Name: Lutika Kolhe

Assignment on Spring MVC

1. Design and develop a Spring MVC web application as follows:

* Create index.jsp page having one hyperlink. When user dicks on that hyperlink, it should call HelloWorldController.
* Design HelloWorldController class that returns a view helloWorld.jsp
* Design a hello World jsp page that displays "Hello World" message.

Class1 : HelloController

**import** org.springframework.stereotype.Controller;

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

@Controller

**public** **class** HelloController {

@RequestMapping("/hello")

**public** String redirect() {

**return** "helloWorld";

}}

Helloworld.jsp

<?xml version="1.0" encoding="ISO-8859-1" ?>

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

pageEncoding="ISO-8859-1"%>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">

<head>

<!-- <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1" /> -->

<title>Insert title here</title>

</head>

<body>

<h2>

HeLLo World

<h2>

</body>

</html>

Index.jsp

<?xml version="1.0" encoding="ISO-8859-1" ?>

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

pageEncoding="ISO-8859-1"%>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">

<head>

<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1" />

<title>Insert title here</title>

</head>

<body>

<a href="hello">Click here...</a>

</body>

</html>

servlet-dispatcher.xml

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

<beans xmlns="http://www.springframework.org/schema/beans"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xmlns:context="http://www.springframework.org/schema/context"

xmlns:mvc="http://www.springframework.org/schema/mvc"

xsi:schemaLocation="

http://www.springframework.org/schema/beans

http://www.springframework.org/schema/beans/spring-beans.xsd

http://www.springframework.org/schema/context

http://www.springframework.org/schema/context/spring-context.xsd

http://www.springframework.org/schema/mvc

http://www.springframework.org/schema/mvc/spring-mvc.xsd">

<!-- Provide support for component scanning -->

<context:component-scan base-package="com.javatpoint" />

<!--Provide support for conversion, formatting and validation -->

<mvc:annotation-driven/>

<!-- Define Spring MVC view resolver -->

<bean id="viewResolver" class="org.springframework.web.servlet.view.InternalResourceViewResolver">

<property name="prefix" value="/WEB-INF/"></property>

<property name="suffix" value=".jsp"></property>

</bean>

</beans>

web.xml

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

<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://java.sun.com/xml/ns/javaee" xsi:schemaLocation="http://java.sun.com/xml/ns/javaee http://java.sun.com/xml/ns/javaee/web-app\_3\_0.xsd" id="WebApp\_ID" version="3.0">

<display-name>SpringMVC</display-name>

<servlet>

<servlet-name>spring</servlet-name>

<servlet-class>org.springframework.web.servlet.DispatcherServlet</servlet-class>

<load-on-startup>1</load-on-startup>

</servlet>

<servlet-mapping>

<servlet-name>spring</servlet-name>

<url-pattern>/hello</url-pattern>

</servlet-mapping>

</web-app>

1. Design and develop a Spring MVC web application as follows

* Design simplelnterest jsp to capture principal amount, no. of years and rate of interest
* Simpleinterest Controller will receive these inputs and calculates simple interest.
* Simpleinterest Controller shoulukaturn a view that contains simple interest.

Class1:SimpleIntrestController

**package** com.controller;

**import** org.springframework.stereotype.Controller;

**import** org.springframework.ui.Model;

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

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

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

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

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

@Controller

**public** **class** SimpleInterestController {

@RequestMapping(value = "/getvalues.html", method = RequestMethod.***GET***)

**public** ModelAndView getForm()

{

ModelAndView model = **new** ModelAndView("Values");

**return** model;

}

@RequestMapping(value = "/submitvalues.html", method = RequestMethod.***POST***)

**public** ModelAndView acceptForm(@RequestParam("amount") Double amount, @RequestParam("rate") Double rate, @RequestParam("time") **int** time)

{

ModelAndView model = **new** ModelAndView("Calculate");

model.addObject("message", "Simple Interest : " + "(" + amount + "\*" + rate + "\*" + time + ")/100 = " + (amount\*rate\*time)/100);

**return** model;

}

}

Web.xml

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

<web-app xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"* xmlns=*"http://xmlns.jcp.org/xml/ns/javaee"* xsi:schemaLocation=*"http://xmlns.jcp.org/xml/ns/javaee http://xmlns.jcp.org/xml/ns/javaee/web-app\_4\_0.xsd"* id=*"WebApp\_ID"* version=*"4.0"*>

