Chapter 1: Configuring a Spring Development Environment

![Java SE Development Kit 8 Update 91 (64-bit) - Custom Setup](image)

Select optional features to install from the list below. You can change your choice of features after installation by using the Add/Remove Programs utility in the Control Panel.

**Feature Description**

Java SE Development Kit 8 Update 91 (64-bit), including the JavaFX SDK, a private JRE, and the Java Mission Control tools suite. This will require 180MB on your hard drive.

**Install to:**
C:\Program Files\Java\jdk1.8.0_91\

**New System Variable**

Variable name: JAVA_HOME

Variable value: C:\Program Files\Java\jdk1.8.0_91\

[OK] [Cancel]
C:\ProgramData\Oracle\Java\javapath
C:\Program Files (x86)\Intel\iCLS Client\C:\Program Files\Intel\iCLS Client\%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\C:\Program Files\Intel\Intel(R) Management Engine Components\C:\Program Files (x86)\Intel\Intel(R) Management Engine Components\C:\Program Files (x86)\Intel\Intel(R) Management Engine Components\C:\Program Files (x86)\Intel\Intel(R) Management Engine Components\C:\Program Files (x86)\Intel\Management Engine Components\C:\Program Files (x86)\ATI Technologies\ATI.ACE\Core-Static
%JAVA_HOME%\bin
%M2_HOME%\bin
Please select the path of a Java SE 7.0 or later JRE installed on your system.

C:\Program Files\Java\jre1.8.0_91
New Maven Runtime

Specify attributes for a Maven installation

Installation type:  ☐ External  ☐ Workspace
Installation home: C:\Program Files\apache-maven-3.3.9
Installation name: apache-maven-3.3.9
Additional extension libraries:

Finish  Cancel
New Server Runtime Environment

Define a new server runtime environment

Select the type of runtime environment:

- tomcat
  - Apache Tomcat v3.2
  - Apache Tomcat v4.0
  - Apache Tomcat v4.1
  - Apache Tomcat v5.0
  - Apache Tomcat v5.5
  - Apache Tomcat v6.0
  - Apache Tomcat v7.0
  - Apache Tomcat v8.0

Apache Tomcat v8.0 supports J2EE 1.2, 1.3, 1.4, and Java EE 5, 6, and 7 Web modules.

- Create a new local server

< Back  Next >  Finish  Cancel
New Server Runtime Environment

Tomcat Server

Specify the installation directory

Name:
Apache Tomcat v8.0

Tomcat installation directory:
C:\Program Files\Apache Software Foundation\Tomcat 8.0

JRE:
Workbench default JRE

Download and Install...
Select a wizard
Create a Maven Project

Wizards:

- General
- AspectJ
- Eclipse Modeling Framework
- EJB
- Java
- Java EE
- JavaScript
- JAXB
- JPA
- Maven
  - Check out Maven Projects from SCM
  - Maven Module
  - Maven Project
- Plug-in Development
webstore/pom.xml

Overview

Artifact
Group Id: com.packt
Artifact Id: webstore
Version: 0.0.1-SNAPSHOT
Packaging: war

Parent
Properties

New module element

Add property
Name: maven.compiler.source
Value: 1.8

OK Cancel
Group Id: org.springframework
Artifact Id: spring-webmvc
Version: 4.3.0.RELEASE
Scope: compile

Enter groupld, artifactId or sha1 prefix or pattern (*):

⚠️ Index downloads are disabled, search results may be incomplete.

