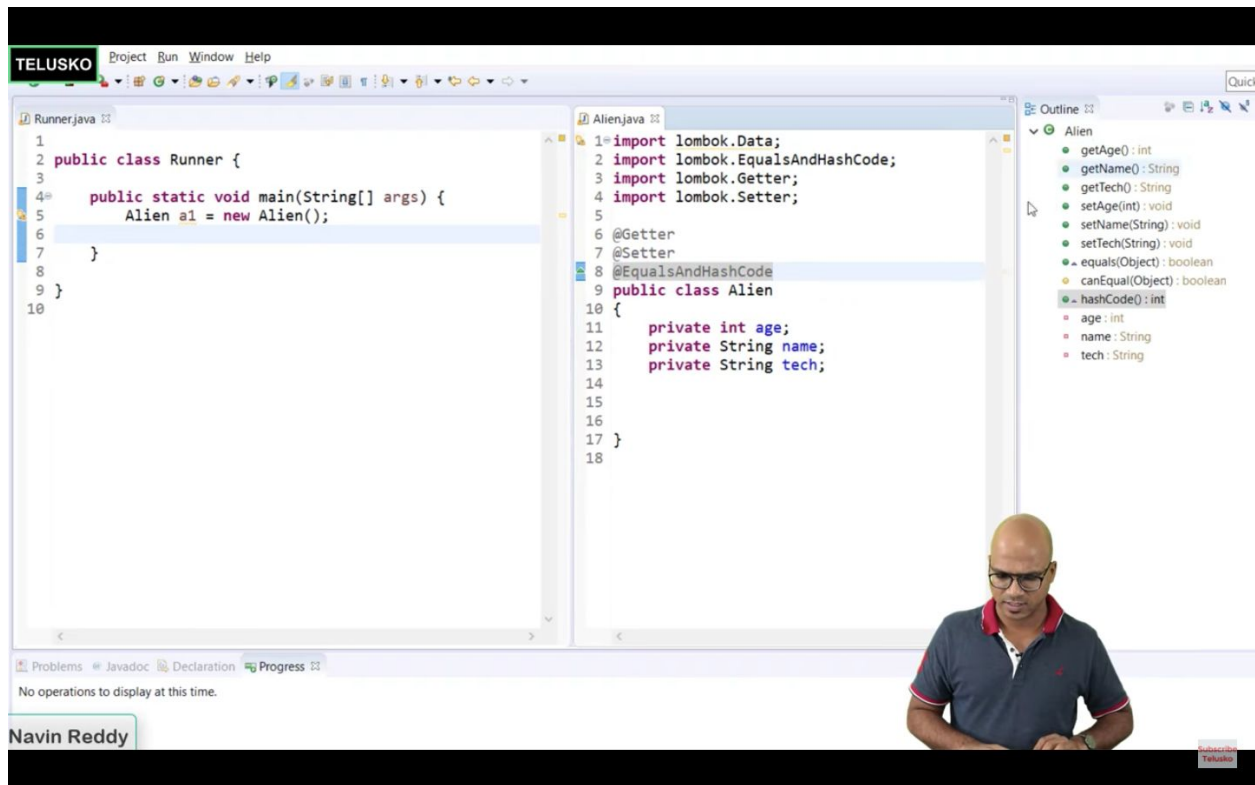


A class should have getter-setters for the instance variables, equals & hashCode method implementation, all field constructors and an implementation of toString method. This class so far has no business logic and even without it is 80+ lines of code. This is insane.

## Project Lombok

Project Lombok is a java library that automatically plugs into your editor and build tools and helps reduce the boiler plate code.

As can be seen in below img getters and setters are not written in code but they are available for use. It reduces useless lines of code error margin is efficient.



