**Practice project**

Searching for a Specific User and Updating the User Information

Code:

pom.xml

<?xml version="1.0" encoding="UTF-8"?>

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<parent>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-parent</artifactId>

<version>2.6.3</version>

<relativePath/> <!-- lookup parent from repository -->

</parent>

<groupId>com.project</groupId>

<artifactId>SearchUser</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>SearchUser</name>

<description>Demo project for Spring Boot</description>

<properties>

<java.version>11</java.version>

</properties>

<dependencies>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-data-jpa</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-web</artifactId>

</dependency>

<dependency>

<groupId>mysql</groupId>

<artifactId>mysql-connector-java</artifactId>

<scope>runtime</scope>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-test</artifactId>

<scope>test</scope>

</dependency>

<dependency>

<groupId>javax.servlet</groupId>

<artifactId>jstl</artifactId>

<version>1.2</version>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-tomcat</artifactId>

<scope>provided</scope>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-validation</artifactId>

</dependency>

<dependency>

<groupId>org.hibernate.validator</groupId>

<artifactId>hibernate-validator</artifactId>

<version>6.1.2.Final</version>

</dependency>

<dependency>

<groupId>org.apache.tomcat.embed</groupId>

<artifactId>tomcat-embed-jasper</artifactId>

<scope>provided</scope>

</dependency>

<dependency>

<groupId>org.projectlombok</groupId>

<artifactId>lombok</artifactId>

<optional>true</optional>

</dependency>

<dependency>

<groupId>com.h2database</groupId>

<artifactId>h2</artifactId>

<scope>runtime</scope>

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-maven-plugin</artifactId>

<configuration>

<excludes>

<exclude>

<groupId>org.projectlombok</groupId>

<artifactId>lombok</artifactId>

</exclude>

</excludes>

</configuration>

</plugin>

</plugins>

</build>

</project>

User.java

**package** com.searchuser.domain;

**import** lombok.Data;

**import** lombok.NoArgsConstructor;

**import** javax.persistence.\*;

@Entity

@Data

@NoArgsConstructor

**public** **class** User {

@Column

@GeneratedValue(strategy = GenerationType.***IDENTITY***)

@Id

**private** Long id;

@Column

**private** String username;

@Column

**private** String password;

@Column

**private** String description;

}

UserRepository.java

**package** com.searchuser.repository;

**import** com.searchuser.domain.User;

**import** org.springframework.data.repository.CrudRepository;

**import** org.springframework.stereotype.Repository;

**import** java.util.Optional;

@Repository

**public** **interface** UserRepository **extends** CrudRepository<User, Long>{

Optional<User> findById (Long id);

}

UserService.java

**package** com.searchuser.service;

**import** com.searchuser.domain.User;

**import** com.searchuser.repository.UserRepository;

**import** lombok.extern.log4j.Log4j2;

**import** org.springframework.beans.factory.annotation.Autowired;

**import** org.springframework.stereotype.Service;

@Service

@Log4j2

**public** **class** UserService {

@Autowired

UserRepository userRepository;

**private** User currentUser;

**public** **boolean** userInformationHasBeenUpdated(String username, String password, String description) {

**boolean** change = **false**;

**if** (!username.isBlank() && !username.contains(" ")) {

currentUser.setUsername(username);

change = **true**;

}

**if** (!password.isBlank() && !password.contains(" ")) {

currentUser.setPassword(password);

change = **true**;

}

**if** (!description.isBlank()) {

currentUser.setDescription(description);

change = **true**;

}

**if** (change) {

userRepository.save(currentUser);

***log***.info("Saved update of user id: " + currentUser.getId());

}

**return** change;

}

**public** **void** setCurrentUser(User user) {

currentUser = user;

}

}

BootStrap.java

**package** com.searchuser.bootstrap;

**import** com.searchuser.domain.User;

**import** com.searchuser.repository.UserRepository;

**import** org.springframework.beans.factory.annotation.Autowired;

**import** org.springframework.boot.CommandLineRunner;

**import** org.springframework.stereotype.Component;

@Component

**public** **class** BootStrap **implements** CommandLineRunner{

@Autowired

UserRepository userRepository;

@Override

**public** **void** run(String... args) **throws** Exception {

User user = **new** User();

User user1 = **new** User();

user.setPassword("123");

user.setDescription("Example description");

user.setUsername("chris");

user1.setPassword("456");

user1.setDescription("Second Example Description");

user1.setUsername("foo");

userRepository.save(user);

userRepository.save(user1);

}

}

ServletInit.java

**package** com.searchuser.bootstrap;

**import** com.searchuser.SearchUserApplication;

**import** org.springframework.boot.builder.SpringApplicationBuilder;

**import** org.springframework.boot.web.servlet.support.SpringBootServletInitializer;

**public** **class** ServletInit **extends** SpringBootServletInitializer{

@Override

**protected** SpringApplicationBuilder configure(SpringApplicationBuilder springApplicationBuilder){

**return** springApplicationBuilder.sources(SearchUserApplication.**class**);

}

}

UserController.java

**package** com.searchuser.controller;

**import** com.searchuser.domain.User;

**import** com.searchuser.repository.UserRepository;

**import** com.searchuser.service.UserService;

**import** lombok.extern.log4j.Log4j2;

**import** org.springframework.beans.factory.annotation.Autowired;

**import** org.springframework.ui.ModelMap;

**import** org.springframework.web.bind.annotation.GetMapping;

**import** org.springframework.web.bind.annotation.PostMapping;

**import** org.springframework.web.bind.annotation.RequestParam;

**import** org.springframework.web.bind.annotation.RestController;

**import** org.springframework.web.servlet.ModelAndView;

**import** java.util.Optional;

@RestController

@Log4j2

**public** **class** UserController {

@Autowired

UserRepository userRepository;

