Western Norway
University of
Applied Sciences

# Lab: Spring Framework (Dependency Injection)

*Created by Lasse Jenssen*

Home

# Task 1: Spring Initializer and Spring Boot

- Use Spring Initializer (https:start.spring.io)
- Create a new Maven project:
  - Artifact/Name: lab-web03-spring-solution
  - GroupId: no.hvl.dat152
  - Package: no.hvl.dat152
  - Packaging: jar
  - Java Version: Up to you, but recommend Java 1.8 or 11
  - Dependencies: None
- Unpack the zip-file generated by Spring Initializer, and open project in Eclipse.
- Task 2 on continues on next page.

# Task 2: Model Classes

- Create a model class "Actor" (no.hvl.dat152.model.Actor) with the following attributes:
  - name (String)
  - dateOfBirth (java.util.Date ... or String, if you don't get Date to work)
  - Create the needed constructors to make the rest of the exercise work.
  - Create a toString() method which outputs:

    *"Actor: { Name: " + name + ", Date of birth: " + dateOfBirth + "}"*
- Create a model class "Movie" (no.hvl.dat152.model.Movie) with the following attributes:
  - name (String)
  - year (String)
  - actors (List< Actor>)
  - Create the needed constructors to make the rest of the exercise work.
  - Create a toString() method which outputs:

    *""Movie: { name: " + name + ", year: " + year + "}"*

    and loops on the list of actors and output toString() for every actor.
- Task continues on next page.

# Task 3: The Application class

- Make your main Class look like the code shown on next slide.
- You should only change ...
  - Substitude the "< your class name>" with you classname in line 4 and 10.
  - Create a "beans.xml" file in the src/main/resource folder,
    and instansiate the beans needed to generate the output shown on the last page/slide (if you don't manage to inject a list, then inject only one actor in the Movie).
  - In line 18, get the Movie bean by using the "context" variable (which is autowired).

# Task 3: The Application class

```
@SpringBootApplication
@Configuration
@ImportResource("classpath:beans.xml")
public class < your class name> implements CommandLineRunner {

   @Autowired
   ApplicationContext context;

   public static void main(String[] args) {
      SpringApplication app = new SpringApplication(< your class name>.class);

      app.setBannerMode(Banner.Mode.OFF);
      app.run(args);
   }

   @Override
   public void run(String... args) throws Exception {
      Movie movie = < ... get bean ... >

      System.out.println(movie.toString());
   }
}
```

# Expected Output when running application

*You can make up your own Movie and Actors*

```
1 Movie: { name: Star Wars: Episode I - The Phantom Menace, year: 1999}
2 Actor: { Name: Liam Neeson, Date of birth: Sat Jun 07 00:00:00 CET 1952}
3 Actor: { Name: Ewan McGregor, Date of birth: Wed Mar 31 00:00:00 CET 1971}
4 Actor: { Name: Natalie Portman, Date of birth: Tue Jun 09 00:00:00 CEST 1981}
```