Search Results:
Package Explorer

- Servers

- webstore
  - src/main/java
  - src/main/resources
  - src/test/java
  - src/test/resources

- Maven Dependencies
  - spring-webmvc-4.3.0.RELEASE.jar - C:\Users\Amuthan\m2\repository
  - spring-aop-4.3.0.RELEASE.jar - C:\Users\Amuthan\m2\repository
  - spring-beans-4.3.0.RELEASE.jar - C:\Users\Amuthan\m2\repository
  - spring-context-4.3.0.RELEASE.jar - C:\Users\Amuthan\m2\repository
  - spring-core-4.3.0.RELEASE.jar - C:\Users\Amuthan\m2\repository
  - commons-logging-1.2.jar - C:\Users\Amuthan\m2\repository
  - spring-expression-4.3.0.RELEASE.jar - C:\Users\Amuthan\m2\repository
  - spring-web-4.3.0.RELEASE.jar - C:\Users\Amuthan\m2\repository
  - jstl-1.2.jar - C:\Users\Amuthan\m2\repository
  - javax.servlet-api-3.1.0.jar - C:\Users\Amuthan\m2\repository

- JRE System Library [JavaSE-1.8]

- src

- target

- pom.xml
Welcome to Web Store!

The one and only amazing web store
Run On Server

Select which server to use

How do you want to select the server?

○ Choose an existing server

○ Manually define a new server

Select the server that you want to use:

<table>
<thead>
<tr>
<th>Server</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>![localhost]</td>
<td></td>
</tr>
<tr>
<td>![Tomcat v8.0 Server at localhost]</td>
<td>Stopped</td>
</tr>
</tbody>
</table>

Apache Tomcat v8.0 supports J2EE 1.2, 1.3, 1.4, and Java EE 5, 6, and 7 Web modules.

Always use this server when running this project
Welcome to Web Store!

The one and only amazing web store
HTTP Status 404 - /webstore/welcome

type Status report
message /webstore/welcome
description The requested resource is not available.

Apache Tomcat/8.0.36

http://localhost:8080/webstore/products/search?pid=123

“Scheme” “Host name” “application name” “Request path” “Parameters”

HTTP Status 404 - /webstore/WEB-INF/views/welcome.jsp

type Status report
message /webstore/WEB-INF/views/welcome.jsp
description The requested resource is not available.

Apache Tomcat/8.0.36
Products

All the available products in our store

iPhone 6s

Apple iPhone 6s smartphone with 4.00-inch 640x1136 display and 8-megapixel rear camera

500 USD

Available 1000 units in stock
Products
All the available products in our store

iPhone 6s
Apple iPhone 6s smartphone with 4.00-inch 640x1136 display and 8-megapixel rear camera
$500
Available 450 units in stock

Dell Inspiron
Dell Inspiron 14-inch Laptop (Black) with 3rd Generation Intel Core processors
$700
Available 1000 units in stock

Nexus 7
Google Nexus 7 is the lightest 7 inch tablet With a quad-core Qualcomm Snapdragon? S4 Pro processor
$300
Available 1000 units in stock
Chapter 3: Control Your Store with Controllers

Products
All the available products in our store

Nexus 7
Google Nexus 7 is the lightest 7 inch tablet With a quad-core Qualcomm Snapdragon S4 Pro processor

$300
Available 1000 units in stock
Products

All the available products in our store

Dell Inspiron
Dell Inspiron 14-inch Laptop (Black) with 3rd Generation Intel Core processors
$700
Available 1000 units in stock

Nexus 7
Google Nexus 7 is the lightest 7 inch tablet with a quad-core Qualcomm Snapdragon 84 Pro processor
$300
Available 1000 units in stock
Products

iPhone 6s

Apple iPhone 6s smartphone with 4.00-inch 640x1136 display and 8-megapixel rear camera

Item Code: P1234
manufacturer: Apple
category: Smart Phone
Available units in stock: 450

500 USD

Order Now
Products
All the available products in our store

iPhone 6s
Apple iPhone 6s smartphone with 4.00-inch 640x1136 display and 8-megapixel rear camera
$600
Available 1450 units in stock
Details

Dell Inspiron
Dell Inspiron 14-Inch Laptop (Black) with 3rd Generation Intel Core processors
$700
Available 1000 units in stock
Details

Nexus 7
Google Nexus 7 is the lightest 7 inch tablet with a quad-core Qualcomm Snapdragon S4 Pro processor
$300
Available 1000 units in stock
Details
Chapter 4: Working with Spring Tag Libraries

