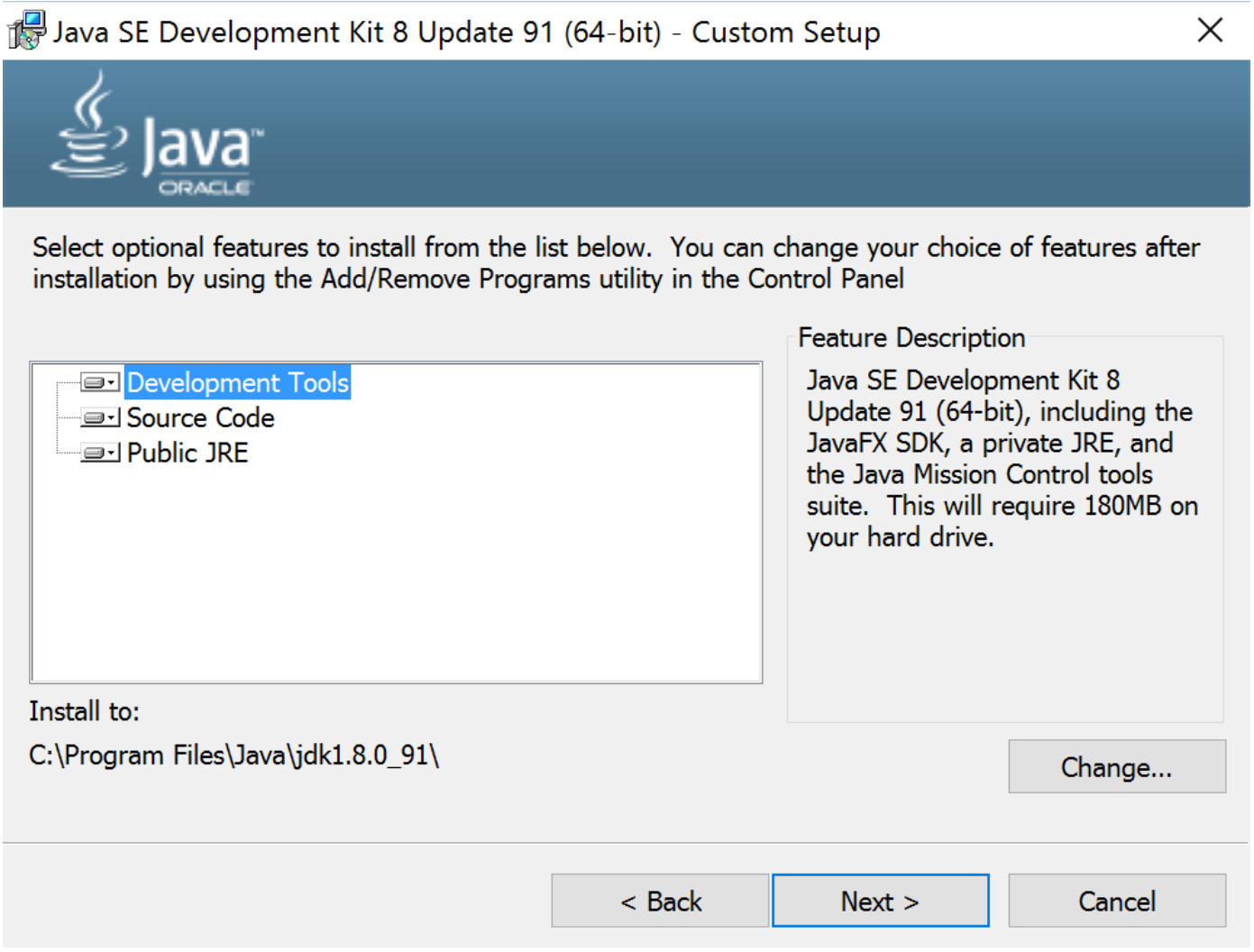
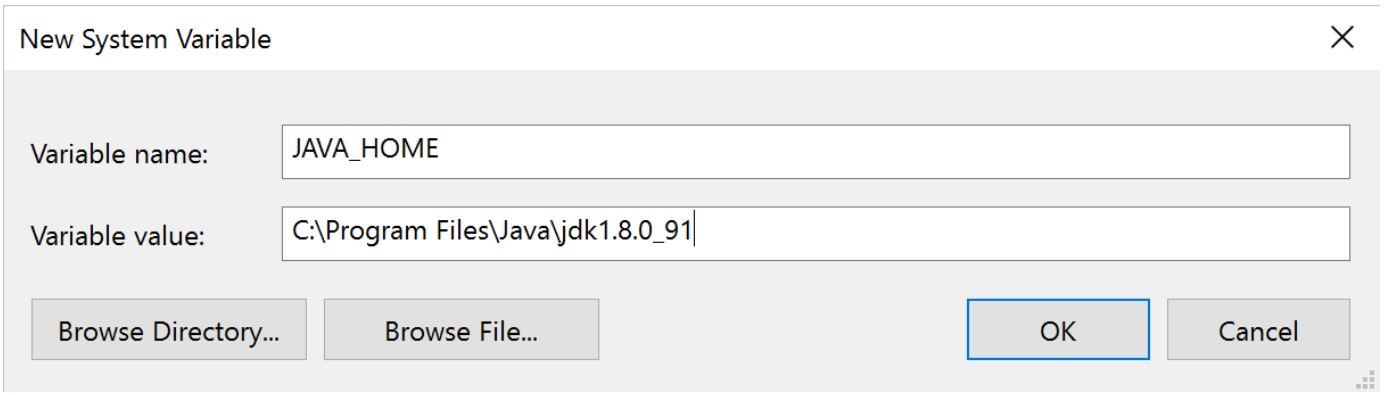
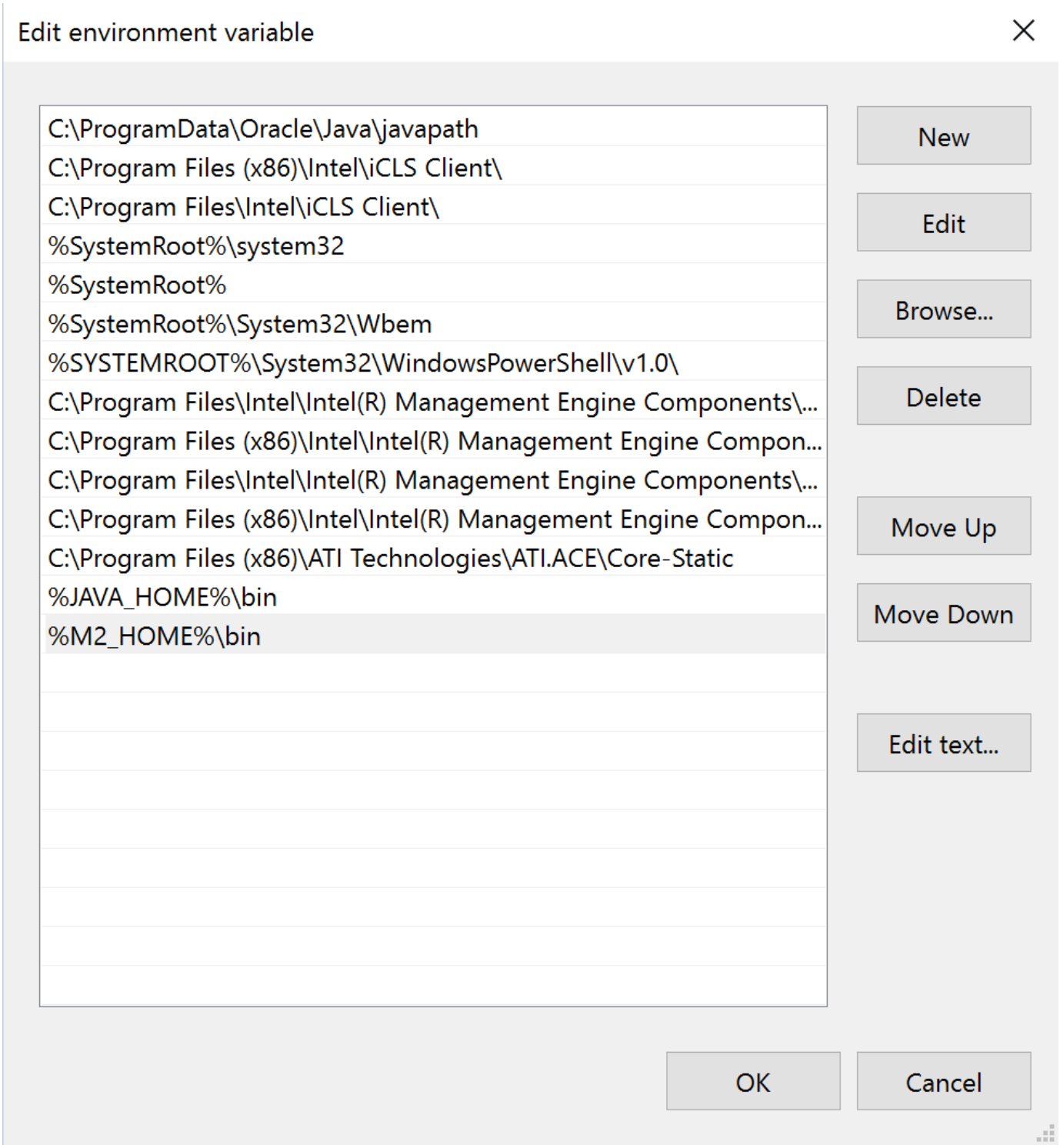
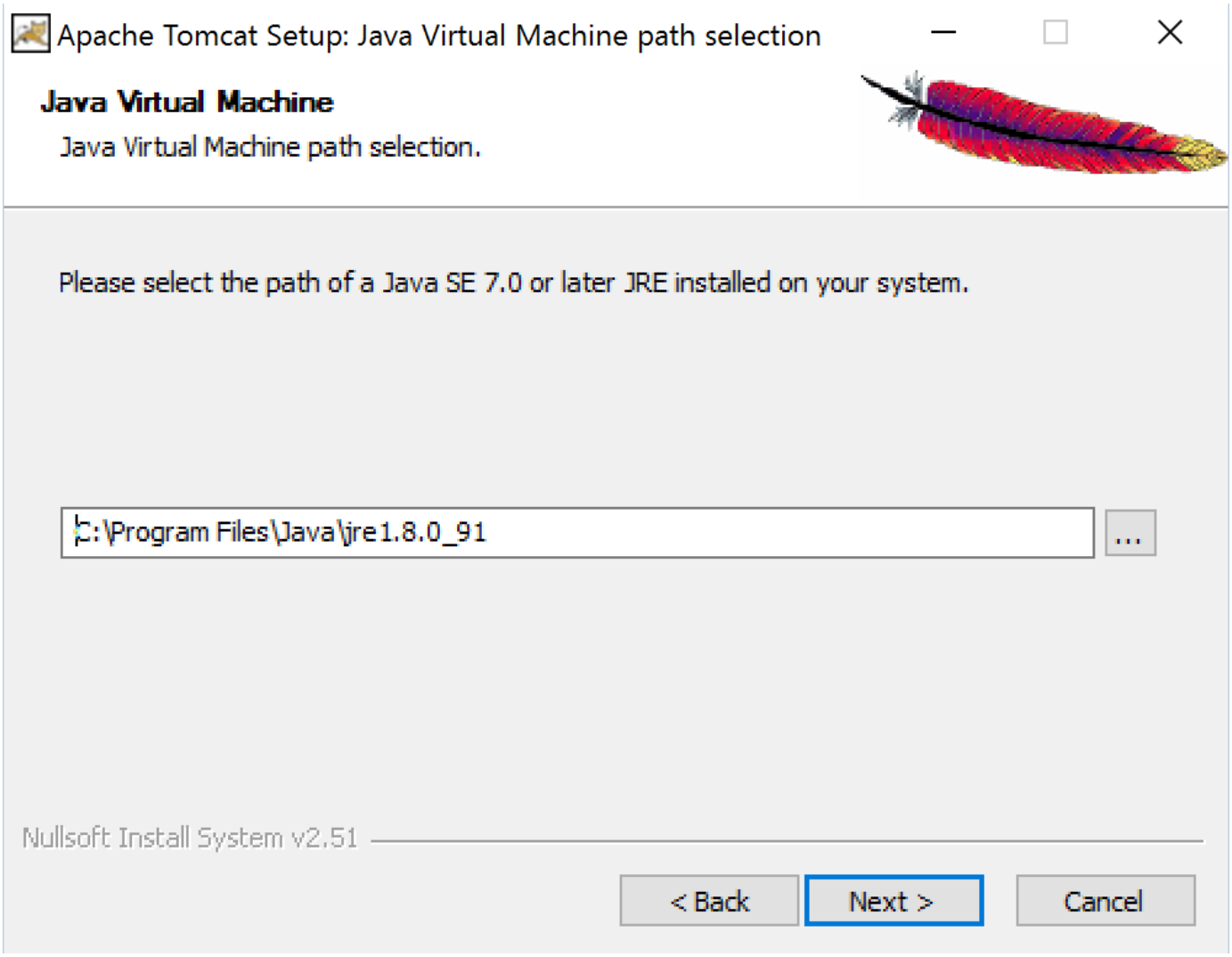
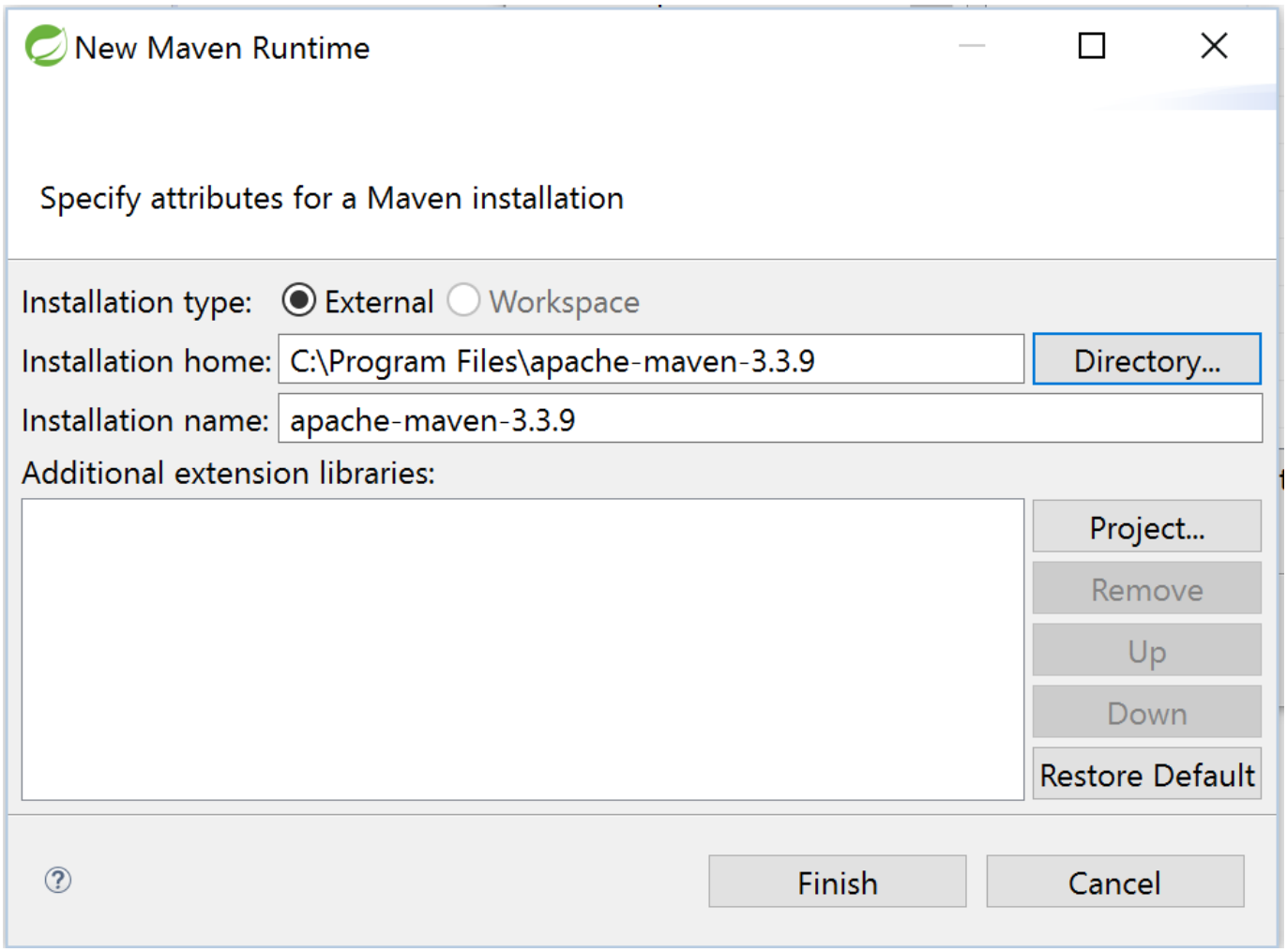
Chapter 1: Configuring a Spring Development Environment