TELUSKO Project Run Window Help

Runner.java

```
1 public class Runner {
2
3
4     public static void main(String[] args) {
5         Alien a1 = new Alien();
6     }
7
8
9 }
10
```

\*Alien.java

```
1 import lombok.Data;
2 import lombok.EqualsAndHashCode;
3 import lombok.Getter;
4 import lombok.NoArgsConstructor;
5 import lombok.RequiredArgsConstructor;
6 import lombok.Setter;
7
8 @NoArg
9 public class Alien
10 {
11     private @Getter int age;
12     private String name;
13     private String tech;
14
15
16
17 }
18
```


Outline

- Alien
  - Alien()
  - age : int
  - getAge() : int
  - name : String
  - tech : String

Problems Javadoc Declaration Progress

No operations to display at this time.

Navin Reddy



Project Lombok | GoodBye Boilerplate Code

TELUSKO Refactor Navigate Search Project Run Window Help

Package Explorer

- LBDemo
  - JRE System Library [Jav]
  - src
    - (default package)
      - Alien.java
      - Runner.java
    - Referenced Libraries
      - lombok.jar - C:\Use

Runner.java

```
1 public class Runner {
2
3
4     public static void main(String[] args) {
5         Alien a1 = new Alien();
6     }
7
8
9 }
10
```

\*Alien.java

```
1 import lombok.Data;
2
3 public @Data class Alien
4 {
5     private int age;
6     private String name;
7     private String tech;
8
9
10
11 }
12
```


Outline

- Alien
  - getAge() : int
  - getName() : String
  - getTech() : String
  - setAge(int) : void
  - setName(String) : void
  - setTech(String) : void
  - equals(Object) : boolean
  - canEqual(Object) : boolean
  - hashCode() : int
  - toString() : String
  - Alien()
  - age : int
  - name : String
  - tech : String

Problems Javadoc Declaration Progress

No operations to display at this time.

Navin Reddy



9:33 / 12:40



## Project Lombok Features

- Features as of **Version 1.18.8** - Released on May 7th, 2019
  - Check official documentation for new features
- **val** - local variables declared final
- **var** - mutable local variables
- **@NonNull** - Null check, will throw NPE if parameter is null
- **@Cleanup** - Will call close() on resource in finally block





## Project Lombok Features

- **@Getter** - Creates getter methods for all properties
- **@Setter** - Creates setter for all non-final properties
- **@ToString**
  - Generates String of classname, and each field separated by commas
  - Optional parameter to include field names
  - Optional parameter to include call to the super toString method



Press **esc** to exit full screen



## Project Lombok Features

- **@NoArgsConstructor**
  - Generates no args constructor
  - Will cause compiler error if there are final fields
  - Can optionally force, which will initialize final fields with 0 / false / null
- **@RequiredArgsConstructor**
  - Generates a constructor for all fields that are final or marked @NonNull
  - Constructor will throw a NullPointerException if any @NonNull fields are null





## Project Lombok Features

- **@AllArgsConstructor**

- Generates a constructor for all properties of class
- Any **@NotNull** properties will have null checks

- **@Data**

- Generates typical boilerplate code for POJOs
- Combines - **@Getter**, **@Setter**, **@ToString**, **@EqualsAndHashCode**, **@RequiredArgsConstructor**
- No constructor is generated if constructors have been explicitly declared



Press **esc** to exit full screen



## Project Lombok Features

- **@Value**

- The immutable variant of **@Data**
- All fields are made private and final by default

- **@NonNull**

- Set on parameter of method or constructor and a `NullPointerException` will be thrown if parameter is null





## Project Lombok Features

- **@Builder**

- Implements the 'builder' pattern for object creation
- `Person.builder().name("Adam Savage").city("San Francisco").job("Mythbusters").job("Unchained Reaction").build();`

- **@SneakyThrows**

- Throw checked exceptions without declaring in calling method's throws clause

- **@Synchronized**

- A safer implementation of Java's synchronized



## Project Lombok Features

- **@Getter(lazy = true)** - for expensive getters

- Will calculate value first time and cache
- Additional gets will read from cache

- **@Log** - Creates a Java util logger - *Java util loggers are awful*

- **@Slf4j** - Creates a SLF4J logger.

- Recommended - SLF4J is a generic logging facade
- Spring Boot's default logger is LogBack