<display-name>SpringMVC</display-name>

<servlet>

<servlet-name>spring-dispatcher</servlet-name>

<servlet-class>

org.springframework.web.servlet.DispatcherServlet

</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>spring-dispatcher</servlet-name>

<url-pattern>/</url-pattern>

</servlet-mapping>

</web-app>

spring-servlet.xml

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

<beans xmlns=*"http://www.springframework.org/schema/beans"*

xmlns:context=*"http://www.springframework.org/schema/context"*

xmlns:mvc=*"http://www.springframework.org/schema/mvc"*

xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"*

xsi:schemaLocation=*"*

*http://www.springframework.org/schema/beans*

*http://www.springframework.org/schema/beans/spring-beans-3.0.xsd*

*http://www.springframework.org/schema/context*

*http://www.springframework.org/schema/context/spring-context-3.0.xsd*

*http://www.springframework.org/schema/mvc*

*http://www.springframework.org/schema/mvc/spring-mvc-3.0.xsd"*>

<mvc:annotation-driven/>

<context:component-scan base-package = *"com.controller"*/>

<bean id=*"viewResolver"* class=*"org.springframework.web.servlet.view.InternalResourceViewResolver"*>

<property name = *"prefix"*>

<value>/WEB-INF/</value>

</property>

<property name = *"suffix"*>

<value>.jsp</value>

</property>

</bean>

</beans>

Values.jsp

<html>

<body>

<h1>Student Application Form</h1>

<form action = "/AssignmentQ2/submitvalues.html" method = "post">

<p> Amount : <input type = "number" name = "amount"/></p>

<p> Rate : <input type = "number" name = "rate"/></p>

<p> Years : <input type = "number" name = "time"/></p>

<input type = "submit" value = "Submit"/>

</form>

</body>

Calculate.jsp

<html>

<body>

<h1>Simple Interest</h1>

<h2>${message}</h2>

</body>

</html>

1. Design and develop a Spring MVC web application as follows:

* Design a' User model class having attributes username, password & email.
* Design login.jsp to capture username and password (Use ModelAttribute)
* UserController should receive the credentials and return "success" view if user is authenticated successfully, else retum "error" view.
* Design success jsp and error jsp

Class1: UserController

**package** com.controller;

**import** org.springframework.stereotype.Controller;

**import** org.springframework.ui.Model;

**import** org.springframework.validation.BindingResult;

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

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

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

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

@Controller

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

@RequestMapping(value = "/getdetails.html", method = RequestMethod.GET)

**public** ModelAndView getForm()

{

ModelAndView model = **new** ModelAndView("Details");

**return** model;

}

@ModelAttribute

**public** **void** addCommonObjects(Model model)

{

model.addAttribute("message", "Logged In");

}

@RequestMapping(value = "/submitdetails.html", method = RequestMethod.POST)

**public** ModelAndView acceptForm(@ModelAttribute("detail1") Detail detail1, BindingResult result)

{

**if**(result.hasErrors())

{

ModelAndView model = **new** ModelAndView("Details");

**return** model;

}

ModelAndView model = **new** ModelAndView("Page");

**return** model;

}

}

Class2: Detail

**package** com.controller;

**public** **class** Detail {

**private** String username;

**private** String password;

**private** String email;

**public** String getUsername()

{

**return** username;

}

**public** **void** setUsername(String username)

{

**this**.username = username;

}

**public** String getPassword()

{

**return** password;

}

**public** **void** setPassword(String password)

{

**this**.password = password;

}

**public** String getEmail()

{

**return** email;

}

**public** **void** setEmail(String email)

{

**this**.email = email;

}

}

Web.xml

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

<web-app xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"* xmlns=*"http://xmlns.jcp.org/xml/ns/javaee"* xsi:schemaLocation=*"http://xmlns.jcp.org/xml/ns/javaee http://xmlns.jcp.org/xml/ns/javaee/web-app\_4\_0.xsd"* id=*"WebApp\_ID"* version=*"4.0"*>

<display-name>SpringMVC</display-name>

<servlet>

<servlet-name>spring-dispatcher</servlet-name>

<servlet-class>

org.springframework.web.servlet.DispatcherServlet

</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>spring-dispatcher</servlet-name>