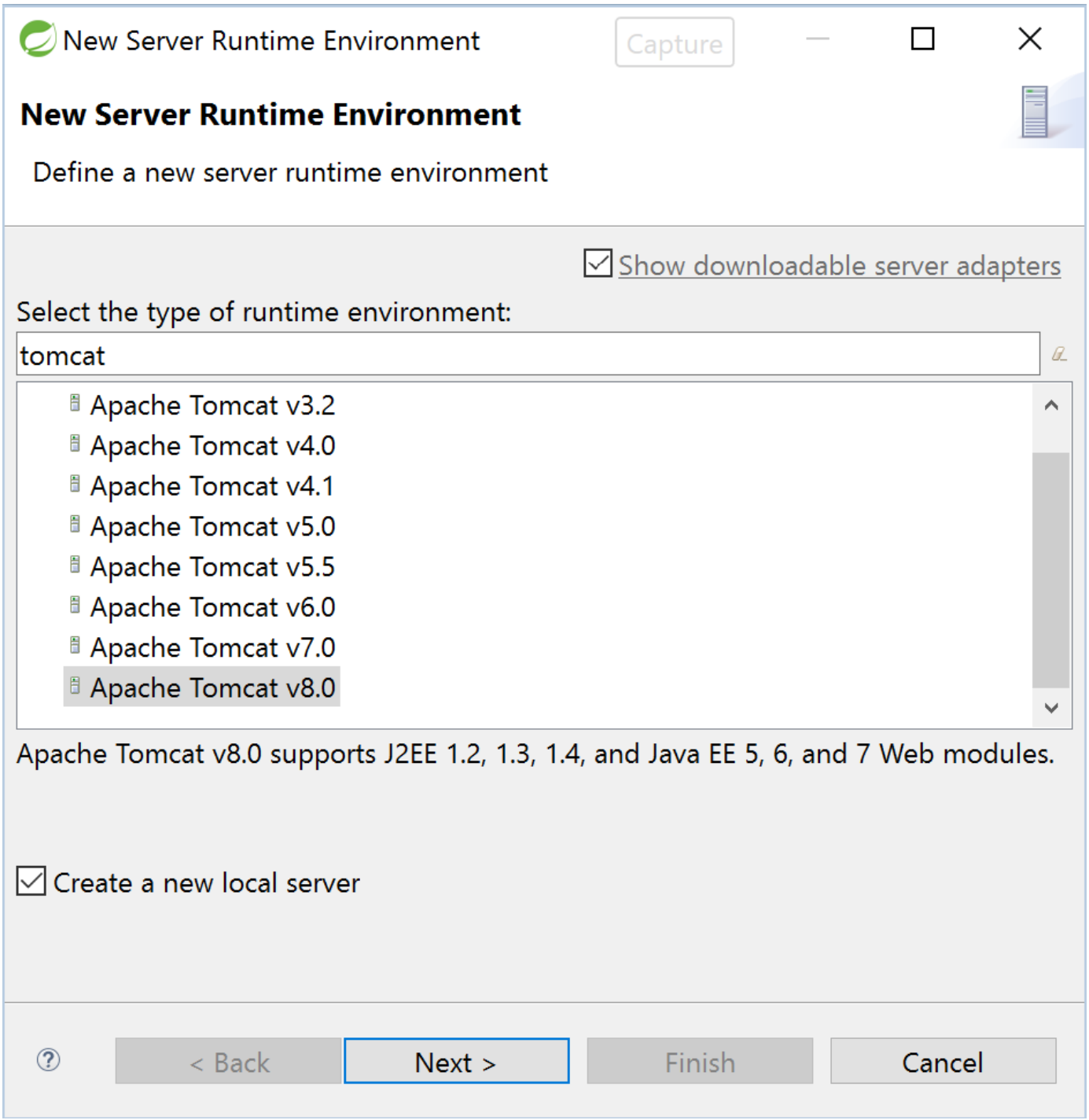


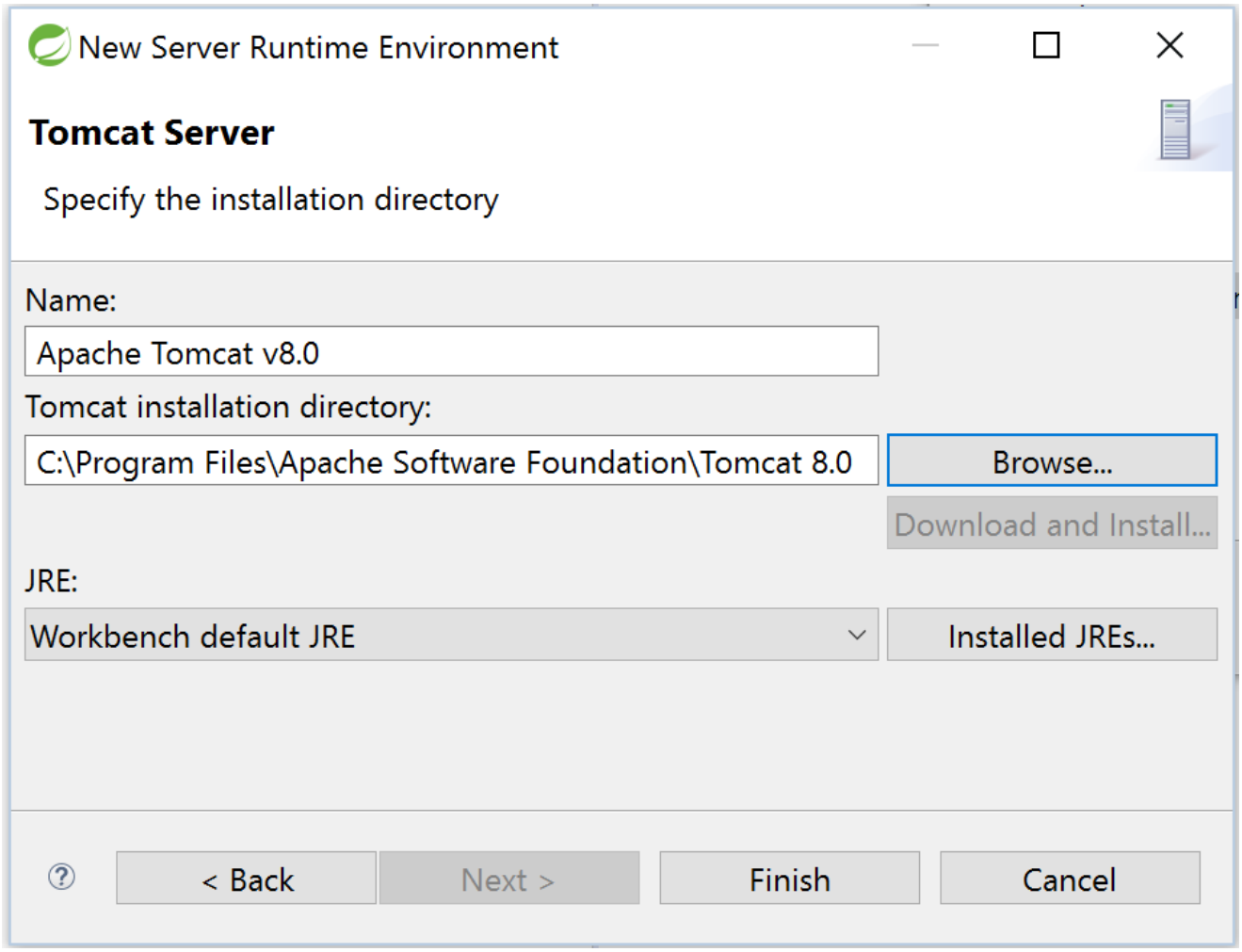


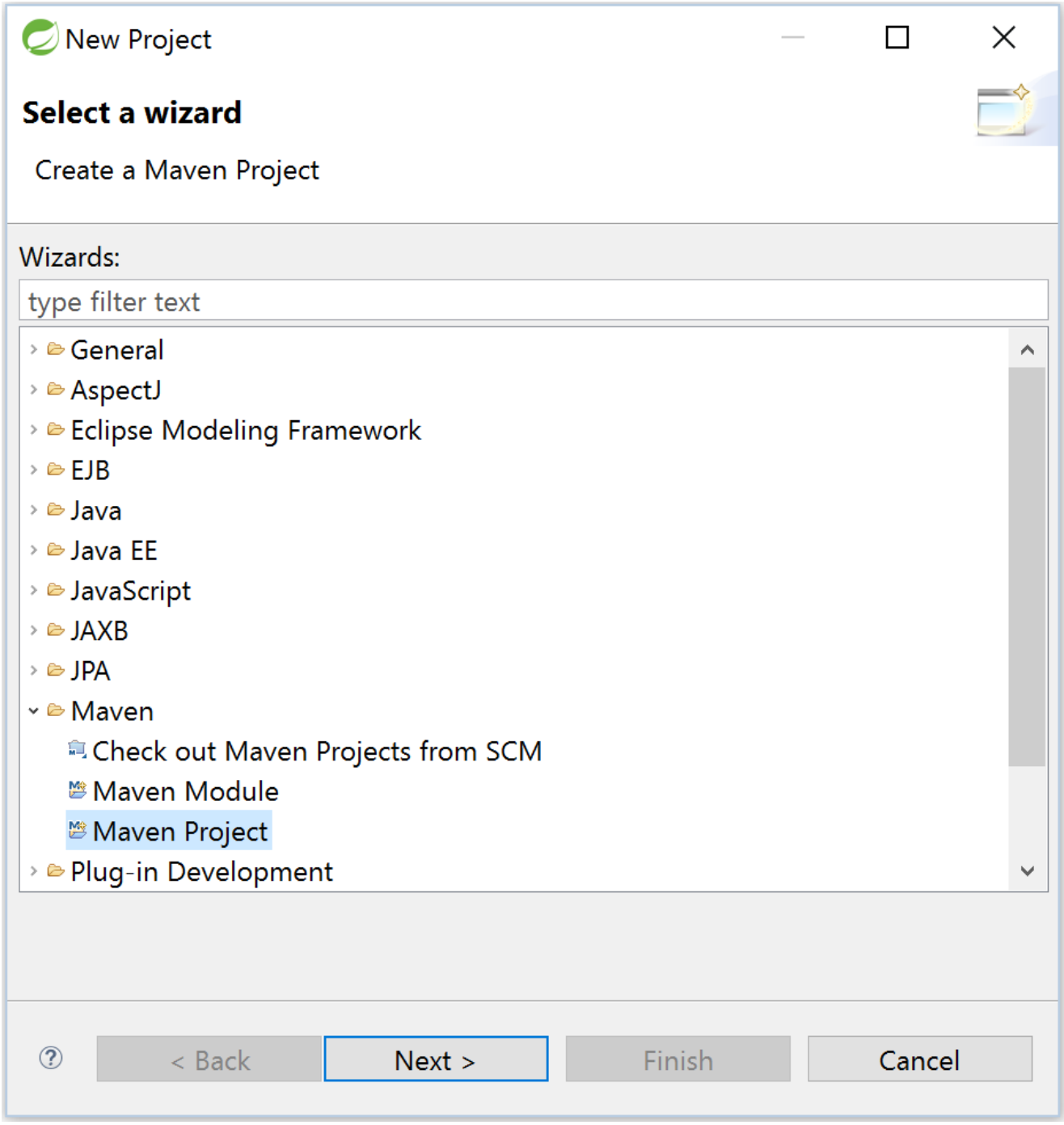

Edit environment variable
C:\ProgramData\Oracle\Java\javapath
C:\Program Files (x86)\Intel\iCLS Client\
C:\Program Files\Intel\iCLS Client\
%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\
C:\Program Files\Intel\Intel(R) Management Engine Components\...
C:\Program Files (x86)\Intel\Intel(R) Management Engine Compon...
C:\Program Files\Intel\Intel(R) Management Engine Components\...
C:\Program Files (x86)\Intel\Intel(R) Management Engine Compon...
C:\Program Files (x86)\ATI Technologies\ATI.ACE\Core-Static
%JAVA_HOME%\bin
%M2_HOME%\bin
New
Edit
Browse...
Delete
Move Up
Move Down
Edit text...
OK
Cancel

