endava

UNIVERSITATEA DIN
BUCUREȘTI
VIRTUTE ET SAPIENTIA

WEB TECHNOLOGIES USING JAVA

Laboratory 4 - 30.10.2020

AGENDA

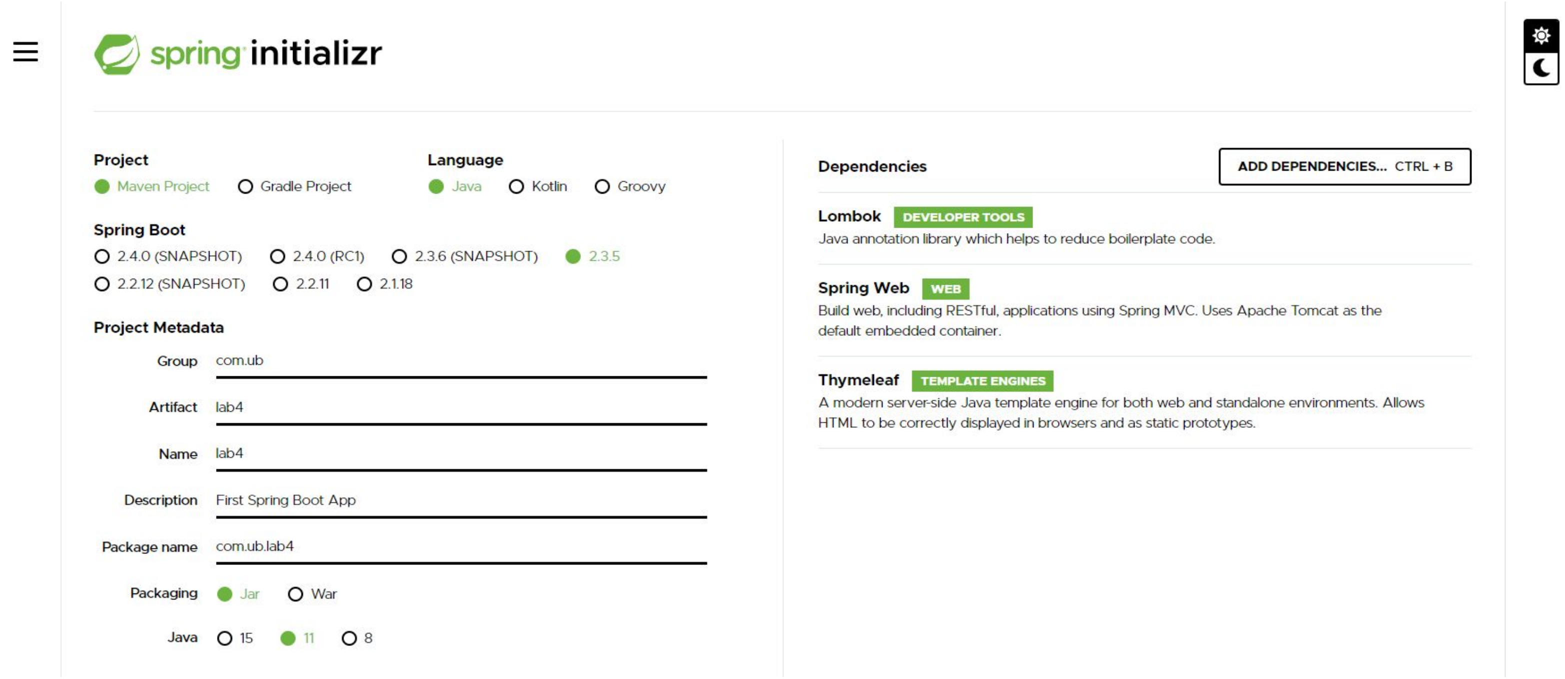
- ➢ Spring Boot - Getting started
- ➢ Postman - for calling endpoints
- ➢ Using Thymeleaf in Spring
- ➢ Application

Spring Boot - Getting started (I)

- ➢ Simplified dependency management
- ➢ Executable JARs for Simplified Deployment
- ➢ Autoconfiguration
- ➢ How to setup a Spring Boot app:

  1. Maven or Gradle project + needed dependencies
  2. The Spring Initializr - https://start.spring.io

Spring Boot - Getting started (II)



spring initializr

Project

● Maven Project ○ Gradle Project

Language

● Java ○ Kotlin ○ Groovy

Spring Boot

○ 2.4.0 (SNAPSHOT) ○ 2.4.0 (RC1) ○ 2.3.6 (SNAPSHOT) ● 2.3.5

○ 2.2.12 (SNAPSHOT) ○ 2.2.11 ○ 2.1.18

Project Metadata

Group	com.ub
Artifact	lab4
Name	lab4
Description	First Spring Boot App
Package name	com.ub.lab4
Packaging	● Jar ○ War
Java	○ 15 ● 11 ○ 8

Dependencies

Lombok DEVELOPER TOOLS

Java annotation library which helps to reduce boilerplate code.