<url-pattern>/</url-pattern>

</servlet-mapping>

</web-app>

Spring-servalet.xml

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

<beans xmlns=*"http://www.springframework.org/schema/beans"*

xmlns:context=*"http://www.springframework.org/schema/context"*

xmlns:mvc=*"http://www.springframework.org/schema/mvc"*

xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"*

xsi:schemaLocation=*"*

*http://www.springframework.org/schema/beans*

*http://www.springframework.org/schema/beans/spring-beans-3.0.xsd*

*http://www.springframework.org/schema/context*

*http://www.springframework.org/schema/context/spring-context-3.0.xsd*

*http://www.springframework.org/schema/mvc*

*http://www.springframework.org/schema/mvc/spring-mvc-3.0.xsd"*>

<mvc:annotation-driven/>

<context:component-scan base-package = *"com.controller"*/>

<bean id=*"viewResolver"* class=*"org.springframework.web.servlet.view.InternalResourceViewResolver"*>

<property name = *"prefix"*>

<value>/WEB-INF/</value>

</property>

<property name = *"suffix"*>

<value>.jsp</value>

</property>

</bean>

</beans>

Details.jsp

<html>

<body>

<form:errors path = "detail1.\*/"/>

<form action = "/AssignmentQ3/submitdetails.html" method = "post">

<p> Username : <input type = "text" name = "username"/></p>

<p> Password : <input type = "password" name = "password"/></p>

<p> Email : <input type = "email" name = "email"/></p>

<input type = "submit" value = "Submit"/>

</form>

</body>

</html>

Page.jsp

<html>

<body>

<h1>Logged In</h1>

<h2>${message}</h2>

<table>

<tr>

<td>User name : </td>

<td>${detail1.username}</td>

</tr>

<tr>

<td>Email : </td>

<td>${detail1.email}</td>

</tr>

</table>

</body>

</html>

1. Design and develop a Spring MVC web application as follows

* Design a User model class having attributes username, password & email,
* Design registration.jsp to capture username, password and email. (Use ModelAttribute)
* UserController should receive the details and store into a database. (Use JdbcTemplate).
* After successful registration, it should return login view.
* Design login jsp to capture username and password (Use ModelAttribute)
* UserController should receive the credentials and return "success" view if user is authenticated successfully, else return "error" view f Design success jap and error sp

Class1: UserController

**package** com.controller;

**import** java.util.ArrayList;

**import** java.util.List;

**import** org.springframework.stereotype.Controller;

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

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

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

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

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

@Controller

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

List<Userdetails> list = **new** ArrayList<Userdetails>();

@RequestMapping(value = "/registerSuccess.html", method=RequestMethod.POST)

**public** String newusers(@RequestParam("usname") String unm,@RequestParam("uspwd") String pwd,@RequestParam("usmail") String mail) {

Userdetails user1 = **new** Userdetails(unm,pwd,mail);

list.add(user1);

**return** "redirect:/login.html";

}

@RequestMapping(value = "/login.html")

**public** ModelAndView tryagain(@ModelAttribute("user1") Userdetails user1) {

ModelAndView model = **new** ModelAndView("loginpage");

model.addObject(user1);

**return** model;

}

@RequestMapping(value = "/Authdetails.html", method=RequestMethod.POST)

**public** ModelAndView getvalues(@ModelAttribute("user1") Userdetails user1) {

**for**(**int** i=0;i<list.size();i++) {

**if**(list.get(i).getUsname().equals(user1.usname) && list.get(i).getUspwd().equals(user1.uspwd)) {

ModelAndView model = **new** ModelAndView("success");

model.addObject(user1);

**return** model;

}**else** {

ModelAndView model = **new** ModelAndView("Error");

model.addObject(user1);

**return** model;

}

}

**return** **null**;

}

}

Class2: Userdetails

**package** come.controller;

**public** **class** Userdetails {

String usname,uspwd,usmail;