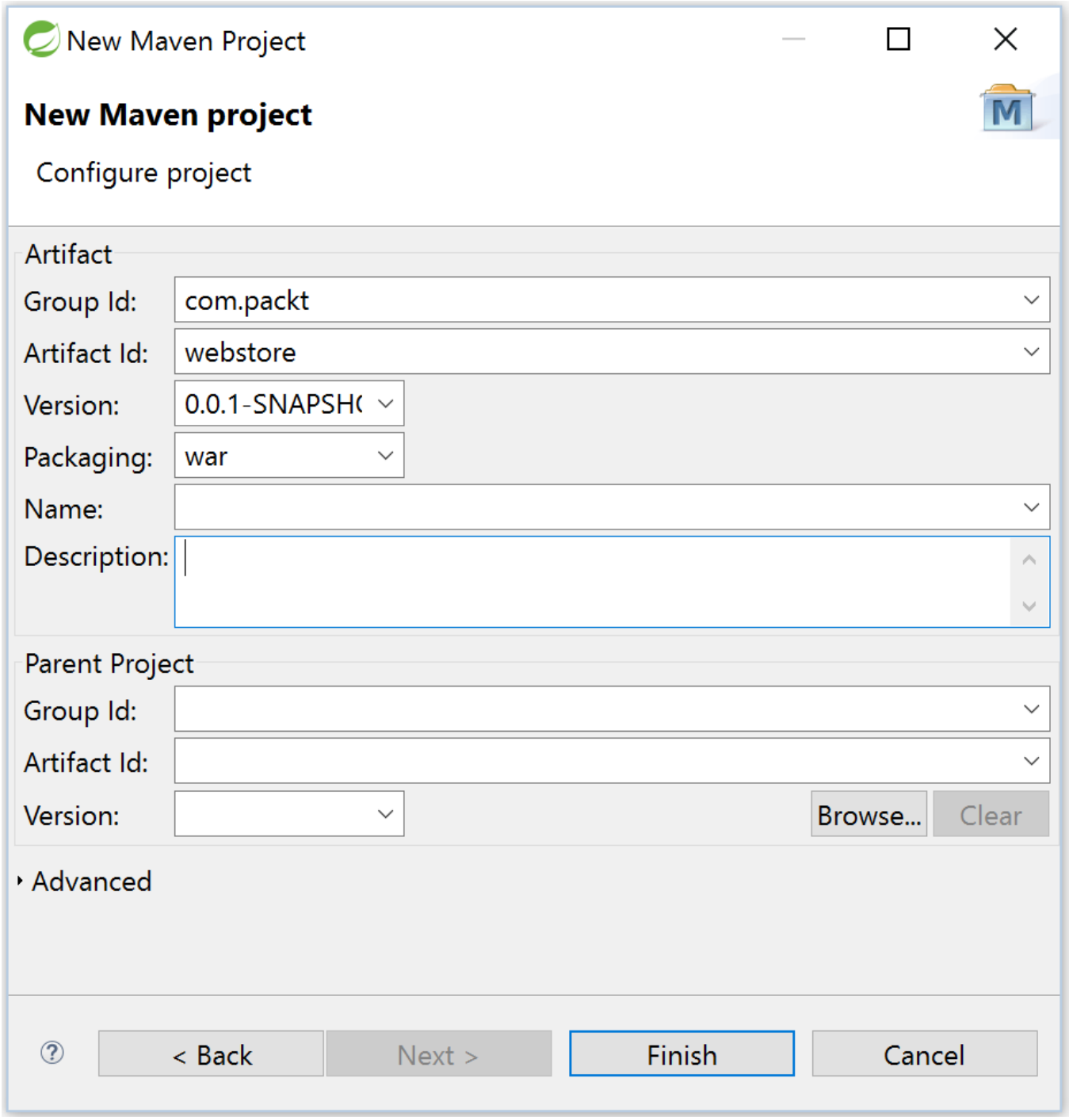

Apache Tomcat Setup: Java Virtual Machine path selection
Java Virtual Machine
Java Virtual Machine path selection.
Please select the path of a Java SE 7.0 or later JRE installed on your system.
C:\Program Files\Java\jre1.8.0_91
...
Nullsoft Install System v2.51
< Back
Next >
Cancel

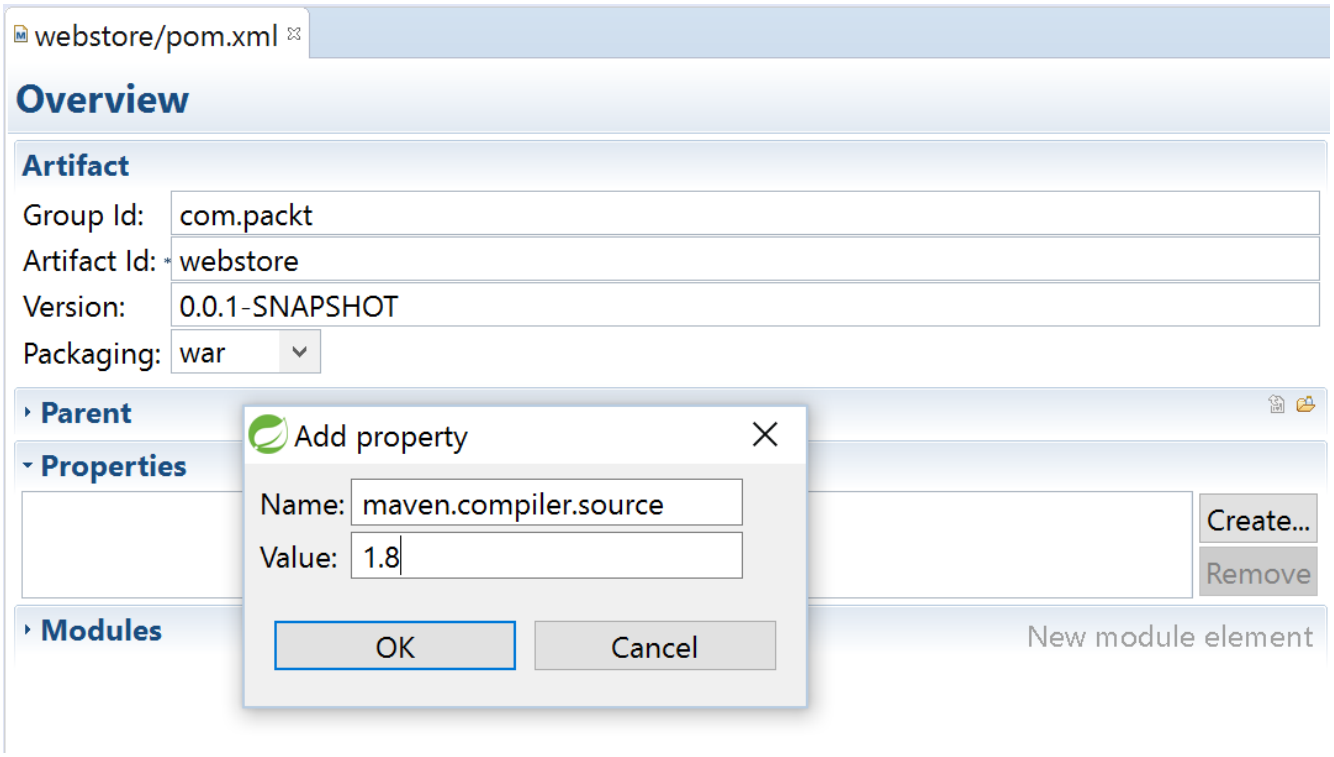

New Maven Runtime
Specify attributes for a Maven installation
Installation type:
External
Workspace
Installation home:
C:\Program Files\apache-maven-3.3.9
Directory...
Installation name:
apache-maven-3.3.9
Additional extension libraries:
Project...
Remove
Up
Down
Restore Default
Finish
Cancel

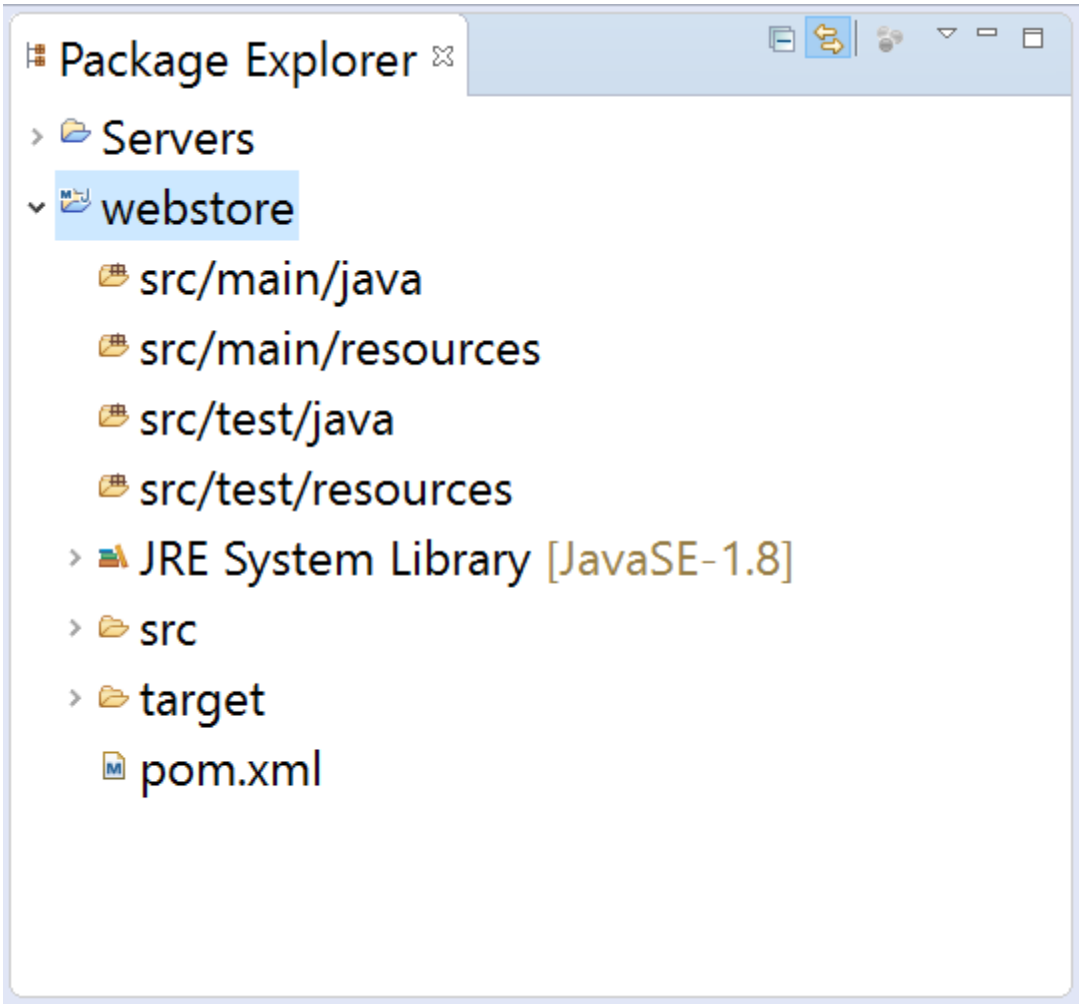

New Server Runtime Environment
Capture
New Server Runtime Environment
Define a new server runtime environment
Show downloadable server adapters
Select the type of runtime environment:
tomcat
Apache Tomcat v3.2
Apache Tomcat v4.0
Apache Tomcat v4.1
Apache Tomcat v5.0
Apache Tomcat v5.5
Apache Tomcat v6.0
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

