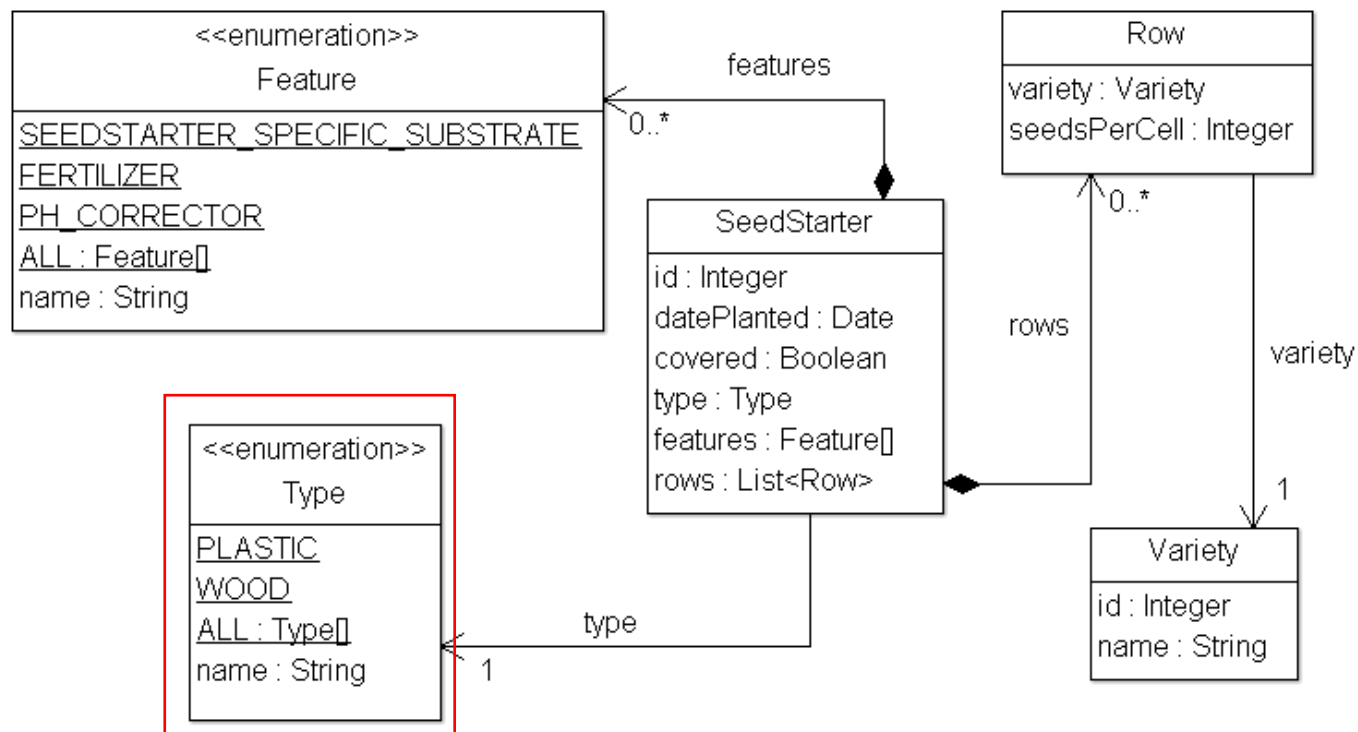
```
@Getter
@Setter
@Entity
public class SeedStarter {
    @Id @GeneratedValue(strategy = GenerationType.IDENTITY)
    @Column(name = "SEED_STARTER_ID")
    private Long id;

    private LocalDateTime datePlanted;
    private boolean covered;
    @Enumerated(EnumType.STRING)
    private Type type;
}
```

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- Type(Enum)

```
public enum Type {  
    PLASTIC, WOOD  
}
```



엔티티 설계

- SeedStarter에 Feature 리스트 추가

```
public class SeedStarter {  
    @Id @GeneratedValue(strategy = GenerationType.IDENTITY)  
    @Column(name = "SEED_STARTER_ID")  
    private Long id;  
  
    private LocalDateTime datePlanted;  
    private boolean covered;  
    @Enumerated(EnumType.STRING)  
    private Type type;  
  
    @OneToMany(mappedBy = "seedStarter", cascade = CascadeType.PERSIST, orphanRemoval = true)  
    private List<Feature> features = new ArrayList<>();  
}
```