**public** Userdetails() {}

**public** Userdetails(String usname, String uspwd, String usmail) {

**super**();

**this**.usname = usname;

**this**.uspwd = uspwd;

**this**.usmail = usmail;

}

**public** String getUsname() {

**return** usname;

}

**public** **void** setUsname(String usname) {

**this**.usname = usname;

}

**public** String getUspwd() {

**return** uspwd;

}

**public** **void** setUspwd(String uspwd) {

**this**.uspwd = uspwd;

}

**public** String getUsmail() {

**return** usmail;

}

**public** **void** setUsmail(String usmail) {

**this**.usmail = usmail;

}

}

Web.xml

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

<web-app xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"* xmlns=*"http://xmlns.jcp.org/xml/ns/javaee"* xsi:schemaLocation=*"http://xmlns.jcp.org/xml/ns/javaee http://xmlns.jcp.org/xml/ns/javaee/web-app\_4\_0.xsd"* id=*"WebApp\_ID"* version=*"4.0"*>

<display-name>SpringMVC</display-name>

<servlet>

<servlet-name>spring-dispatcher</servlet-name>

<servlet-class>

org.springframework.web.servlet.DispatcherServlet

</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>spring-dispatcher</servlet-name>

<url-pattern>/</url-pattern>

</servlet-mapping>

</web-app>

Spring-servlet.xml

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

<beans xmlns=*"http://www.springframework.org/schema/beans"*

xmlns:context=*"http://www.springframework.org/schema/context"*

xmlns:mvc=*"http://www.springframework.org/schema/mvc"*

xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"*

xsi:schemaLocation=*"*

*http://www.springframework.org/schema/beans*

*http://www.springframework.org/schema/beans/spring-beans-3.0.xsd*

*http://www.springframework.org/schema/context*

*http://www.springframework.org/schema/context/spring-context-3.0.xsd*

*http://www.springframework.org/schema/mvc*

*http://www.springframework.org/schema/mvc/spring-mvc-3.0.xsd"*>

<mvc:annotation-driven/>

<context:component-scan base-package = *"com.controller"*/>

<bean id=*"viewResolver"* class=*"org.springframework.web.servlet.view.InternalResourceViewResolver"*>

<property name = *"prefix"*>

<value>/WEB-INF/</value>

</property>

<property name = *"suffix"*>

<value>.jsp</value>

</property>

</bean>

</beans>

login.jsp

<html>

<body>

<form action = "/AssignmentQ3/Authdetails.html" method = "post">

<p> Username : <input type = "text" name = "username"/></p>

<p> Password : <input type = "password" name = "password"/></p>

<p> Email : <input type = "email" name = "email"/></p>

<input type = "submit" value = "Submit"/>

</form>

</body>

</html>

success.jsp

<html>

<body>

<h1>Logged In</h1>

<h2>${message}</h2>

<table>

<tr>

<td>User name : </td>

<td>${user1.usname}</td>

</tr>

<tr>

<td>Email : </td>

<td>${user1.usmail}</td>

</tr>

</table>

</body>

</html>

1. Apply the following server-side validations to the above registration form:

* Username should not be empty or null.
* Username should be alphanumeric and between 8 to 20 characters.
* Username should not contain space.
* Password should not be empty or null.
* Password should contain at least one upper case letter, lower-case letter, a digit or special character (S, #,, @).
* Password should also be 8 to 20 characters long. • Email should not be empty or null. Email should be valid
* City should be selected.
* ZipCode should not be empty or null. It should be 6-digits.

CustomerController.java

**package** com.controller;

**import** javax.validation.Valid;

**import** org.springframework.stereotype.Controller;

**import** org.springframework.ui.Model;

**import** org.springframework.validation.BindingResult;

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

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

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

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

@Controller

**public** **class** CustomerController {

/\*@InitBinder

public void initBinder(WebDataBinder binder)

{

}\*/

@RequestMapping(value = "/getcustomer.html", method = RequestMethod.GET)

**public** ModelAndView getForm()

{

ModelAndView model = **new** ModelAndView("CustomerIn");

**return** model;

}

@ModelAttribute

**public** **void** addCommonObjects(Model model)

{

model.addAttribute("message", "Customer Got In");

}

@RequestMapping(value = "/submitcustomer.html", method = RequestMethod.POST)

**public** ModelAndView acceptForm(@Valid @ModelAttribute("cust1") Customer cust1, BindingResult result)

{

**if**(result.hasErrors())

{

ModelAndView model = **new** ModelAndView("CustomerIn");

**return** model;

}

ModelAndView model = **new** ModelAndView("CustomerOut");