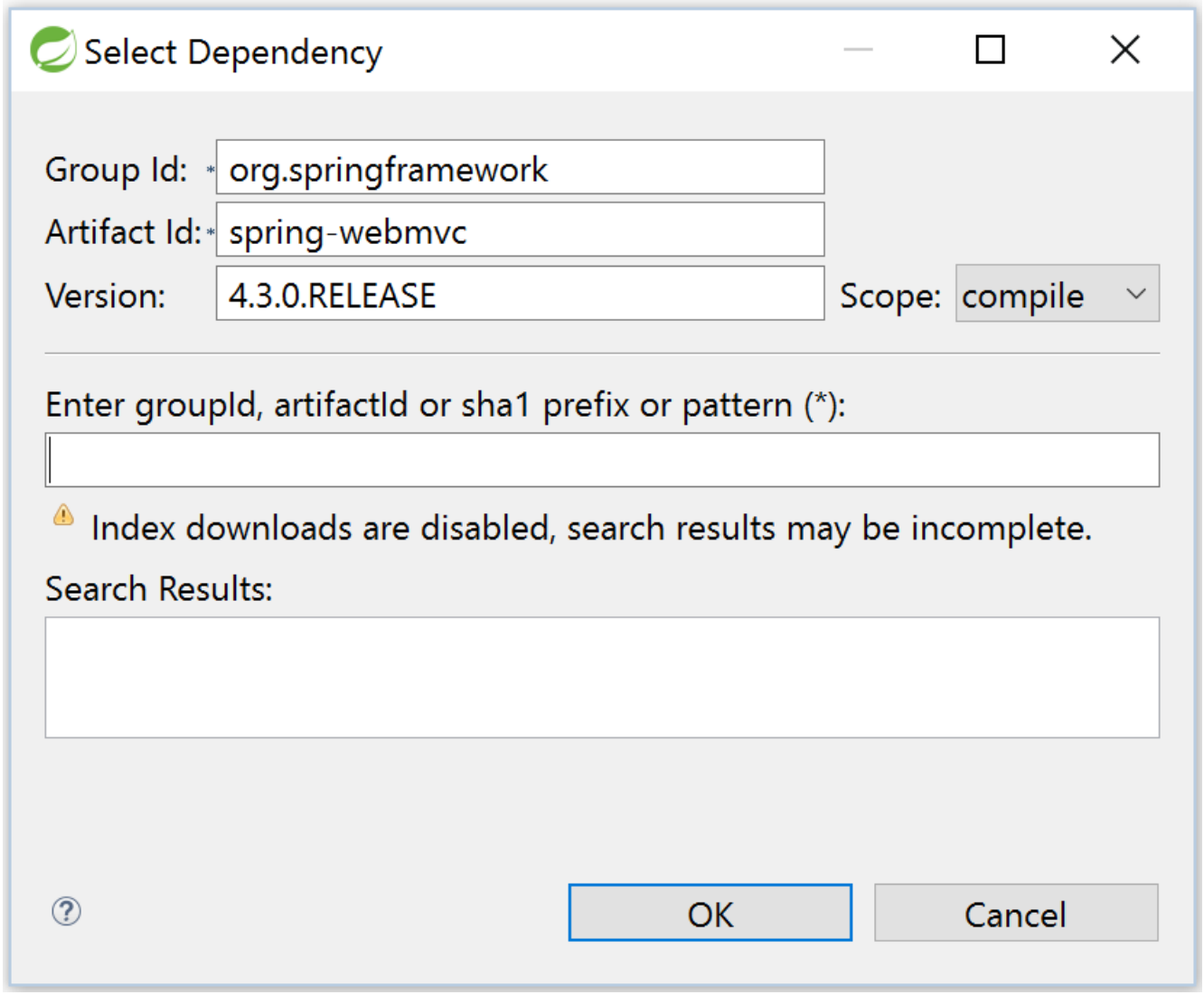

New Server Runtime Environment
Tomcat Server
Specify the installation directory
Name:
Apache Tomcat v8.0
Tomcat installation directory:
C:\Program Files\Apache Software Foundation\Tomcat 8.0
Browse...
Download and Install...
JRE:
Workbench default JRE
Installed JREs...
< Back
Next >
Finish
Cancel

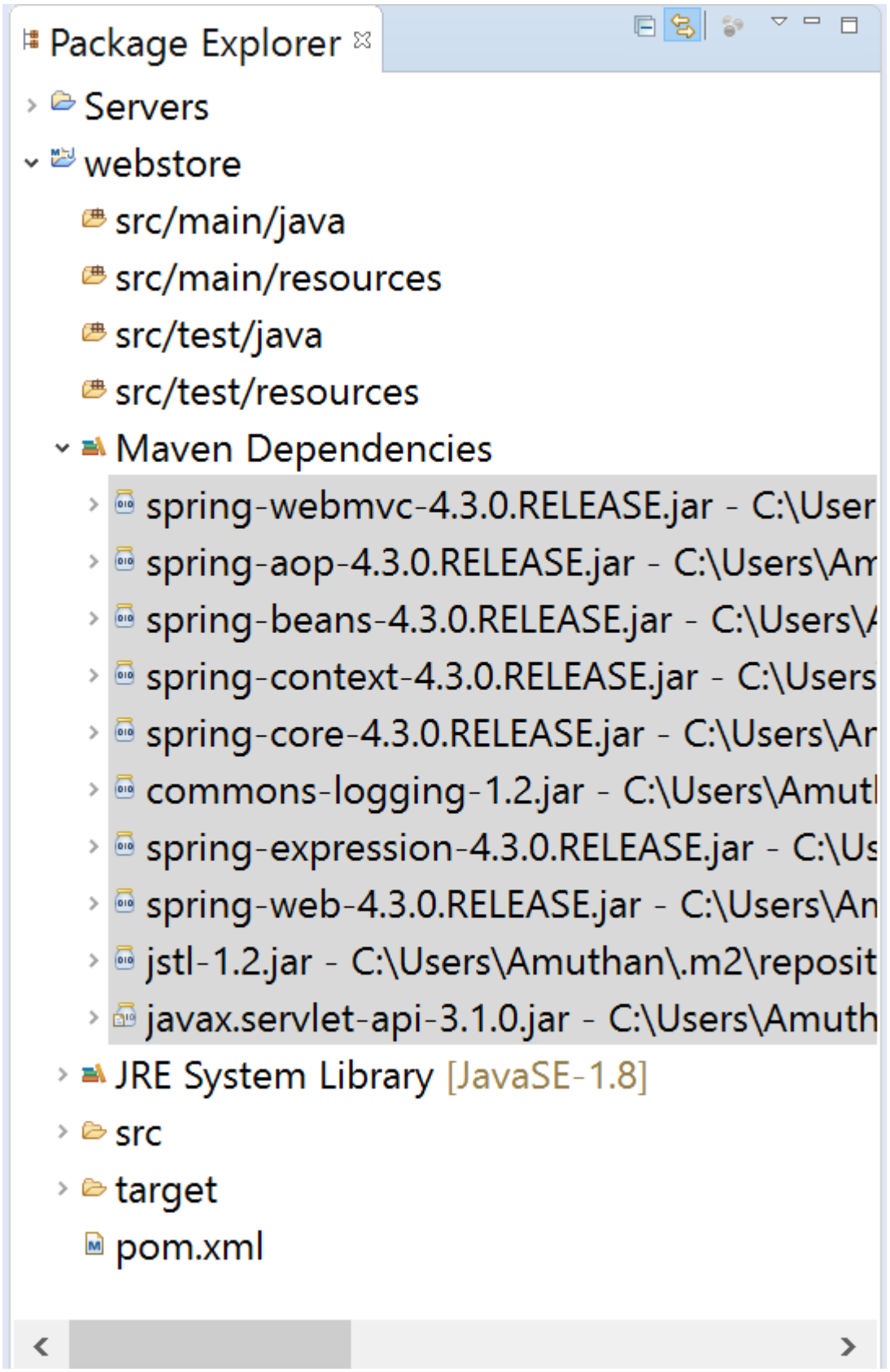

New Project
Select a wizard
Create a Maven Project
Wizards:
type filter text
General
AspectJ
Eclipse Modeling Framework
EJB
Java
Java EE
JavaScript
JAXB
JPA
Maven
Check out Maven Projects from SCM
Maven Module
Maven Project
Plug-in Development
< Back
Next >
Finish
Cancel

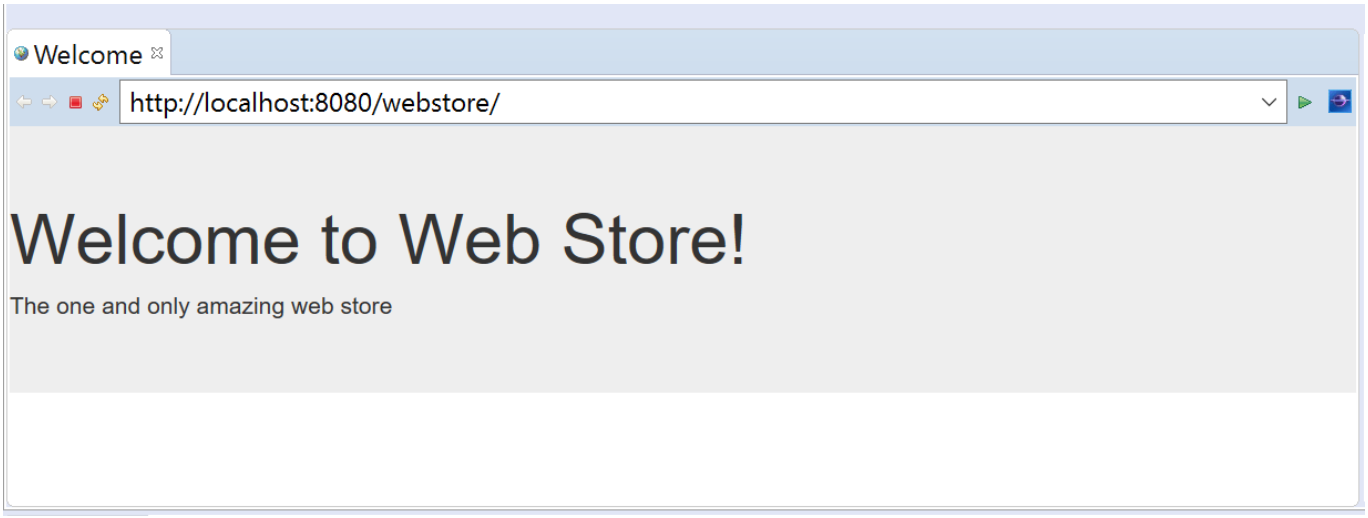

New Maven Project
New Maven project
Configure project
Artifact
Group Id:
com.packt
Artifact Id:
webstore
Version:
0.0.1-SNAPSH(
Packaging:
war
Name:
Description:
Parent Project
Group Id:
Artifact Id:
Version:
Browse...
Clear
Advanced
< Back
Next >
Finish
Cancel

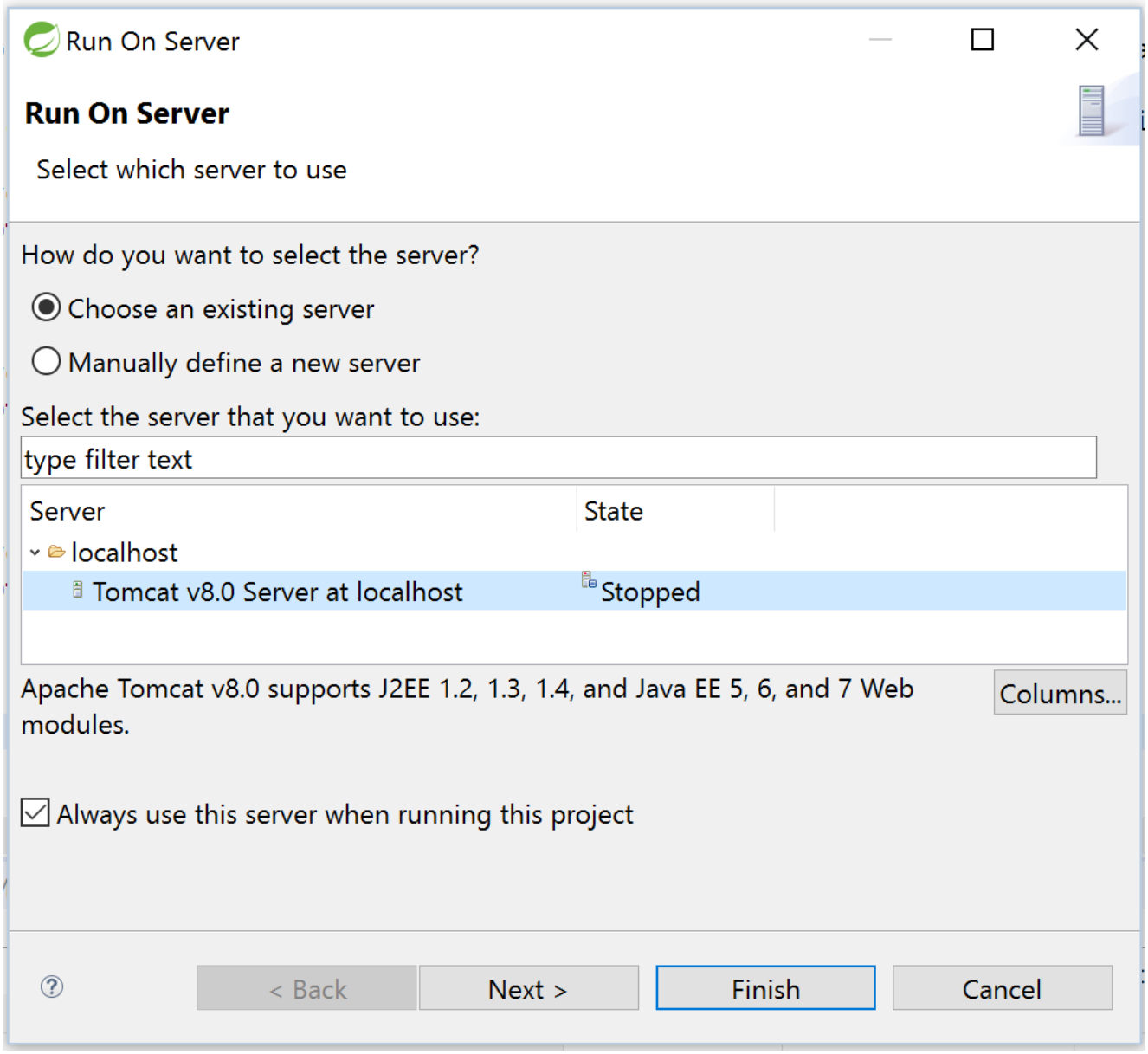

webstore/pom.xml
Overview
Artifact
Group Id: com.packt
Artifact Id: webstore
Version: 0.0.1-SNAPSHOT
Packaging: war
Parent
Properties
Create...
Remove
Modules
New module element
Add property
Name: maven.compiler.source
Value: 1.8
OK
Cancel

