


91.Introduction to Lombok Library

Lombok is a Java Library which helps the developers by providing getters, setters, constructor and toString and few Other for POJO Class which user provides.

During Compilation process if an Lombok annotation is specified it will add the getters, setters, constructor and toString and few Other and generate the byte code.

REDUCING BOILERPLATE CODE WITH LOMBOK



- Java expects lot of boilerplate code inside POJO classes like getters and setters.
- Lombok, which is a Java library provides you with several annotations aimed at avoiding writing Java code known to be repetitive and/or boilerplate.
- It can be added into any of the Java project by adding the below maven dependency,

```
<dependency>
  <groupId>org.projectlombok</groupId>
  <artifactId>lombok</artifactId>
</dependency>
```

Project Lombok works by plugging into your build process. Then, it will auto-generate the Java bytecode into your .class files required to implement the desired behavior, based on the annotations you used.

Most commonly used Lombok annotations,

- @Getter, @Setter
- @NoArgsConstructor
- @RequiredArgsConstructor
- @AllArgsConstructor
- @ToString, @EqualsAndHashCode
- @Data

@Data is a shortcut annotation that combines the features of below annotations together,

- @ToString
- @EqualsAndHashCode
- @Getter, @Setter
- @RequiredArgsConstructor

@Slf4j Annotation

@Slf4j, so this annotation will generate a log object which is very equivalent to this line of code.

```
private Logger log=LoggerFactory.getLogger(ContactController.class);
```

So we does not have create this Log Object.

Generally for Usage of this log we will be using Copy Paste .So there might be chance we missed updating the class from which it needs to get the log .In order to avoid this we can @Slf4j annotation as it generates the log Object for the class.

```
3
4 import lombok.extern.slf4j.Slf4j;
5
6 import org.slf4j.Logger;
7 import org.slf4j.LoggerFactory;
8 import org.springframework.stereotype.Service;
9
10 @Slf4j
11 @Service
12 public class ContactService {
13
14     //private Logger log=LoggerFactory.getLogger(ContactService.class);
15     public boolean saveMessage(Contact contact) {
16
17         boolean isSaved=true;
18         Log.info(contact.toString());
19         return isSaved;
20     }
21 }
```

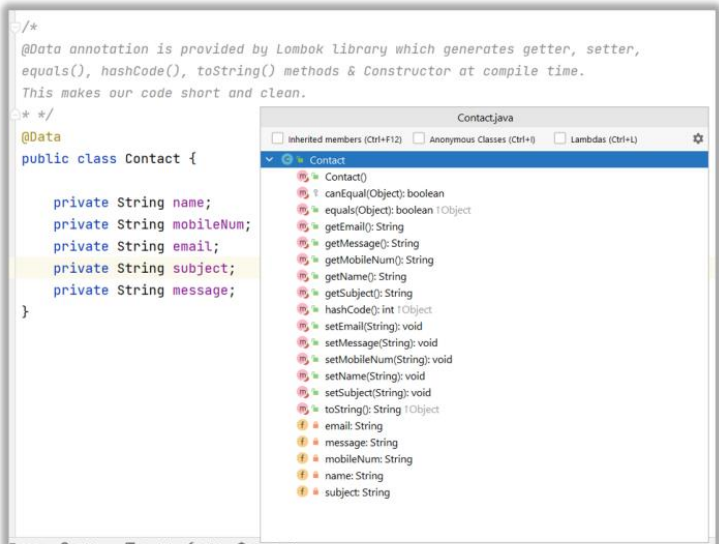
@Data Annotation

REDUCING BOILERPLATE CODE WITH LOMBOK

easy bytes

```
/**
 * @Data annotation is provided by Lombok Library which generates getter, setter,
 * equals(), hashCode(), toString() methods & Constructor at compile time.
 * This makes our code short and clean.
 */
@Data
public class Contact {

    private String name;
    private String mobileNum;
    private String email;
    private String subject;
    private String message;
}
```



A sample outline of a Java POJO class with @Data annotation used. The source code will not have boilerplate code but the compiled byte code will have.

Boiler Plate Code :

Boilerplate code is reusable code that saves you time by providing a basic structure for your projects.

Which of the following is a Java library that provides several annotations aimed at avoiding writing Java code known to be repetitive and/or boilerplate ?

JDBC

Apache Log4j

Lombok

Ans : Lombok