**return** model;

}

}

Customer.java

**package** com.controller;

**import** java.util.ArrayList;

**import** javax.validation.constraints.NotEmpty;

**import** javax.validation.constraints.NotNull;

**import** javax.validation.constraints.Pattern;

**import** javax.validation.constraints.Size;

**public** **class** Customer {

@NotNull

@NotEmpty

@Pattern(regexp = "^[\\p{Alnum}]{8,20}$")

**private** String username;

@NotNull

@NotEmpty

@Pattern(regexp = "^(?=.\*[0-9])(?=.\*[a-z])(?=.\*[A-Z])(?=.\*[.@#;$]).{8,20}$")

**private** String password;

@NotNull

@NotEmpty

**private** String email;

**private** String contact;

@NotNull

@NotEmpty

@Size(min = 6, max = 6)

**private** Long zip;

@NotEmpty

**private** ArrayList<String> city;

**public** String getUsername() {

**return** username;

}

**public** **void** setUsername(String username) {

**this**.username = username;

}

**public** String getPassword() {

**return** password;

}

**public** **void** setPassword(String password) {

**this**.password = password;

}

**public** String getEmail() {

**return** email;

}

**public** **void** setEmail(String email) {

**this**.email = email;

}

**public** String getContact() {

**return** contact;

}

**public** **void** setContact(String contact) {

**this**.contact = contact;

}

**public** Long getZip() {

**return** zip;

}

**public** **void** setZip(Long zip) {

**this**.zip = zip;

}

**public** ArrayList<String> getCity() {

**return** city;

}

**public** **void** setCity(ArrayList<String> city) {

**this**.city = city;

}

}

CustomerIn.jsp

<html>

<body>

<form:errors path = "cust1.\*/"/>

<form action = "/AssignmentQ6/submitcustomer.html" method = "post">

<p> Username : <input type = "text" name = "username"/></p>

<p> Password : <input type = "password" name = "password"/></p>

<p> Email : <input type = "email" name = "email"/></p>

<p> Contact : <input type = "text" name = "contact"/></p>

<p> City : <select name="city">

<option value="Bhubaneswar">Bhubaneswar</option>

<option value="Mysore">Mysore</option>

<option value="Balasore">Balasore</option>

<option value="New york">New York</option>

</select></p>

<p> Zip Code : <input type = "number" name = "zip"/></p>

<input type = "submit" value = "Submit"/>

</form>

</body>

</html>

CustomerOut.jsp

<html>

<body>

<h2>${message}</h2>

<table>

<tr>

<td>User name : </td>

<td>${cust1.username}</td>

</tr>

<tr>

<td>Email : </td>

<td>${cust1.email}</td>

</tr>

<tr>

<td>Contact : </td>

<td>${cust1.contact}</td>

</tr>

<tr>

<td>City : </td>

<td>${cust1.city}</td>

</tr>

<tr>

<td>Zip Code : </td>

<td>${cust1.zip}</td>

</tr>

</table>

</body>

</html>

web.xml

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

<web-app xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"* xmlns=*"http://xmlns.jcp.org/xml/ns/javaee"* xsi:schemaLocation=*"http://xmlns.jcp.org/xml/ns/javaee http://xmlns.jcp.org/xml/ns/javaee/web-app\_4\_0.xsd"* id=*"WebApp\_ID"* version=*"4.0"*>

<display-name>SpringMVC</display-name>

<servlet>

<servlet-name>spring-dispatcher</servlet-name>

<servlet-class>

org.springframework.web.servlet.DispatcherServlet

</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>spring-dispatcher</servlet-name>

<url-pattern>/</url-pattern>

</servlet-mapping>

</web-app>

servlet-dispatcher.xml

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

<beans xmlns=*"http://www.springframework.org/schema/beans"*

xmlns:context=*"http://www.springframework.org/schema/context"*

xmlns:mvc=*"http://www.springframework.org/schema/mvc"*

xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"*

xsi:schemaLocation=*"*

*http://www.springframework.org/schema/beans*

*http://www.springframework.org/schema/beans/spring-beans-3.0.xsd*

*http://www.springframework.org/schema/context*

*http://www.springframework.org/schema/context/spring-context-3.0.xsd*

*http://www.springframework.org/schema/mvc*

*http://www.springframework.org/schema/mvc/spring-mvc-3.0.xsd"*>

<mvc:annotation-driven/>

<context:component-scan base-package = *"com.controller"*/>

<bean id=*"viewResolver"* class=*"org.springframework.web.servlet.view.InternalResourceViewResolver"*>

<property name = *"prefix"*>

<value>/WEB-INF/</value>

</property>

<property name = *"suffix"*>

<value>.jsp</value>

</property>

</bean>

</beans>

1. Add custom validations in the above example.

* Contact should be only numeric and exactly 10-digits.