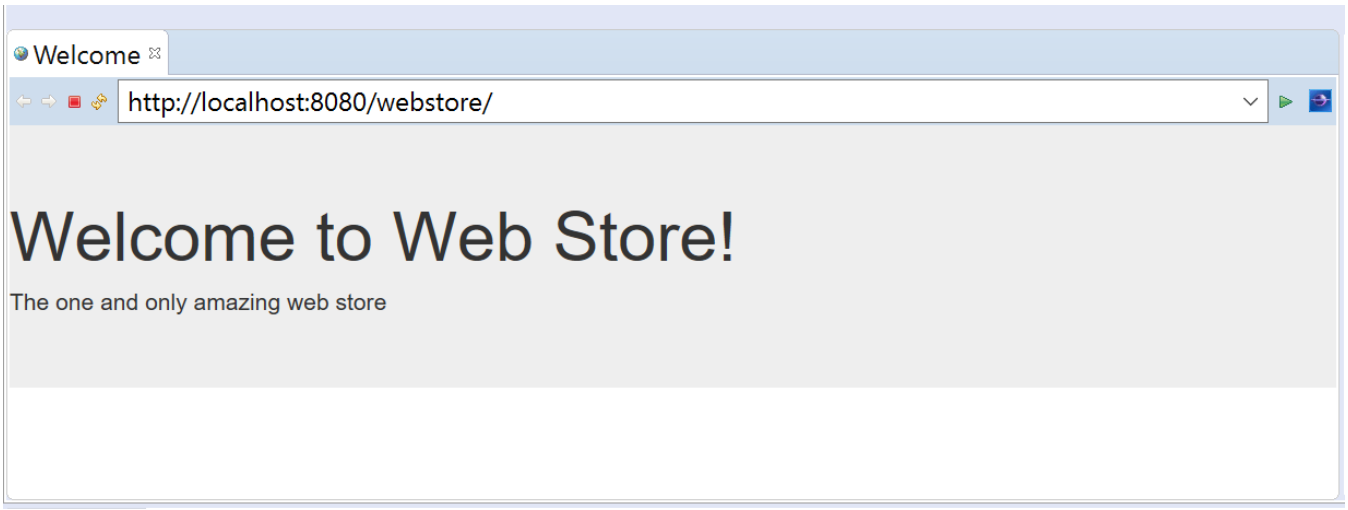

Package Explorer
Servers
webstore
src/main/java
src/main/resources
src/test/java
src/test/resources
JRE System Library [JavaSE-1.8]
src
target
pom.xml


Select Dependency
Group Id: * org.springframework
Artifact Id: * spring-webmvc
Version: 4.3.0.RELEASE
Scope: compile
Enter groupId, artifactId or sha1 prefix or pattern (*):
Index downloads are disabled, search results may be incomplete.
Search Results:
OK
Cancel

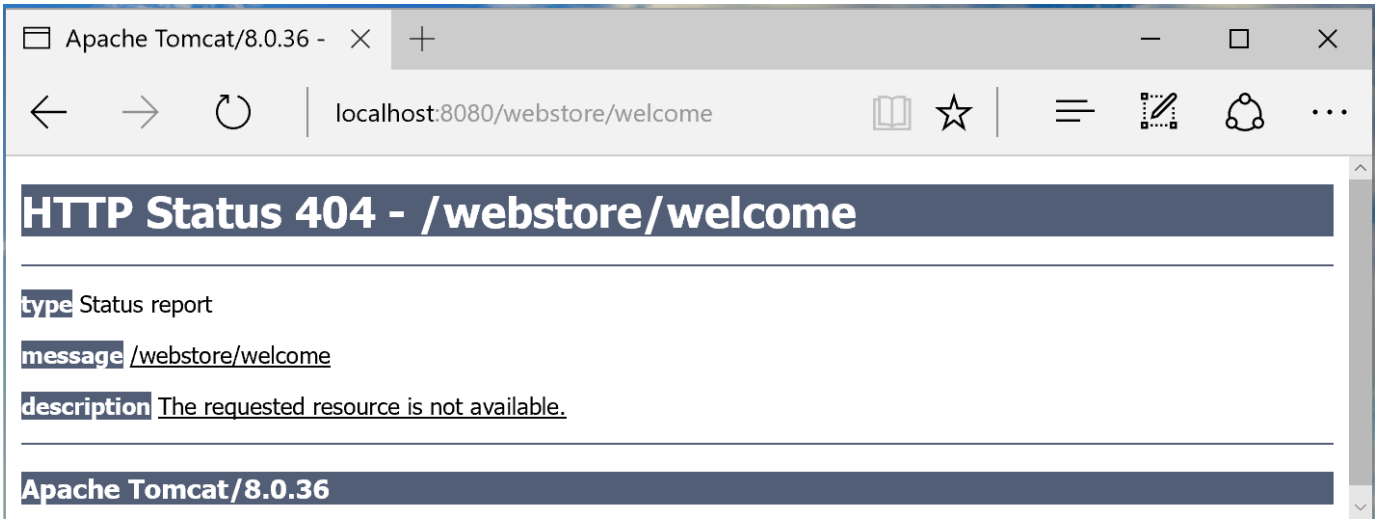

Package Explorer
Servers
webstore
src/main/java
src/main/resources
src/test/java
src/test/resources
Maven Dependencies
spring-webmvc-4.3.0.RELEASE.jar - C:\User
spring-aop-4.3.0.RELEASE.jar - C:\Users\Am
spring-beans-4.3.0.RELEASE.jar - C:\Users\A
spring-context-4.3.0.RELEASE.jar - C:\Users
spring-core-4.3.0.RELEASE.jar - C:\Users\Ar
commons-logging-1.2.jar - C:\Users\Amutl
spring-expression-4.3.0.RELEASE.jar - C:\Us
spring-web-4.3.0.RELEASE.jar - C:\Users\An
jstl-1.2.jar - C:\Users\Amuthan\.m2\reposit
javax.servlet-api-3.1.0.jar - C:\Users\Amuth
JRE System Library [JavaSE-1.8]
src
target
pom.xml

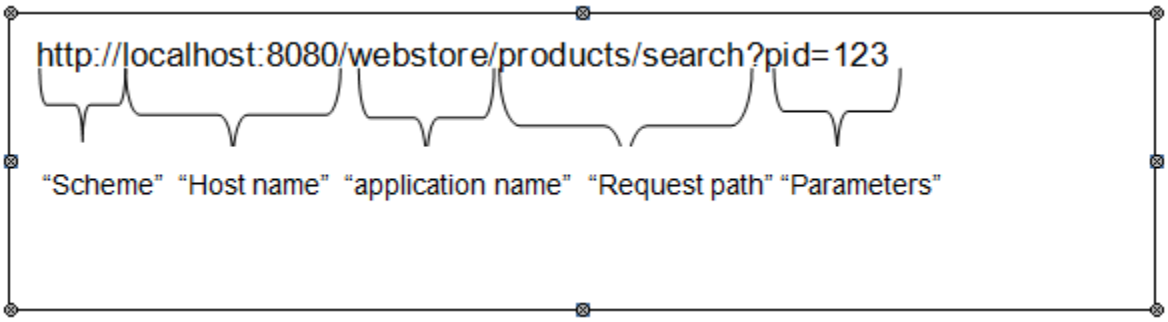

Welcome
http://localhost:8080/webstore/
Welcome to Web Store!
The one and only amazing web store

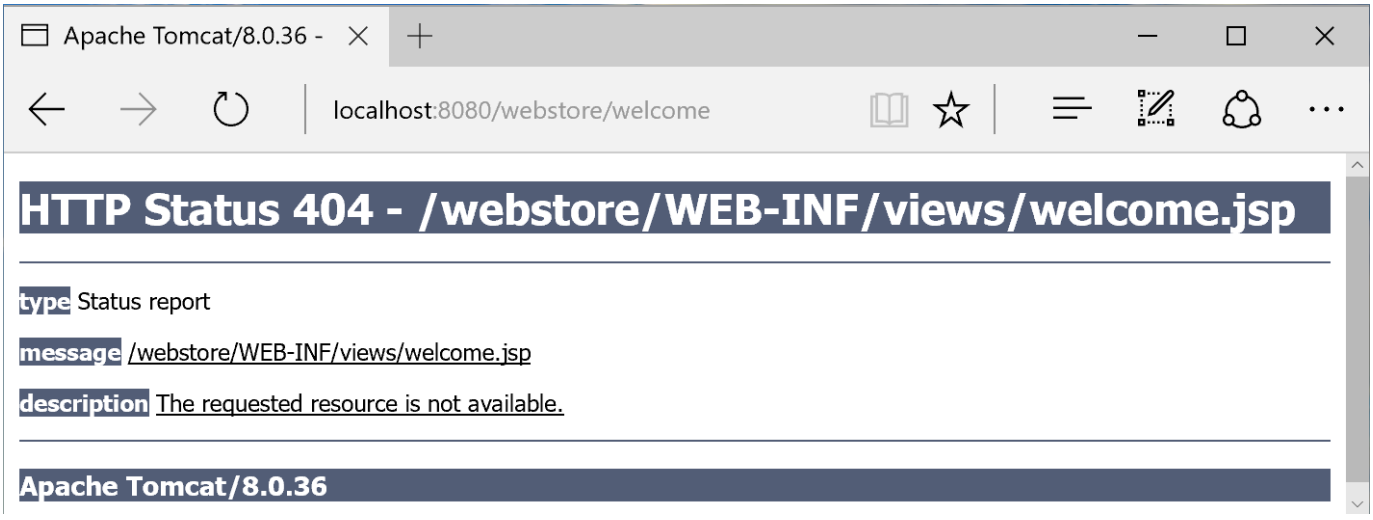

Run On Server
Run On Server
Select which server to use
How do you want to select the server?
Choose an existing server
Manually define a new server
Select the server that you want to use:
type filter text
Server
State
localhost
Tomcat v8.0 Server at localhost
Stopped
Apache Tomcat v8.0 supports J2EE 1.2, 1.3, 1.4, and Java EE 5, 6, and 7 Web modules.
Columns...
Always use this server when running this project
< Back
Next >
Finish
Cancel

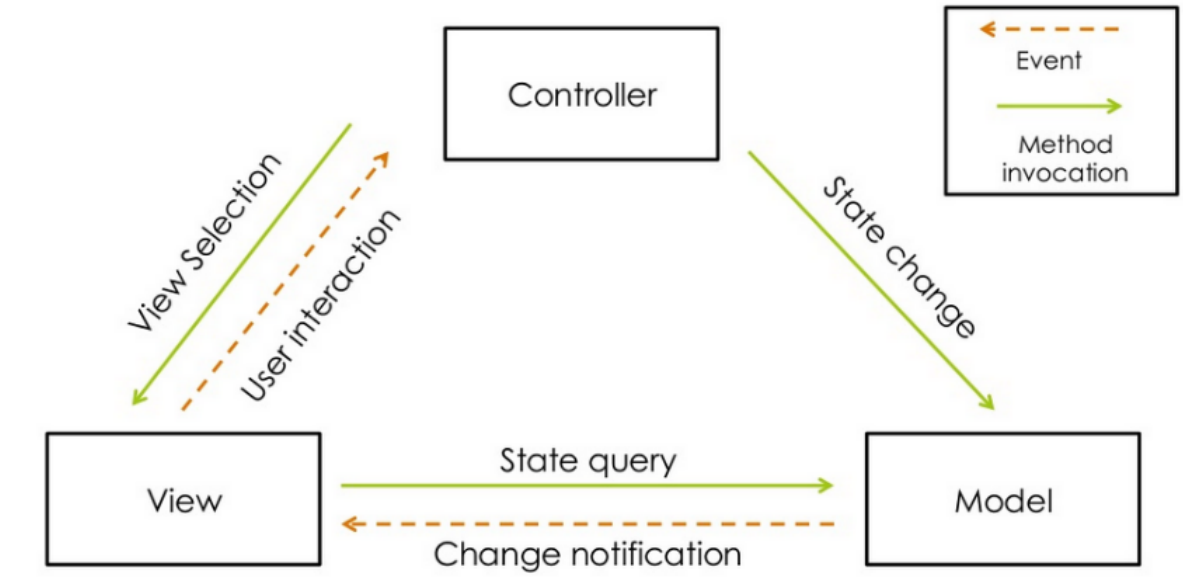

Welcome
http://localhost:8080/webstore/
Welcome to Web Store!
The one and only amazing web store

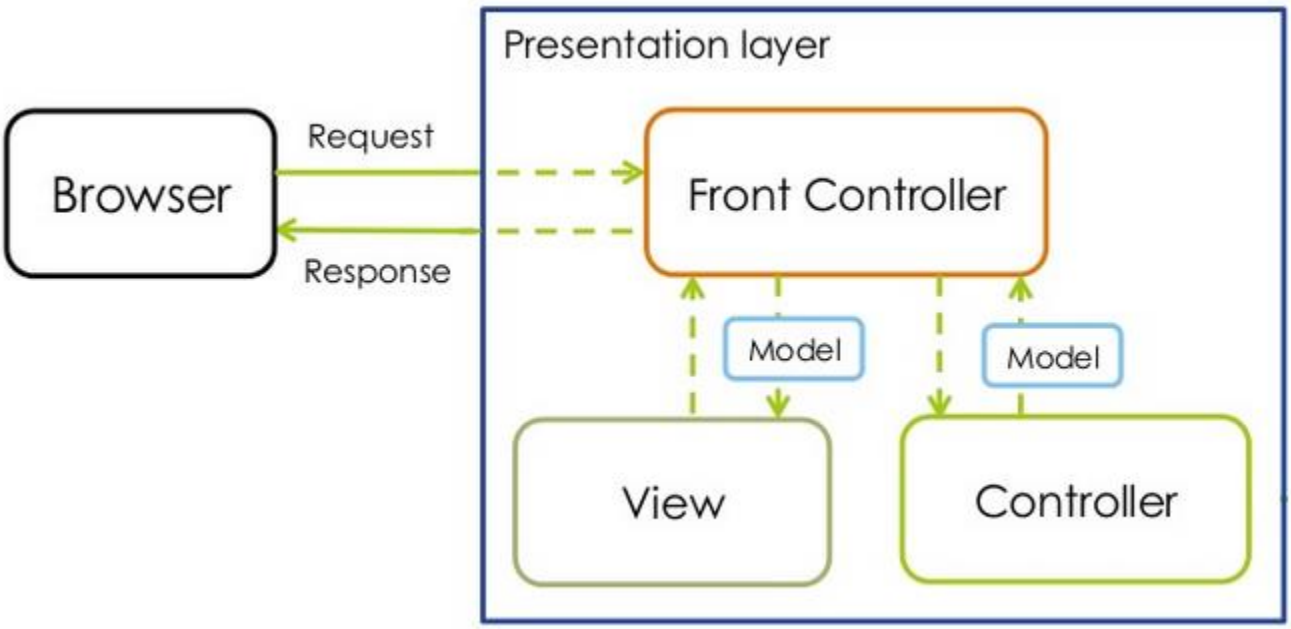
Chapter 2: Spring MVC Architecture – Architecting Your Web Store

