
Project
Lombok
Spice up your java
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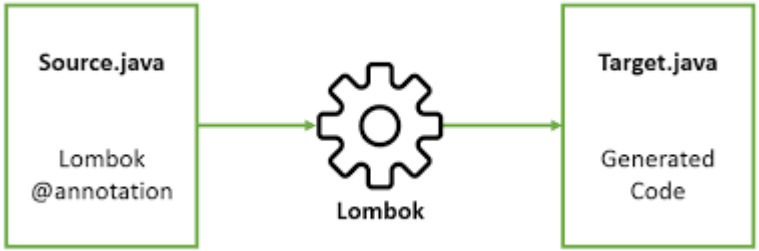
Source.java
Lombok
@annotation
Lombok
Target.java
Generated
Code

```java
@Accessors(fluent=true) @Getter
//@NonNull @Setter
//@NoArgsConstructor
//@AllArgsConstructor
//@RequiredArgsConstructor
//@ToString(exclude = {"lastName"})
//@EqualsAndHashCode(of = {"id"})
@Data
//@Value
@Builder
public class EmployeeLombok {
    private @Setter(AccessLevel.PROTECTED) String id;
    private String firstName;
    private String lastName;
    @NonNull
    private String email;

}
```

Introduction

Lombok is used to reduce boilerplate code for model/data objects, e.g., it can generate getters and setters for those object automatically by using Lombok annotations. The easiest way is to use the @Data annotation.

"Boilerplate" is a term used to describe code that is repeated in many parts of an application with little alteration

Lombok provides a lot of annotations for remove this Boilerplate code.

Like @Data, @Getter, @Setter etc.

Installation

Download install and integrating Lombok jar to
IDE

By integrating into the IDE, Project Lombok is able to inject code that is
immediately available to the developer. For example, simply adding the @Data annotation to a data class, as below, results in a number of new
methods in the IDE.

Installation

Create a maven project and install the
dependency.

A jar file will still need to be included in the classpath of any projects that will
use Project Lombok annotations.

```
<dependency>
 <groupId>org.projectlombok</
 groupId>
 <artifactId>lombok</artifactId>
 <version>1.16.16</version>
 <scope>provided</scope>
 </dependency>
```

Annotations

@Getter and @Setter

1. generate a getter and setter for a field, respectively.

2. Correctly follow convention for boolean properties.

Annotations

@Getter and @Setter

```
@Getter @Setter
private boolean employed = true;
```

```
private boolean employed = true;
public boolean isEmployed() {
   return employed;
}
public void setEmployed(final boolean
employed) {
   this.employed = employed;
   }
```

Annotations

@NonNull

1. Provide fast-fail null check on the corresponding member.
2. NullPointerException will thrown if Lombok is generating setter and constructor method for your class.

Annotations

@NonNull

```
@Getter @Setter @NonNull
private List<Person>
members;

@NonNull
private List<Person>
members;
public Family(@NonNull final List<Person>
members) {
  if (members == null) throw new
  java.lang.NullPointerException("members");
}
@NonNull
public List<Person> getMembers() {  return
members;}

public void setMembers(@NonNull final List<Person> members) {
  if (members == null) throw new
  java.lang.NullPointerException("members");
  this.members = members;
}
```

Annotations

@ToString

1. Implementation of the toString method.
2. By default, any non-static fields will be included
3. Use exclude parameter to exclude any field
4. Set callSuper parameter to true to include output of super class.

```
@ToString(callSuper=true,exclude="someExcludedFie
ld")
```

Annotations

@EqualsAndHashCode

1. Generate both equals and hashCode methods
2. Follow equals and hashCode contract.
3. Set callSuper parameter to true to include output of super class.
4. Use exclude parameter to exclude any field

```
@EqualsAndHashCode(callSuper=true,exclude={"address","city","state",
"zip"})
```

Annotations

@Data

1. Most frequently used annotation.
2. Combines the functionality of @ToString, @EqualsAndHashCode, @Getter and @Setter
3. Generate a constructor.
4. provides everything needed for a Plain Old Java Object (POJO).
5. If a superclass has no default constructor any subclasses cannot use the @Data annotation

Annotations

Some more useful annotations.

1. @NoArgsConstructor, @RequiredArgsConstructor and @AllArgsConstructor
2. @Cleanup @Cleanup InputStream in = **new** FileInputStream(args[0]);
3. @Builder

Benefits

1. Greatly reduce the number of lines of boilerplate code.
2. Reduced maintenance overhead.
3. Fewer bugs and more readable classes.
4. Fast developemt