In continuation with the above code;

Class1:IsNumeric.java

**package** com.controller;

**import** javax.validation.Constraint;

**import** javax.validation.Payload;

**import** net.sourceforge.retroweaver.runtime.java.lang.annotation.Documented;

**import** net.sourceforge.retroweaver.runtime.java.lang.annotation.ElementType;

**import** net.sourceforge.retroweaver.runtime.java.lang.annotation.Retention;

**import** net.sourceforge.retroweaver.runtime.java.lang.annotation.RetentionPolicy;

**import** net.sourceforge.retroweaver.runtime.java.lang.annotation.Target;

@Documented

@Constraint(validatedBy = Numeric.**class**)

@Target( { ElementType.FIELD } )

@Retention( RetentionPolicy.RUNTIME)

**public** **@interface** IsNumeric {

String message() **default** "Not Numeric" +

"Please enter a numeric value";

Class<?>[] groups() **default** {};

Class<? **extends** Payload>[] payload() **default** {};

}

Class2: Numeric.java

**package** com.controller;

**import** java.util.regex.Matcher;

**import** java.util.regex.Pattern;

**import** javax.validation.ConstraintValidator;

**import** javax.validation.ConstraintValidatorContext;

**public** **class** Numeric **implements** ConstraintValidator<IsNumeric, String> {

**private** **static** **final** String CONTACT\_PATTERN = "((?=.\*\\d).{10,10})";

**private** Pattern pattern;

**private** Matcher matcher;

**public** Numeric()

{

pattern = Pattern.compile(CONTACT\_PATTERN);

}

@Override

**public** **void** initialize(IsNumeric isNumeric)

{

isNumeric.message();

}

@Override

**public** **boolean** isValid(String contact, ConstraintValidatorContext arg1) {

**if**(contact == **null**)

{

**return** **false**;

}

matcher = pattern.matcher(contact);

**return** matcher.matches();

}

}

Class3: Customer.java

**package** com.controller;

**import** java.util.ArrayList;

**import** javax.validation.constraints.NotEmpty;

**import** javax.validation.constraints.NotNull;

**import** javax.validation.constraints.Pattern;

**import** javax.validation.constraints.Size;

**public** **class** Customer {

@NotNull

@NotEmpty

@Pattern(regexp = "^[\\p{Alnum}]{8,20}$")

**private** String username;

@NotNull

@NotEmpty

@Pattern(regexp = "^(?=.\*[0-9])(?=.\*[a-z])(?=.\*[A-Z])(?=.\*[.@#;$]).{8,20}$")

**private** String password;

@NotNull

@NotEmpty

**private** String email;

//using custom annotation

@IsNumeric

**private** String contact;

@NotNull

@NotEmpty

@Size(min = 6, max = 6)

**private** Long zip;

@NotEmpty

**private** ArrayList<String> city;

**public** String getUsername() {

**return** username;

}

**public** **void** setUsername(String username) {

**this**.username = username;

}

**public** String getPassword() {

**return** password;

}

**public** **void** setPassword(String password) {

**this**.password = password;

}

**public** String getEmail() {

**return** email;

}

**public** **void** setEmail(String email) {

**this**.email = email;

}

**public** String getContact() {

**return** contact;

}

**public** **void** setContact(String contact) {

**this**.contact = contact;

}

**public** Long getZip() {

**return** zip;

}

**public** **void** setZip(Long zip) {

**this**.zip = zip;

}

**public** ArrayList<String> getCity() {

**return** city;

}

**public** **void** setCity(ArrayList<String> city) {

**this**.city = city;

}

}

1. Design and develop a Spring MVC web application as follows:

* Create a login.jsp page.
* When user clicks on the French or Vietnam, page text should be changed to selected Locale:

Class1: LanguageController.java

**package** com.controller;

**import** org.springframework.stereotype.Controller;

**import** org.springframework.validation.BindingResult;

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

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

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

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

@Controller

**public** **class** LanguageController {

@RequestMapping(value = "/getpage.html", method = RequestMethod.GET)