엔티티 설계

- Feature 엔티티

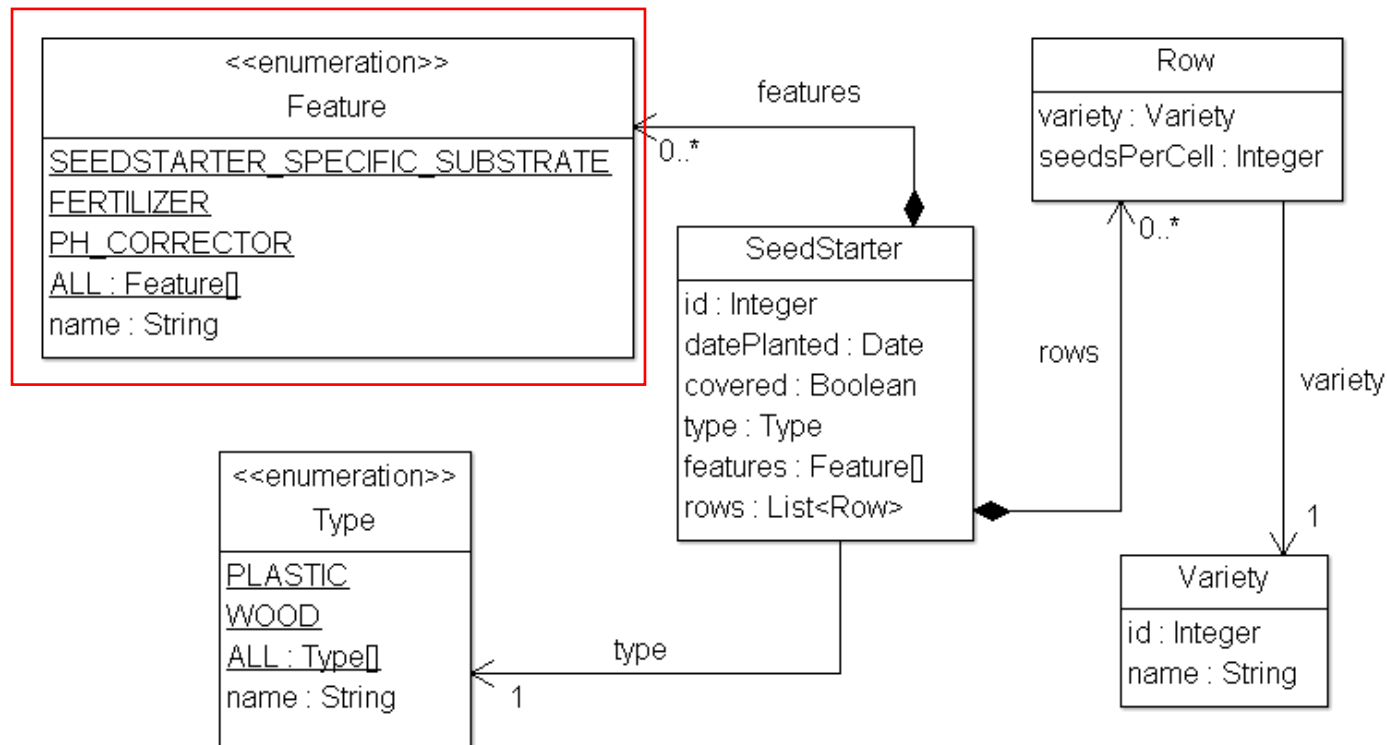
```
@Getter
@Setter
@Entity
public class Feature {
    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    @Column(name = "FEATURE_ID")
    private Long id;
    @Enumerated(EnumType.STRING)
    private FeatureType name;

    @ManyToOne(fetch = FetchType.LAZY)
    @JoinColumn(name = "SEED_STARTER_ID")
    private SeedStarter seedStarter = new SeedStarter();
}
```

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- FeatureType(enum)

```
public enum FeatureType {  
    SUBSTRATE, FERTILIZER, PH_CORRECTOR  
}
```



엔티티 설계

- SeedStarter에 Detail 리스트 추가

```
@OneToMany(mappedBy = "seedStarter", cascade = CascadeType.PERSIST, orphanRemoval = true)
private List<Detail> details = new ArrayList<>();
```

- Detail 엔티티 설계

```
@Getter
@Setter
@Entity
public class Detail {
    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    @Column(name = "DETAIL_ID")
    private Long id;
    private int rowNum;
    private int seedPerCell;
    private String variety;
    @ManyToOne(fetch = FetchType.LAZY)
    @JoinColumn(name = "SEED_STARTER_ID")
    private SeedStarter seedStarter;
```