



Spring Boot

In this lesson, we'll be starting the discussion about the Spring Boot framework.

We'll cover the following



- The Spring framework and the Java community
 - Java code
- Compiling the Spring Boot project



The Spring framework and the Java community

The Spring Framework has long been part of the Java community. It has a broad set of features covering most of the technical requirements of typical Java applications. Spring Boot (<https://projects.spring.io/spring-boot/>) facilitates the use of Spring.

A minimal Spring Boot application can be found in the directory simplest-

spring-boot of the project <https://github.com/ewolff/spring-boot-demos>
(<https://github.com/ewolff/spring-boot-demos>).



Java code

The Java code from the project shows how Spring Boot can be used.



JavaCode

```
/*  
 * The Java code from the project shows how Spring Boot can be used.  
 */  
  
@RestController  
@SpringBootApplication  
public class ControllerAndMain {  
  
    @RequestMapping("/") public String hello() {  
        return "hello\n";  
    }  
  
    public static void main(String[] args) {  
        SpringApplication.run(ControllerAndMain.class, args);  
    }  
}
```

Line 5 and 7:

- The annotation `@RestController` means that the class `ControllerAndMain` should process HTTP requests.

Line 6:

- `@SpringBootApplication` triggers the automatic configuration of the environment.

The application thereby starts an environment with a web server and with the parts of the Spring framework that are fitting for a web application.

Line 9:



- The method `hello()`, is annotated with `@RequestMapping`. Therefore it is called upon an HTTP request to the URL `"/`. The method's return value is returned in the HTTP response.


Lines 13 and 14:

- Finally, the `main()` method starts the application with the help of the class `SpringApplication`.
- The application can simply be started as a **Java application** *even though* it processes **HTTP requests**.

Note: A **web server** is required for handling HTTP in the Java world. It is included in the application.

Compiling the Spring Boot project

For compiling the project, Spring Boot supports, among others, Maven (<https://maven.apache.org/>). Here is a minimal example of a Maven build configuration file:

 pom.xml



```
<project>
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.ewolff</groupId>
  <artifactId>simplest-spring-boot</artifactId>
  <version>0.0.1-SNAPSHOT</version>

  <parent>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-parent</artifactId>
    <version>2.1.2.RELEASE</version>
  </parent>

  <properties>
    <java.version>10</java.version>
  </properties>

  <dependencies>
    <dependency>
      <groupId>org.springframework.boot</groupId>
      <artifactId>spring-boot-starter-web</artifactId>
    </dependency>

    <dependency>
      <groupId>org.springframework.boot</groupId>
      <artifactId>spring-boot-starter-test</artifactId>
      <scope>test</scope>
    </dependency>
  </dependencies>

  <build>
    <plugins>
      <plugin>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-maven-plugin</artifactId>
      </plugin>
    </plugins>
  </build>
</project>
```

The build configuration *inherits settings* from the parent configuration `spring-boot-starter-parent`.

Maven's parent configuration makes it easy to reuse settings for the build of multiple projects.

The version of the **maven parent** determines which version of Spring Boot is used.



The **Spring Boot version** defines the version of the Spring framework and the versions of all other libraries.

Thus, the developer does not have to define a stack with compatible versions of all frameworks, which is otherwise, often a challenge.

QUIZ

Z

1 The version of the Maven parent indirectly determines which version of Spring Boot is used.



A) True



B) False

Submit Answer



Question 1 of 2
0 attempted



Reset Quiz



In the *next lesson*, we'll look at how the Spring Boot starter web can serve as a single web dependency.

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