**public** ModelAndView getForm()

{

ModelAndView model = **new** ModelAndView("LoginPage");

**return** model;

}

@RequestMapping(value = "/output.html", method = RequestMethod.POST)

**public** ModelAndView acceptForm(@ModelAttribute("user1") UserDetails user1, BindingResult result)

{

**if**(result.hasErrors())

{

ModelAndView model = **new** ModelAndView("LoginPage");

**return** model;

}

ModelAndView model = **new** ModelAndView("ResultPage");

**return** model;

}

}

Class2: UserDetails.java

**package** com.controller;

**public** **class** UserDetails {

**private** String username;

**private** String password;

**public** String getUsername() {

**return** username;

}

**public** **void** setUsername(String username) {

**this**.username = username;

}

**public** String getPassword() {

**return** password;

}

**public** **void** setPassword(String password) {

**this**.password = password;

}

}

web.xml

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

<web-app xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"* xmlns=*"http://xmlns.jcp.org/xml/ns/javaee"* xsi:schemaLocation=*"http://xmlns.jcp.org/xml/ns/javaee http://xmlns.jcp.org/xml/ns/javaee/web-app\_4\_0.xsd"* id=*"WebApp\_ID"* version=*"4.0"*>

<display-name>SpringMVC</display-name>

<servlet>

<servlet-name>spring-dispatcher</servlet-name>

<servlet-class>

org.springframework.web.servlet.DispatcherServlet

</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>spring-dispatcher</servlet-name>

<url-pattern>/</url-pattern>

</servlet-mapping>

</web-app>

spring-servlet.xml

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

<beans xmlns=*"http://www.springframework.org/schema/beans"*

xmlns:context=*"http://www.springframework.org/schema/context"*

xmlns:mvc=*"http://www.springframework.org/schema/mvc"*

xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"*

xsi:schemaLocation=*"*

*http://www.springframework.org/schema/beans*

*http://www.springframework.org/schema/beans/spring-beans-3.0.xsd*

*http://www.springframework.org/schema/context*

*http://www.springframework.org/schema/context/spring-context-3.0.xsd*

*http://www.springframework.org/schema/mvc*

*http://www.springframework.org/schema/mvc/spring-mvc-3.0.xsd"*>

<mvc:annotation-driven/>

<context:component-scan base-package = *"com.controller"*/>

<mvc:interceptors>

<bean class = *"org.springframework.web.servlet.i18n.LocaleChangeInterceptor"*>

<property name = *"paramName"* value=*"siteLanguage"* />

</bean>

</mvc:interceptors>

<bean id=*"viewResolver"* class=*"org.springframework.web.servlet.view.InternalResourceViewResolver"*>

<property name = *"prefix"*>

<value>/WEB-INF/</value>

</property>

<property name = *"suffix"*>

<value>.jsp</value>

</property>

</bean>

<bean id = *"messageSource"*

class = *"org.springframework.context.support.ReloadableResourceBundleMessageSource"*>

<property name=*"basename"* value = *"/WEB-INF/studentmessages"* />

</bean>

<bean id = *"localeResolver"*

class = *"org.springframework.web.servlet.i18n.CookieLocaleResolver"* />

</beans>

studentmessages\_en.properties

label.username = Username

label.password = Password

studentmessages\_fr.properties

label.username = Nom d'utilisateur

label.password = le mot de passe

studentmessages\_vt.properties

label.username = m\u1EADt kh\u1EA9u m\u1EDF khóa

label.password = tên tài kho\u1EA3n

LoginPage.jsp

<%@ taglib prefix = "form" uri = "http://www.springframework.org/tags/form" %>

<%@ taglib prefix = "spring" uri = "http://www.springframework.org/tags" %>

<html>

<body>

<a href = "/Assignment8/getpage.html?siteLanguage=en">(Login)English</a> |

<a href = "/Assignment8/getpage.html?siteLanguage=fr">(Login)French</a> |

<a href = "/Assignment8/getpage.html?siteLanguage=vt">(Login)Vietenames</a>

<form:errors path = "user1.\*/"/>

<form action = "/Assignment8/output.html" method = "post">

<p> <spring:message code = "label.username" /> : <input type = "text" name = "username"/></p>

<p> <spring:message code = "label.password" />: <input type = "password" name = "password"/></p>

<input type = "submit" value = "Submit"/>

</form>

</body>

</html>