Spring Web WEB

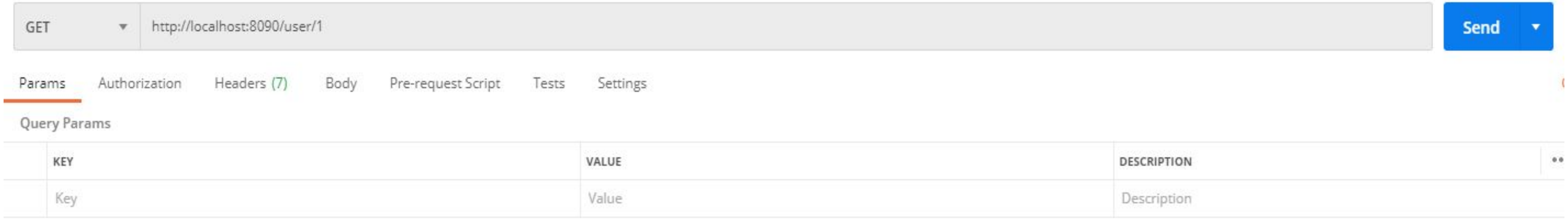
Build web, including RESTful, applications using Spring MVC. Uses Apache Tomcat as the default embedded container.

Thymeleaf TEMPLATE ENGINES

A modern server-side Java template engine for both web and standalone environments. Allows HTML to be correctly displayed in browsers and as static prototypes.

Postman - for calling endpoints

- https://www.postman.com/
    - Define complex requests => quickly send REST requests directly.
    - Inspect Responses.
    - We can see the full list of features here: https://www.postman.com/postman-features/.



GET http://localhost:8090/user/1

KEY	VALUE	DESCRIPTION
Key	Value	Description

Using Thymeleaf in Spring

- Spring Boot provides auto-configuration for Thymeleaf by adding the spring-boot-starter-thymeleaf dependency:

```
<dependency>
   <groupId>org.springframework.boot</groupId>
   <artifactId>spring-boot-starter-thymeleaf</artifactId>
   <version>2.3.5.RELEASE</version>
</dependency>
```

- No explicit configuration is necessary. By default, HTML files should be placed in the resources/templates location.
- More info: https://www.baeldung.com/thymeleaf-in-spring-mvc

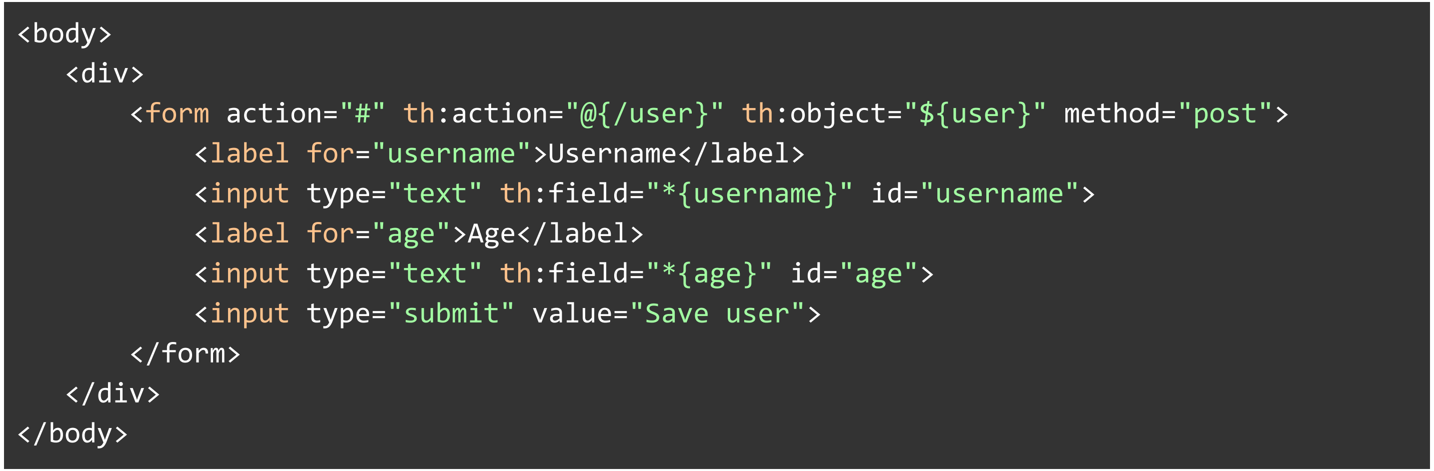
Application (I)

```java
@RestController
public class UserRestController {

   private final UserService userService;

   public UserRestController(UserService userService) {
       this.userService = userService;
   }

   @GetMapping(value = "/user/{id}", produces = MediaType.APPLICATION_JSON_VALUE)
   public User get(@PathVariable("id") Long id) {
       System.out.println(String.format("Request to get user: %s", id));
       return this.userService.get(id);
   }

}
```

Application (II)

```
@Controller
public class UserController {

   private final UserService userService;
   public UserController(UserService userService) {
       this.userService = userService;
   }
   @PostMapping("/user")
   public String save(@ModelAttribute User user, Model model) {
       System.out.println(String.format("Request to save user: %s", user.getUsername()));
       userService.save(user);
       model.addAttribute("user", User.builder().build());
       return "saveUser";
   }
}
```

Application (III)



```
<body>
   <div>
       <form action="#" th:action="@{/user}" th:object="${user}" method="post">
           <label for="username">Username</label>
           <input type="text" th:field="*{username}" id="username">
           <label for="age">Age</label>
           <input type="text" th:field="*{age}" id="age">
           <input type="submit" value="Save user">
       </form>
   </div>
</body>
```

THANK YOU

Silvia Butan