**16.1. Validating a Number Range**

**Validate a Number Range**:

1. Add a new input field on our form for: Free Passes
2. User can only enter a range: 0 to 10

**Development Process (Step by Step)**:

1. Add validation rule to Customer class
2. Display error messages on HTML form
3. Perform validation in the Controller class
4. Update confirmation page

**1) Add validation rule to Customer class**:

**package** com.ruhul.odduu.springmvc;

**import** javax.validation.constraints.Max;

**import** javax.validation.constraints.Min;

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

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

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

**private** String firstName;

@NotNull(message = "is required")

@Size(min = 1, message = "is required")

**private** String lastName;

@Min(value = 0, message = "must be greater than or equal to zero")

@Max(value = 10, message = "must be less than or equal to zero")

**private** **int** freePasses;

**public** **int** getFreePasses() {

**return** freePasses;

}

**public** **void** setFreePasses(**int** freePasses) {

**this**.freePasses = freePasses;

}

**public** String getFirstName() {

**return** firstName;

}

**public** **void** setFirstName(String firstName) {

**this**.firstName = firstName;

}

**public** String getLastName() {

**return** lastName;

}

**public** **void** setLastName(String lastName) {

**this**.lastName = lastName;

}

}

**2) Display error messages on HTML form**:

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

<html>

<head>

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

<title>Customer Registration Form</title>

<style type=*"text/css"*>

*.error* {

color: *red*;

}

</style>

</head>

<body>

<i><b>Fill out the form. Asterisk (\*) means required</b></i>

<br></br>

<form:form action=*"processForm"* modelAttribute=*"customer"*>

First Name: <form:input path=*"firstName"* />

<br></br>

Last Name (\*): <form:input path=*"lastName"* />

<form:errors path=*"lastName"* cssClass=*"error"* />

<br></br>

Free Passes: <form:input path=*"freePasses"* />

<form:errors path=*"freePasses"* cssClass=*"error"* />

<br></br>

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

</form:form>

</body>

</html>

**3) Perform validation in the Controller class**:

No need to change the controller class. It will be the same

**package** com.ruhul.odduu.springmvc;

**import** javax.validation.Valid;

**import** org.springframework.beans.propertyeditors.StringTrimmerEditor;

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

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

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

**import** org.springframework.web.bind.WebDataBinder;

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

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

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

@Controller

@RequestMapping("/customer")

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

// add an initbinder.. to convert trim input string

// remove leading and trailing whitespace

// resolve issue for our validation

@InitBinder

**public** **void** initBinder(WebDataBinder dataBinder) {

// it is part of Spring API. true means trim to null

StringTrimmerEditor stringTrimmerEditor = **new** StringTrimmerEditor(**true**);

dataBinder.registerCustomEditor(String.**class**, stringTrimmerEditor);

}

@RequestMapping("/showForm")

**public** String showForm(Model theModel) {

theModel.addAttribute("customer", **new** Customer());

**return** "customer-form";

}

@RequestMapping("/processForm")

**public** String processForm(@Valid @ModelAttribute("customer") Customer theCustomer, BindingResult theBindingResult) {

System.***out***.println("Last name: |" + theCustomer.getLastName() + " |");

**if** (theBindingResult.hasErrors()) {

**return** "customer-form";

} **else** {

**return** "customer-confirmation";

}

}

}

**4) Update confirmation page**:

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

<!DOCTYPE html>

<html>

<head>

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

<title>Customer Confirmation</title>

</head>

<body>

The customer is confirmed: ${customer.firstName} ${customer.lastName}

<br></br>

Free Passes: ${customer.freePasses}

</body>

</html>

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