Add new product

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Id</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Unit Price</td>
<td></td>
</tr>
<tr>
<td>Manufacturer</td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td></td>
</tr>
<tr>
<td>Unit in Stock</td>
<td>0</td>
</tr>
<tr>
<td>Unit in Order</td>
<td>0</td>
</tr>
<tr>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>Discontinued</td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td>New</td>
</tr>
<tr>
<td></td>
<td>Old</td>
</tr>
<tr>
<td></td>
<td>Refurbished</td>
</tr>
</tbody>
</table>

Add
HTTP Status 500 - Request processing failed; nested exception is java.lang.RuntimeException: Attempting to bind disallowed fields: unitsInOrder,discontinued
Chapter 5: Working with View Resolver

Products
All the available products in our store

### iPhone 6s
Apple iPhone 6s smartphone with 4.00-inch 640x1136 display and 8-megapixel rear camera
$500
Available 450 units in stock

### Dell Inspiron
Dell Inspiron 14-inch Laptop (Black) with 3rd Generation Intel Core processors
$700
Available 1000 units in stock

### Nexus 7
Google Nexus 7 is the lightest 7 inch tablet With a quad-core Qualcomm Snapdragon? S4 Pro processor
$300
Available 1000 units in stock

## Products

### Dell Inspiron
Dell Inspiron 14-inch Laptop (Black) with 3rd Generation Intel Core processors
- **Item Code:** P1235
- **manufacturer:** Dell
- **category:** Laptop
- **Available units in stock:** 1000

700USD

[Order Now]
Add new product

- <product>
  - <category>Laptop</category>
  - <condition>New</condition>
  - <description>Dell Inspiron 14-inch Laptop (Black) with 3rd Generation Intel Core processors</description>
  - <discontinued>false</discontinued>
  - <manufacturer>Dell</manufacturer>
  - <name>Dell Inspiron</name>
  - <productId>P1235</productId>
  - <unitPrice>700</unitPrice>
  - <unitsInOrder>0</unitsInOrder>
  - <unitsInStock>1000</unitsInStock>
</product>
{  "product": {    "productId": "P1235",    "name": "Dell Inspiron",    "unitPrice": 700,    "description": "Dell Inspiron 14-inch Laptop (Black) with 3rd Generation Intel Core processors",    "manufacturer": "Dell",    "category": "Laptop",    "unitsInStock": 1000,    "unitsInOrder": 0,    "discontinued": false,    "condition": "New"  }
}
There is no product found with the Product id P1000

http://localhost:8080/webstore/market/product?id=P1000

com.packt.webstore.exception.ProductNotFoundException

products
Chapter 6: Internalize Your Store with Interceptor

ProcessingTimeLogInterceptor:28 - 20 millisecond taken to process the request http://localhost:8080/webstore/.
Add new product

New Product ID

Name

Unit Price

Manufacturer

Category

Units in stock

Description

Condition

Product Image file

Add
Invalid promo code
Products
All the available products in our store

iPhone 6s
Apple iPhone 6s smartphone with 4.00-inch 640x1136 display and 8-megapixel rear camera
$500
Available 450 units in stock
Details

Dell Inspiron
Dell Inspiron 14-inch Laptop (Black) with 3rd Generation Intel Core processors
$700
Available 1000 units in stock
Details

Nexus 7
Google Nexus 7 is the lightest 7 inch tablet With a quad-core Qualcomm Snapdragon? S4 Pro processor
$300
Available 1000 units in stock
Details
Chapter 7: Incorporating Spring Security

Please sign in

Invalid username and password.

Enter Username

Enter Password

Log in
Access Denied: You are not authorised!

Enter Username

Enter Password

Log in
Chapter 8: Validate Your Products with a Validator

Add new product

Invalid product name. It should be minimum 4 characters to maximum 50 characters long.
Invalid product ID. It should start with character P followed by number.
Unit price is invalid. It cannot be empty.

New Product ID
Name
Unit Price
Manufacturer
Category
Units in stock
Description
Condition
Product Image file

A product already exists with this product id.