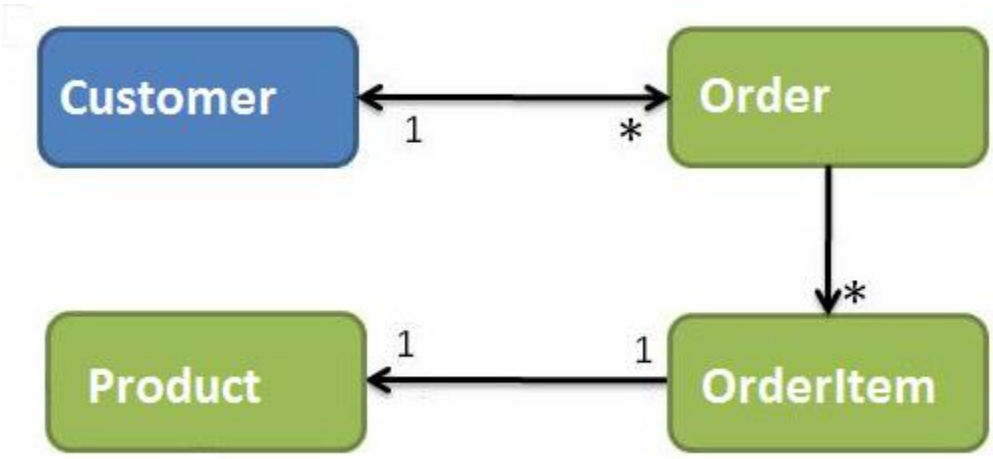


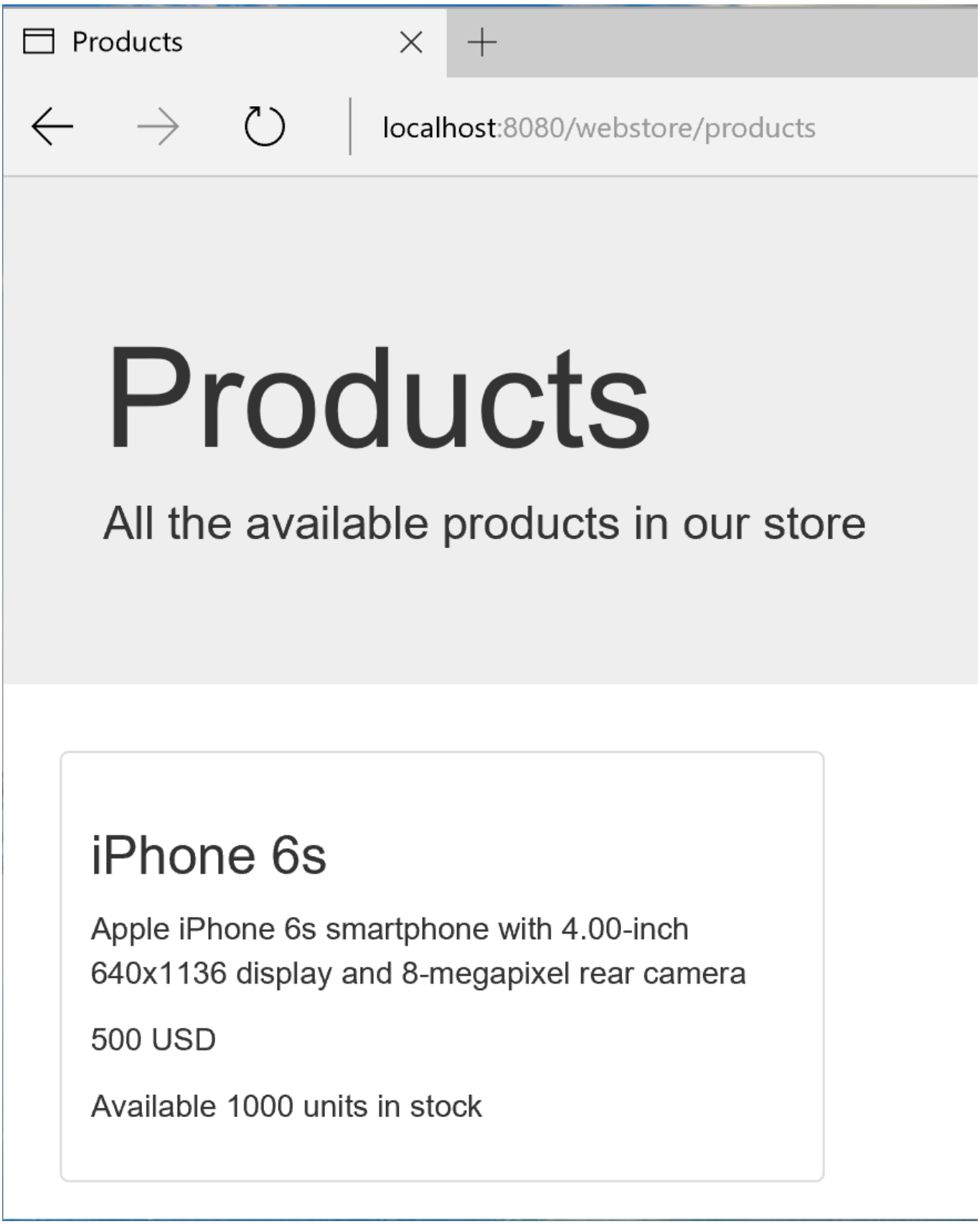


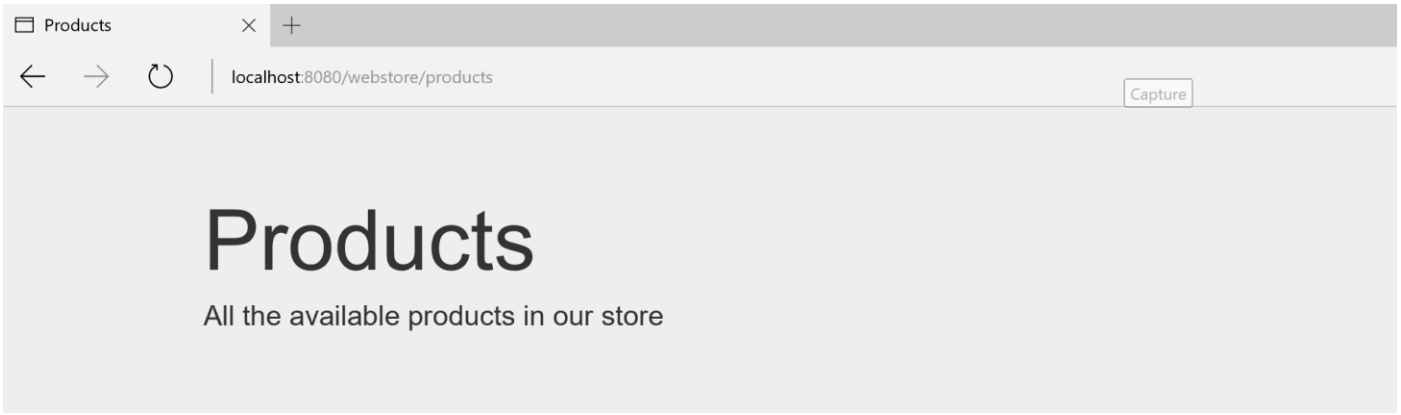



Controller
Event
Method invocation
View Selection
User interaction
State change
View
State query
Change notification
Model


Presentation layer
Browser
Request
Response
Front Controller
Model
Model
View
Controller


Customer
1
*
Order
*
Product
1
1
OrderItem


Products
localhost:8080/webstore/products
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

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 1450 units in stock

Dell Inspiron

Dell Inspiron 14-inch Laptop (Black) with 3rd Generation Intel Core processors

$700

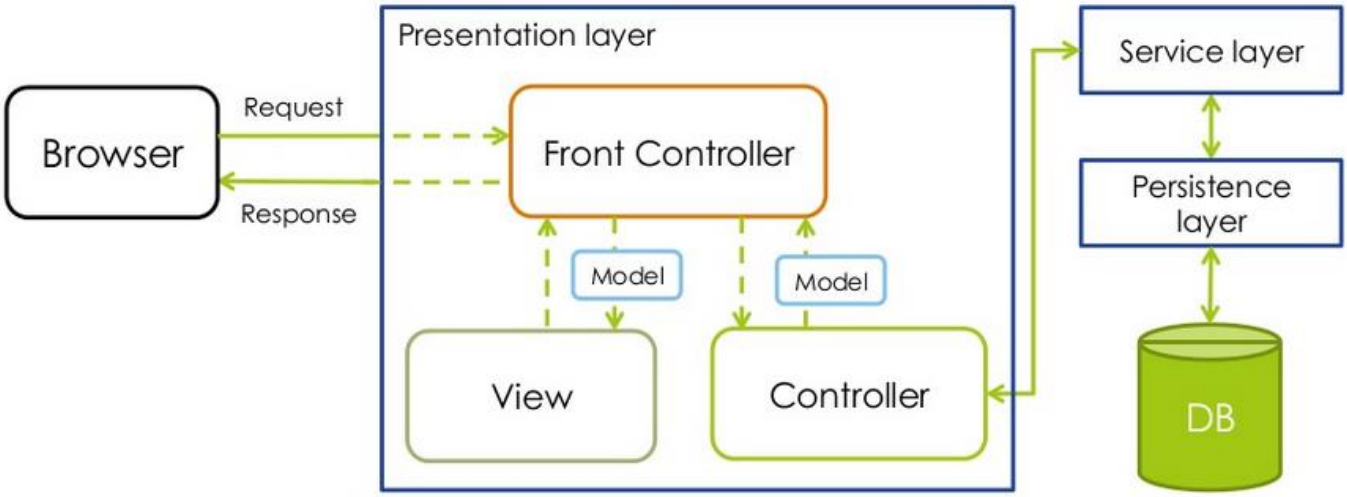
Available 1000 units in stock

Nexus 7

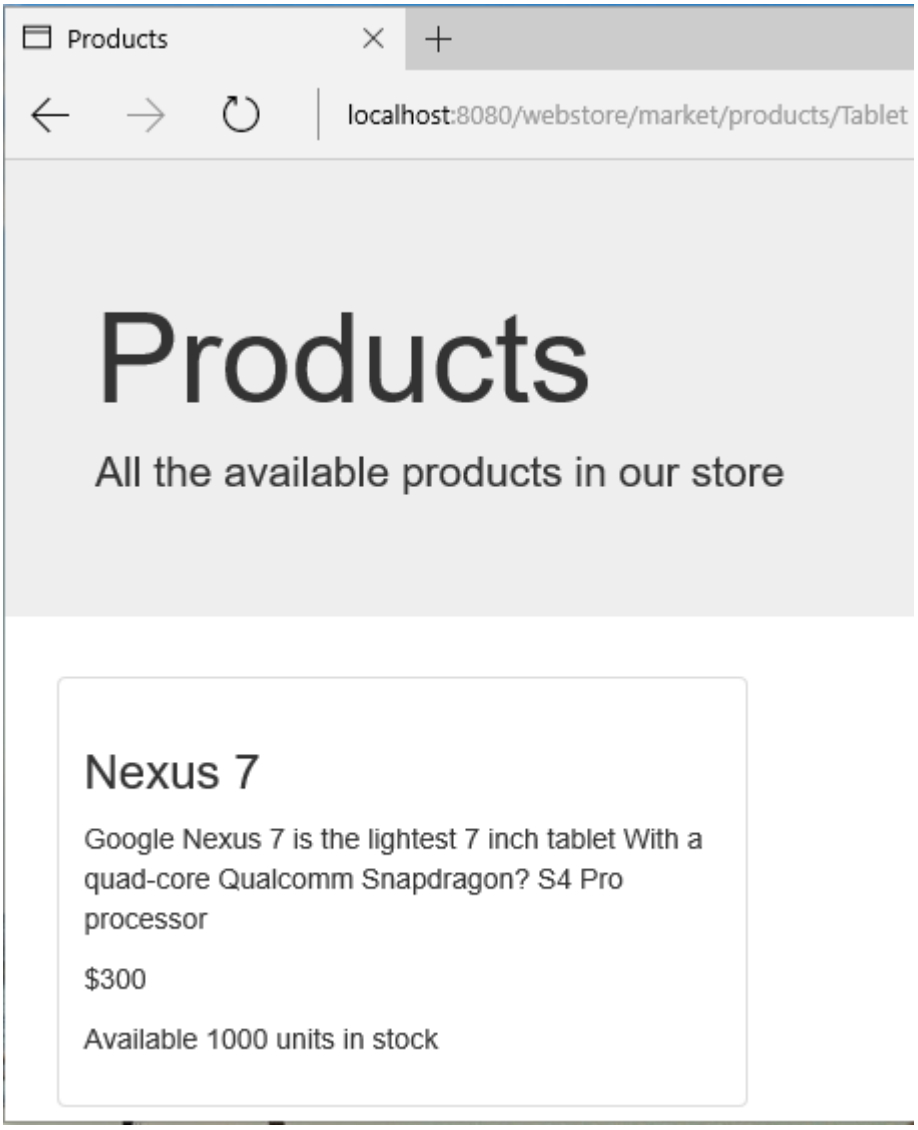
Google Nexus 7 is the lightest 7 inch tablet With a quad-core Qualcomm Snapdragon? S4 Pro processor