@Autowired

UserService userService;

@GetMapping("/")

**public** ModelAndView displaySearch() {

**return** **new** ModelAndView("search-form");

}

@PostMapping("/search")

**public** ModelAndView searchForUser(@RequestParam Long id) {

ModelMap modelMap = **new** ModelMap();

**if** (userRepository.existsById(id)) {

Optional<User> optionalUser = userRepository.findById(id);

User user = optionalUser.get();

modelMap.addAttribute("user", user);

userService.setCurrentUser(user);

**return** **new** ModelAndView("index", modelMap);

}

***log***.warn("Admin entered invalid id: " + id);

**return** **new** ModelAndView("error-id-doesnt-exist");

}

@PostMapping("/update")

**public** ModelAndView updateUser(String username, String password, String description) {

**if**(userService.userInformationHasBeenUpdated(username, password, description)){

**return** **new** ModelAndView("successful-update");

}

**return** **new** ModelAndView("search-form");

}

}

error.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<div>

<strong>Error: Something went wrong</strong>

</div>

<input type=*"button"* value=*"Back to Search Page"* onclick="window.location='/'" >

</body>

</html>

error-id-doesnt-exist.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<!DOCTYPE html>

<html>

<title>Error</title>

<style>

**div** {text-align: *center*; font-size: *large*}

</style>

<body>

<div>

<h1>Error: ID doesn't exist!</h1>

</div>

<div>

<input type=*"button"* class=*"btn btn-primary"* value=*"Back to Search Page"* onclick="window.location='/'" >

</div>

</body>

</html>

index.jsp

<jsp:useBean id=*"user"* scope=*"request"* type=*"com.searchuser.domain.User"*/>

<%@ taglib prefix=*"c"* uri=*"http://java.sun.com/jsp/jstl/core"* %>

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"* pageEncoding=*"ISO-8859-1"*%>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">

<html>

<title>User Information</title>

<style>

**strong** {text-align: *center*;}

**head** {text-align: *center*;}

**div** {text-align: *center*; font-size: *large*}

**br** {text-align: *center*;}

**body** {text-align: *center*;}

**span,** **input** {margin: *5px*;}

**button**{display:*block*;}

</style>

<body>

<form method=*"post"* action=*"/update"*>

<table class =*"table"*>

<thead>

<tr>

<th>Current User name: ${user.getUsername()}</th>

<th>Current Password: ${user.getPassword()}</th>

<th>Current Description: ${user.getDescription()}</th>

</tr>

</thead>

<tbody>

<tr>

<td>

<label>

<input type=*"text"* name=*"username"* minlength=*"3"*>

</label>

</td>

<td>

<label>

<input type=*"text"* name=*"password"* minlength=*"3"*>

</label>

</td>

<td>

<label>

<input type=*"text"* name=*"description"* minlength=*"3"*>

</label>

</td>

</tr>

</tbody>

</table>

<button class=*"btn btn-primary"* onclick="window.location='/'" >Back to index</button>

<button type=*"submit"* class=*"btn btn-success"*>Update</button>

</form>

</body>

</html>

search-form.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<!DOCTYPE html>

<html>

<style>

**strong** {text-align: *center*;}

**head** {text-align: *center*;}

**div** {text-align: *center*; font-size: *larger*}

**br** {text-align: *center*;}

**body** {text-align: *center*;}

**span,** **input** {margin: *5px*;}

</style>

<title>Index</title>

<body>

<div>

<form method=*"post"* action=*"/search"*>

Enter User ID:

<label>

<input type=*"number"* min=*"1"* minlength=*"1"* name=*"id"* required><br>

</label>

<div>

<button type=*"submit"* class=*"btn btn-primary"*>Search</button>

</div>

</form>

</div>

</body>

</html>

successful-update.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"* pageEncoding=*"ISO-8859-1"* %>

<html>

<title>Success</title>

<style>

**div** {text-align: *center*; font-size: *large*}

</style>

<body>

<div>

<h1>Your Update Was Successful!</h1>

</div>

<div>

<input type=*"button"* class=*"btn btn-primary"* value=*"Back to Search Page"* onclick="window.location='/'" >

</div>

</body>

</html>

application.properties

spring.mvc.view.prefix=/WEB-INF/jsp/

spring.mvc.view.suffix=.jsp

spring.h2.console.enabled=true

spring.jpa.hibernate.ddl-auto=create

spring.jpa.show-sql=true

spring.datasource.url=jdbc:mysql://localhost:3306/Work

spring.datasource.username=Work

spring.datasource.password=Simplilearn@123

server.port=8080

spring.jpa.properties.hibernate.dialect = org.hibernate.dialect.MySQL5Dialect

spring.jpa.properties.hibernate.id.new\_generator\_mappings = false

spring.jpa.properties.hibernate.format\_sql = true