Source code: Handling User Authentication

**Create package com.project.Authentication Create AuthenticationApplication.java package** com.project.Authentication;

**import** org.springframework.boot.SpringApplication;

**import** org.springframework.boot.autoconfigure.SpringBootApplication;

**import** org.springframework.context.annotation.Import;

**import** com.project.Authentication.controllers.AuthenticationController;

**import** com.project.Authentication.entities.User;

**import** com.project.Authentication.exceptions.UserNotFoundException;

**import** com.project.Authentication.services.AuthenticationService;

@SpringBootApplication @Import({

AuthenticationController.**class**, UserNotFoundException.**class**, AuthenticationService.**class**, User.**class**

})

**public class** AuthenticationApplication {

**public static void** main(String[] args) { SpringApplication.*run*(AuthenticationApplication.**class**, args);

}

}

# Create package com.project.Authentication.controller Create AuthenticationController.java

package com.project.Authentication.controllers; import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

import org.springframework.beans.factory.annotation.Autowired; import org.springframework.stereotype.Controller;

import org.springframework.web.bind.annotation.GetMapping; import org.springframework.web.bind.annotation.PostMapping; import org.springframework.web.bind.annotation.RequestParam; import com.project.Authentication.entities.User;

import com.project.Authentication.services.AuthenticationService; @Controller

public class AuthenticationController {

Logger logger = LoggerFactory.getLogger(AuthenticationController.class); @Autowired

AuthenticationService authService; @GetMapping("/")

public String showGreeting() { return "greeting";

}

@GetMapping("/Auth") public String showLogin() {

return "authenticate";

}

@PostMapping("/Auth")

public String authenticateUser(@RequestParam("username") String username, @RequestParam("password") String pswd) {

User user = authService.GetUserByName(username); logger.info(user.getName() + " attempted to login with " + user.getPassword());

String path = (authService.isValidPassword(pswd, user.getPassword())) ? "success" : "failure"; logger.info("The path return: " + path);

return path;

}

}

# Create package com.project.Authentication.entities Crate User.java

package com.project.Authentication.entities; import javax.persistence.Column;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue; import javax.persistence.GenerationType; import javax.persistence.Id;

import javax.persistence.Table;

import javax.validation.constraints.NotNull;

@Entity

@Table(name = "user") public class User {

@Id

@GeneratedValue(strategy = GenerationType.AUTO) @NotNull

private Integer id;

@Column(name = "name") @NotNull

private String name;

@Column(name = "email") @NotNull

private String email;

@Column(name = "password") @NotNull

private String password;

public User() {

super();

}

public User(@NotNull String name, @NotNull String password) { this.name = name;

this.password = password;

}

public User(@NotNull String name, @NotNull String email, @NotNull String password) { super();

this.name = name; this.email = email; this.password = password;

}

public Integer getId() {

return id;

}

public void setId(Integer id) { this.id = id;

}

public String getName() {

return name;

}

public void setName(String name) { this.name = name;

}

public String getEmail() {

return email;

}

public void setEmail(String email) {

this.email = email;

}

public String getPassword() {

return password;

}

public void setPassword(String password) { this.password = password;

}

@Override

public String toString() {

return "User [id=" + id + ", name=" + name + ", email=" + email + ", password=" +

password + "]";

}

}

# Create package com.project.Authentication.exceptions Create UserNotFoundException.java

**package** com.project.Authentication.exceptions;

**public class** UserNotFoundException **extends** RuntimeException {

**private static final long *serialVersionUID*** = 1L;

}

# Create package com.project.Authentication.repositories Create AuthenticationRepository.java

package com.project.Authentication.repositories; import java.util.Optional;

import org.springframework.data.repository.CrudRepository; import org.springframework.stereotype.Repository;

import com.project.Authentication.entities.User; @Repository

public interface AuthenticationRepository extends CrudRepository<User, Integer> { public Optional<User> findUserByName(String name);

}

# Create package com.project.Authentication.services Create AuthenticationService.java

package com.project.Authentication.services; import java.util.Optional;

import org.springframework.beans.factory.annotation.Autowired; import org.springframework.stereotype.Service;

import com.project.Authentication.entities.User;

import com.project.Authentication.exceptions.UserNotFoundException; import com.project.Authentication.repositories.AuthenticationRepository; @Service

public class AuthenticationService { @Autowired AuthenticationRepository authRepo;

public User GetUserByName(String name) {

Optional<User> found = authRepo.findUserByName(name); if(found.isPresent()) return found.get();

else throw new UserNotFoundException();

}

public Boolean isValidPassword(String cmp, String actual) { return ((cmp.equals(actual)) ? true : false);

}

}

# Src/main/resources

**application.properties**

spring.jpa.hibernate.ddl-auto=update spring.datasource.url=jdbc:mysql://localhost:3306/mywork spring.datasource.username=root

spring.datasource.password=UPRPBb820@2021

logging.level.org.springframework.web: DEBUG spring.mvc.view.prefix=/WEB-INF/jsp/ spring.mvc.view.suffix=.jsp

server.port=8080

# Open src/main/webapp/jsp Create authenticate.jsp

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

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

<%@ taglib prefix=*"form"* uri=*"*[*http://www.springframework.org/tags/form*](http://www.springframework.org/tags/form)*"*%>

<!DOCTYPE html>

<html>

<head>

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

<title>Authentication Page</title>

</head>

<h2>Login Page</h2>

<body>

welcome to the authentication page

<form:form action=*"Auth"* method=*"post"* commandName=*"login"*>

<label for=*"username"*> Username:</label>

<input name=*"username"* id=*"username"* type=*"text"* placeholder=*"Username"* required/>

<label for=*"password"*>Password:</label>

<input name=*"password"* id=*"password"* type=*"password"* placholder=*"Password"* required/>

<input type=*"submit"* name=*"Submit"*/>

</form:form>

</body>

</html>

# Create failure.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>Failed Login</title>

</head>

<body>

<h1>You failed your login pal!

</h1><br/>

<a href=*"/Auth"*>Attempt Login again</a>

</body>

</html>

# Create greeting.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>Landing Page</title>

</head>

<h2>Welcome Page</h2>

<body>

you reached the landing page

<a href=*"Auth"*>Login</a>

</body>

</html>

# Create success.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>Successful Login Page</title>

</head>

<body>

<h1>Successful Login</h1>

</body>

</html>