New Product ID
Name
Unit Price
Manufacturer
Category
Units in stock
Description
Condition
Product Image file

A product already exists with this product id.
Add new product

You cannot add more than 99 units if the unit price is greater than 1000.

<table>
<thead>
<tr>
<th>New Product ID</th>
<th>P1237</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Sony Head Phone</td>
</tr>
<tr>
<td>Unit Price</td>
<td>1500</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Sony</td>
</tr>
<tr>
<td>Category</td>
<td>Head phones</td>
</tr>
<tr>
<td>Units in stock</td>
<td>150</td>
</tr>
<tr>
<td>Description</td>
<td>With built-in noise canceling technology</td>
</tr>
<tr>
<td>Condition</td>
<td>New Refurbished</td>
</tr>
<tr>
<td>Product Image file</td>
<td>Choose File No file chosen</td>
</tr>
</tbody>
</table>

Add new product

Invalid product name. It should be minimum 4 characters to maximum 50 characters long.
A product already exists with this product id.
You cannot add more than 99 units if the unit price is greater than 1000.

<table>
<thead>
<tr>
<th>New Product ID</th>
<th>P1234 A product already exists with this product id.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Unit Price</td>
<td>1500</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Sony</td>
</tr>
<tr>
<td>Category</td>
<td>Head phones</td>
</tr>
<tr>
<td>Units in stock</td>
<td>150</td>
</tr>
<tr>
<td>Description</td>
<td>With built-in noise canceling technology</td>
</tr>
<tr>
<td>Condition</td>
<td>New Refurbished</td>
</tr>
<tr>
<td>Product Image file</td>
<td>Choose File No file chosen</td>
</tr>
</tbody>
</table>

Add
Chapter 9: Give REST to Your Application with Ajax
Cart

All the selected products in your cart

<table>
<thead>
<tr>
<th>Product</th>
<th>Unit price</th>
<th>Quantity</th>
<th>Price</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1234-iPhone 6s</td>
<td>500</td>
<td>1</td>
<td>500</td>
<td>Remove</td>
</tr>
</tbody>
</table>

Grand Total 500
Chapter 10: Float Your Application with Web Flow

Checkout flow overview
Customer Details

Name: John Doe
Door No: Apt # 2A
Street Name: 1808 Continental Ave
Area Name: Lisle
State: IL
country: USA
Zip Code: 60532
Phone Number: 302 409 3309

Receipt

Shipping Address
John Doe
305,6225 Lake Trail Dr,
Lisle, IL,
USA, 60563

Billing Address
John Doe
Apt # 2A, 1808 Continental Ave
Lisle, IL,
USA, 60532
P: 302 409 3309

<table>
<thead>
<tr>
<th>Product</th>
<th>#</th>
<th>Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>iPhone 6s</td>
<td>2</td>
<td>$500</td>
<td>$1000</td>
</tr>
<tr>
<td>Dell Inspiron</td>
<td>1</td>
<td>$700</td>
<td>$700</td>
</tr>
<tr>
<td>Nexus 7</td>
<td>1</td>
<td>$300</td>
<td>$300</td>
</tr>
</tbody>
</table>

Grand Total: $2000
Chapter 11: Template with Tiles

Web Store

Products
All the available products in our store

iPhone 6s
Apple iPhone 6s smartphone with a 4.7-inch 1334x750 display and 8-megapixel rear camera
$600
Available 450 units in stock
Details

Dell Inspiron
Dell Inspiron 14 inch Laptop (Black) with 3rd Generation Intel Core processor
$750
Available 1000 units in stock
Details

Nexus 7
Google Nexus 7 is the lighter 7 inch tablet with a quad-core Qualcomm Snapdragon 700 processor
$300
Available 1000 units in stock
Details

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Chapter 12: Testing Your Application
Finished after 6.272 seconds

<table>
<thead>
<tr>
<th>Run</th>
<th>Errors</th>
<th>Failures</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- product_with_existing_productId_invalid (6.176 s)
- a_valid_product_should_not_get_any_error_during_validation (0.000 s)
- product_without_productId_and_UnitPrice_and_category_should_should_be_invalid