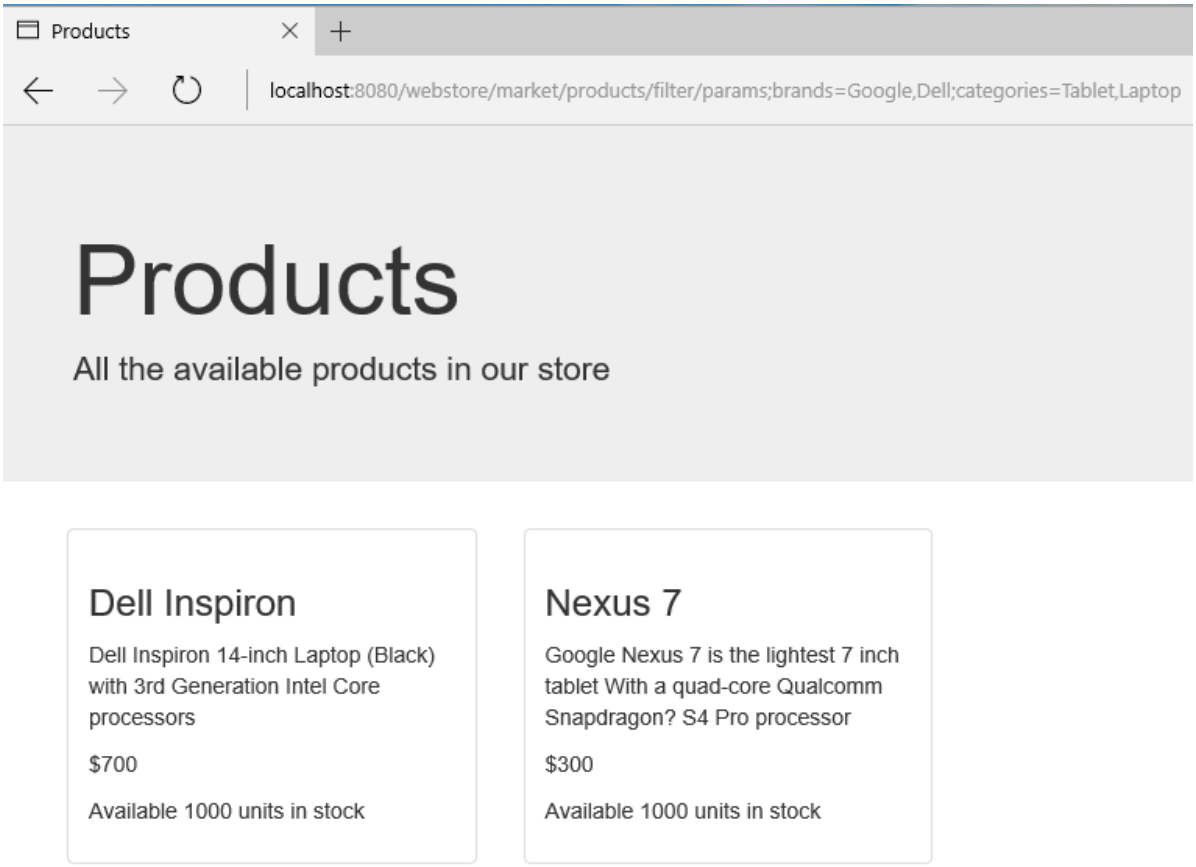
$300

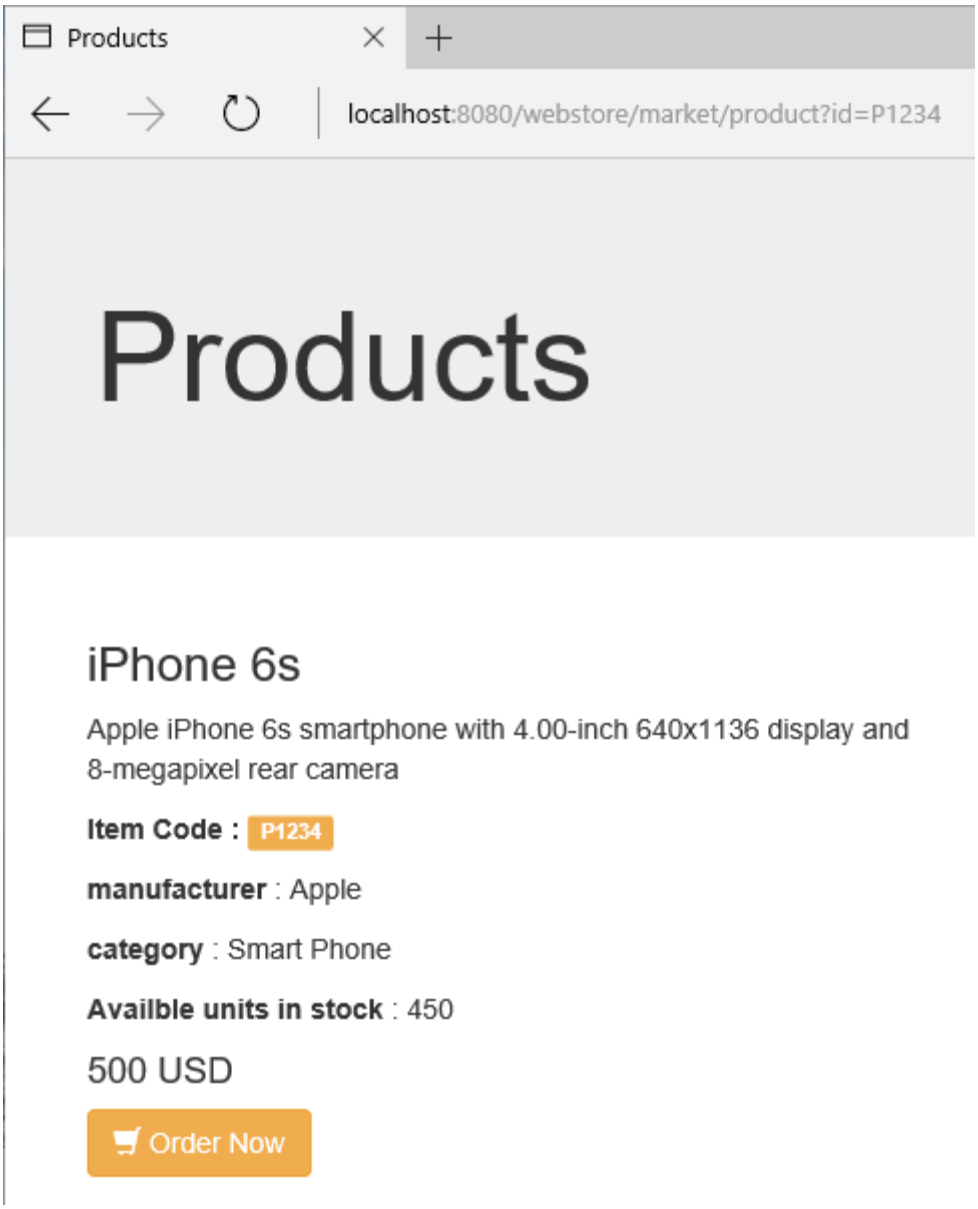
Available 1000 units in stock

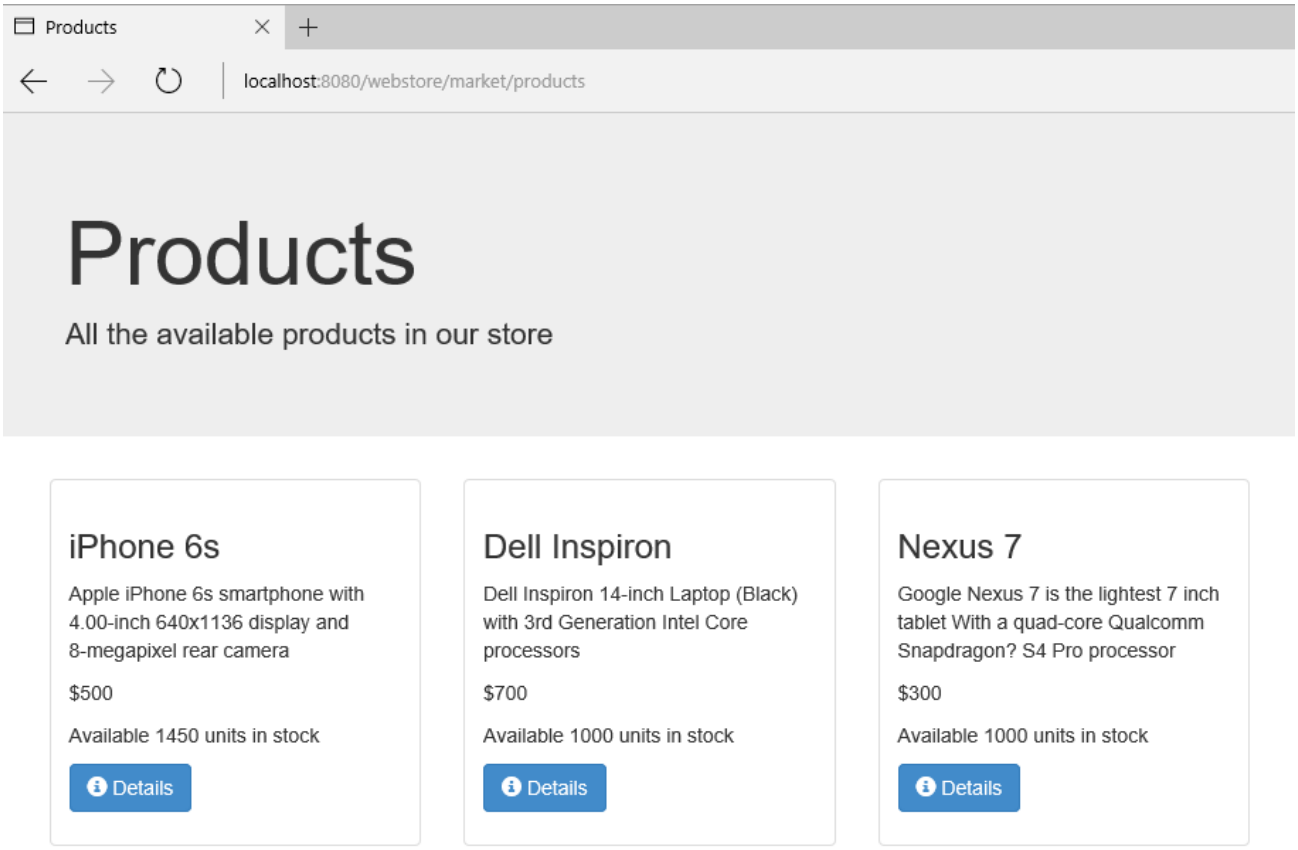

Presentation layer
Service layer
Browser
Request
Response
Front Controller
Persistence layer
Model
Model
View
Controller
DB

Chapter 3: Control Your Store with Controllers

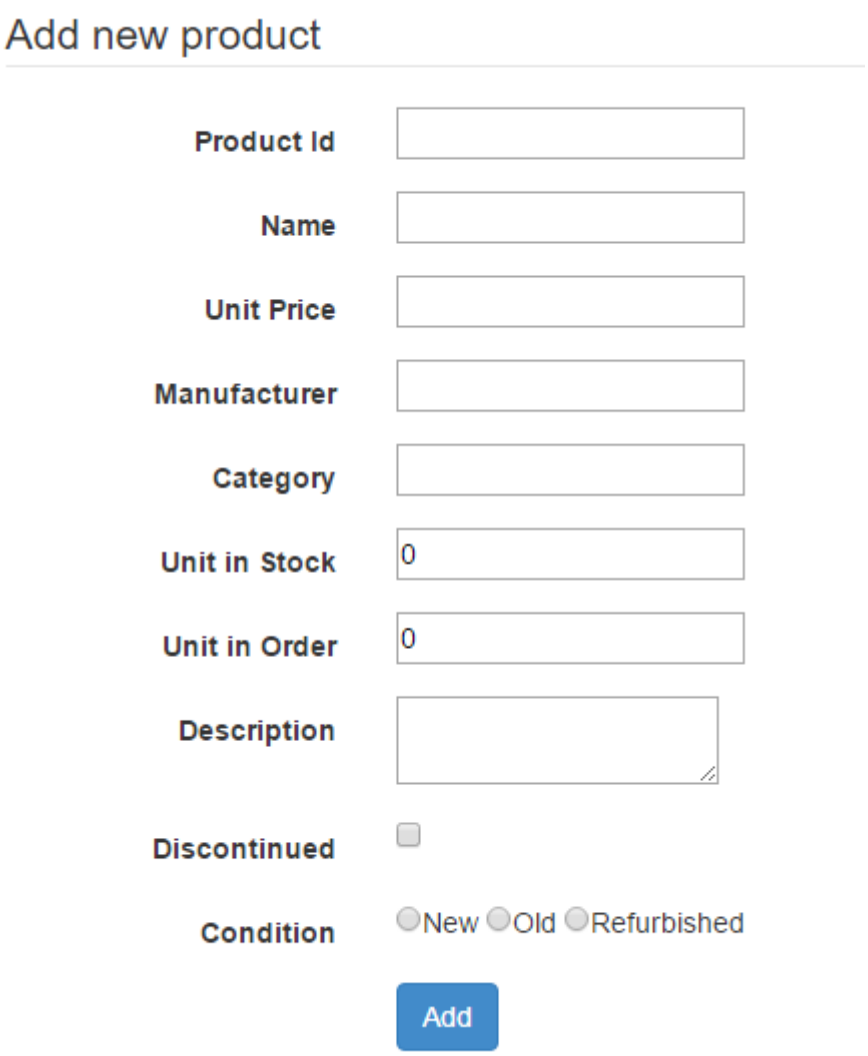


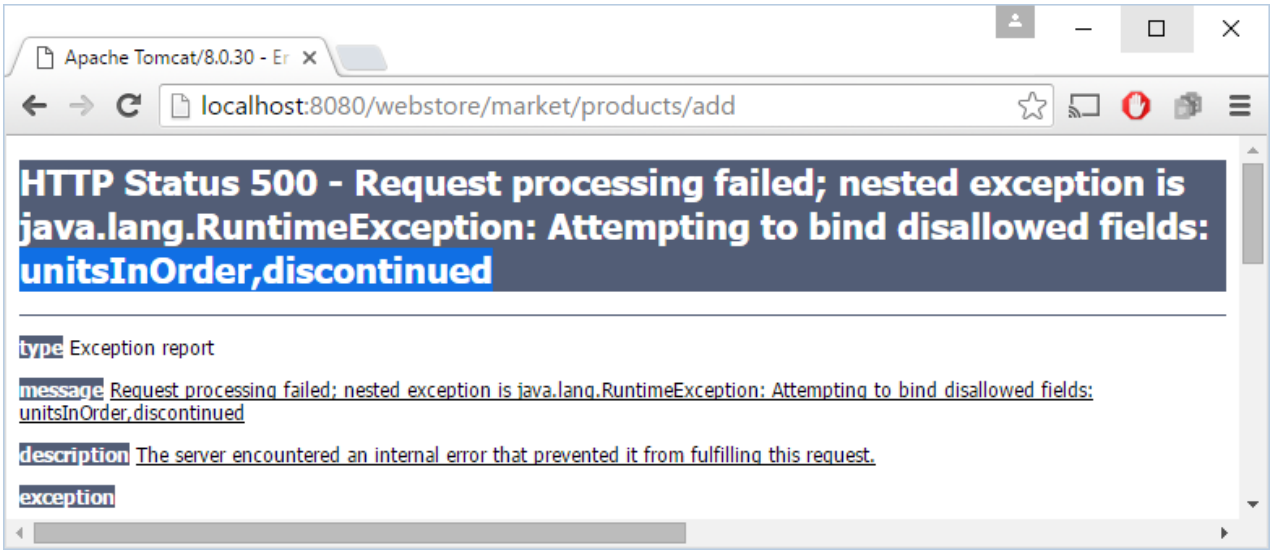

Products
localhost:8080/webstore/market/products/filter/params;brands=Google,Dell;categories=Tablet,Laptop
Products
All the available products in our store
Dell Inspiron
Dell Inspiron 14-inch Laptop (Black) with 3rd Generation Intel Core processors
$700
Available 1000 units in stock
Nexus 7
Google Nexus 7 is the lightest 7 inch tablet With a quad-core Qualcomm Snapdragon? S4 Pro processor
$300
Available 1000 units in stock


Products
localhost:8080/webstore/market/product?id=P1234
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
Availble units in stock : 450
500 USD
Order Now


Products
localhost:8080/webstore/market/products
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 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




Apache Tomcat/8.0.30 - Er
localhost:8080/webstore/market/products/add
HTTP Status 500 - Request processing failed; nested exception is java.lang.RuntimeException: Attempting to bind disallowed fields: unitsInOrder,discontinued
type Exception report
message Request processing failed; nested exception is java.lang.RuntimeException: Attempting to bind disallowed fields: unitsInOrder,discontinued
description The server encountered an internal error that prevented it from fulfilling this request.
exception

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

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

Products

Dell Inspiron

Dell Inspiron 14-inch Laptop (Black) with 3rd Generation Intel Core processors

Item Code : P1235

manufacturer : Dell

category : Laptop

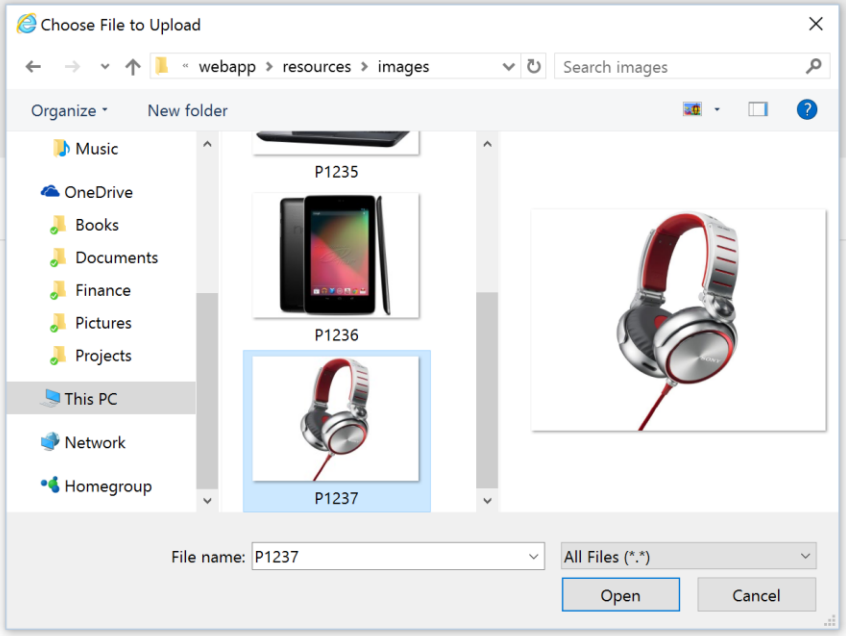
Availble units in stock : 1000

700USD

back Order Now

Products

Add products



Add new product

New Product ID	P1237
Name	MDR Head Phone
Unit Price	250
Manufacturer	Sony
Category	Headphone
Units in stock	1000
Description	With Built-in Noise cancellation
Condition	◉New ○Old ○Refurbished
Product Image file	Browse...

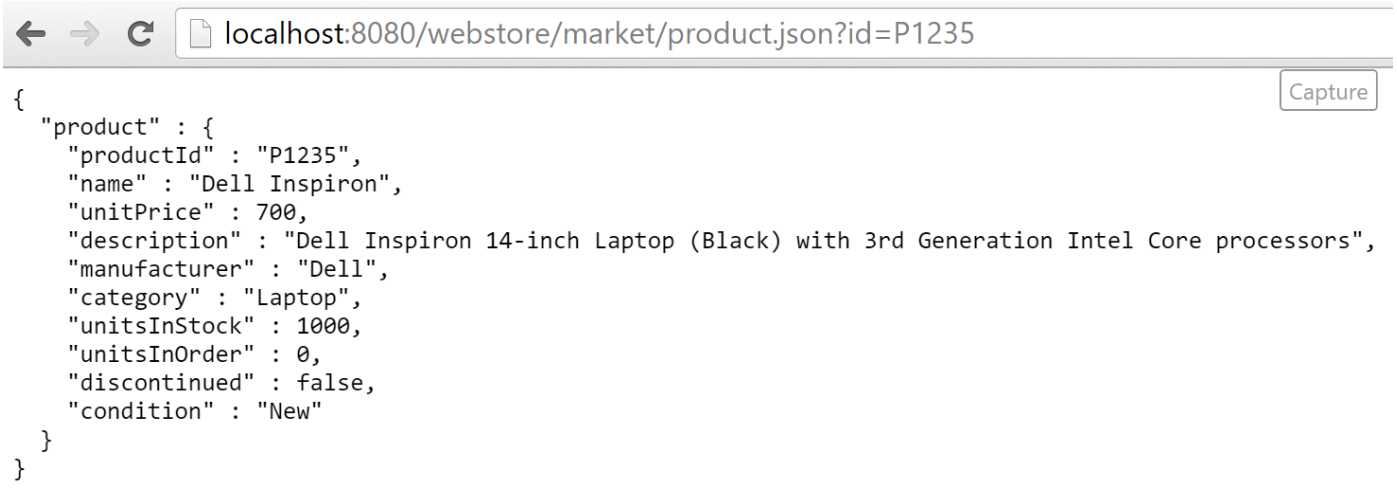
Add

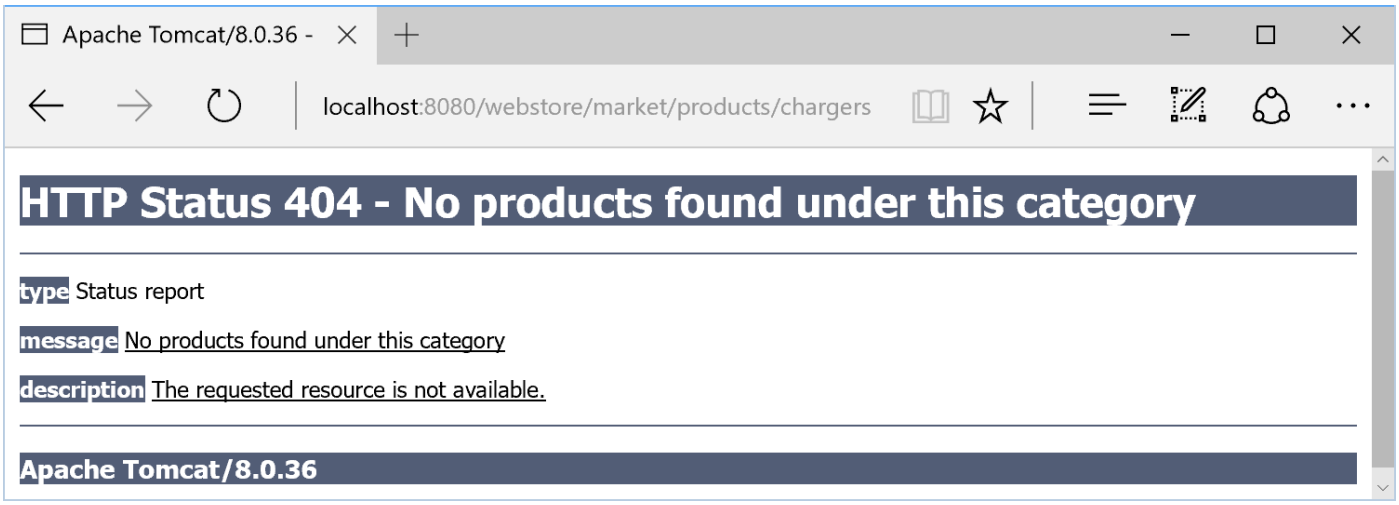
http://localhost:8080/webstore/market/product.xml?id=P1235

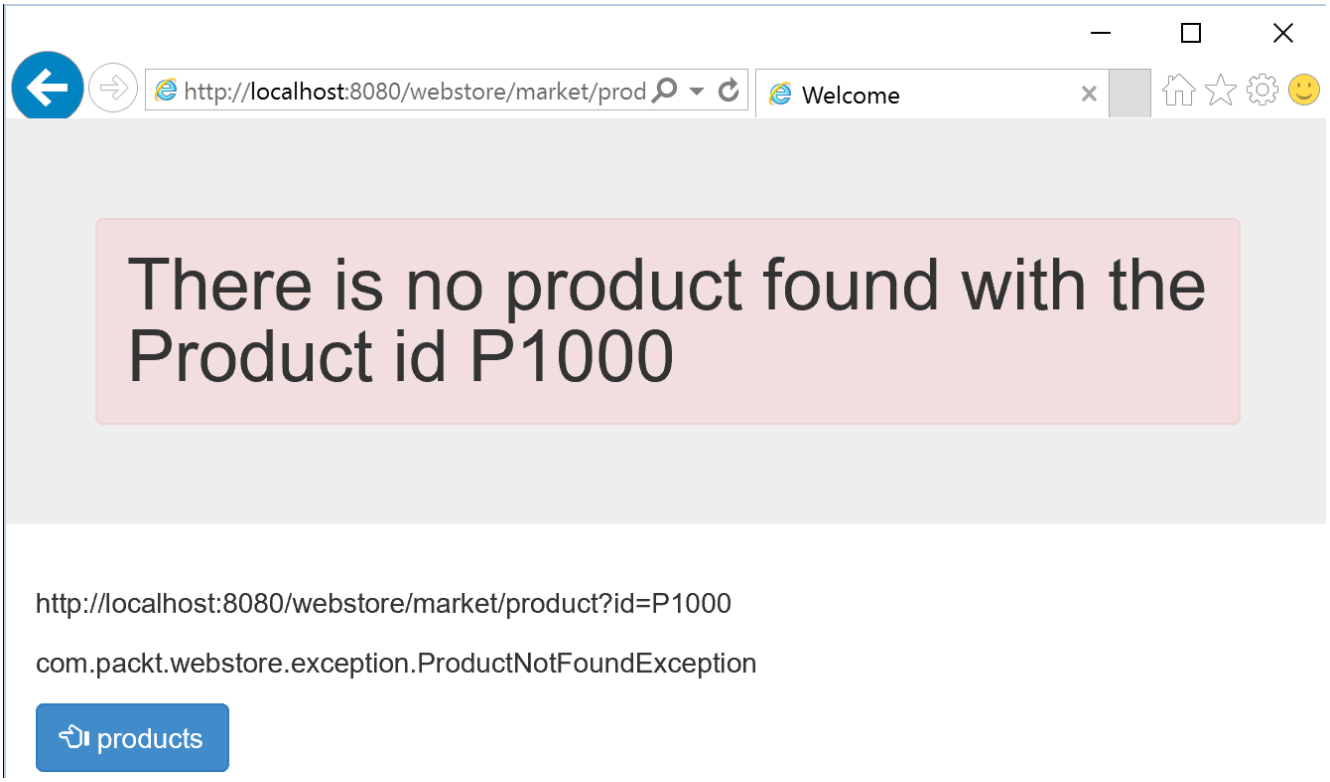
localhost

Capture

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


localhost:8080/webstore/market/product.json?id=P1235
Capture
{
"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"
}
}


Apache Tomcat/8.0.36 -
localhost:8080/webstore/market/products/chargers
HTTP Status 404 - No products found under this category
type Status report
message No products found under this category
description The requested resource is not available.
Apache Tomcat/8.0.36

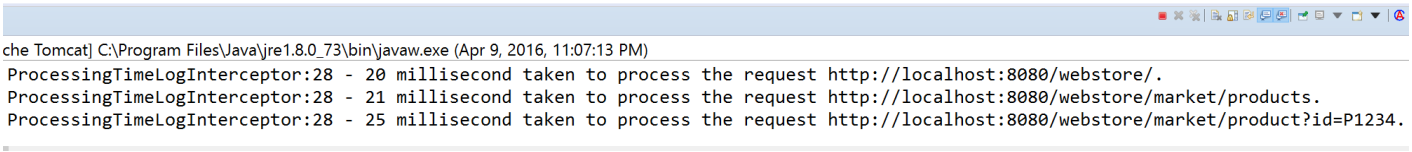


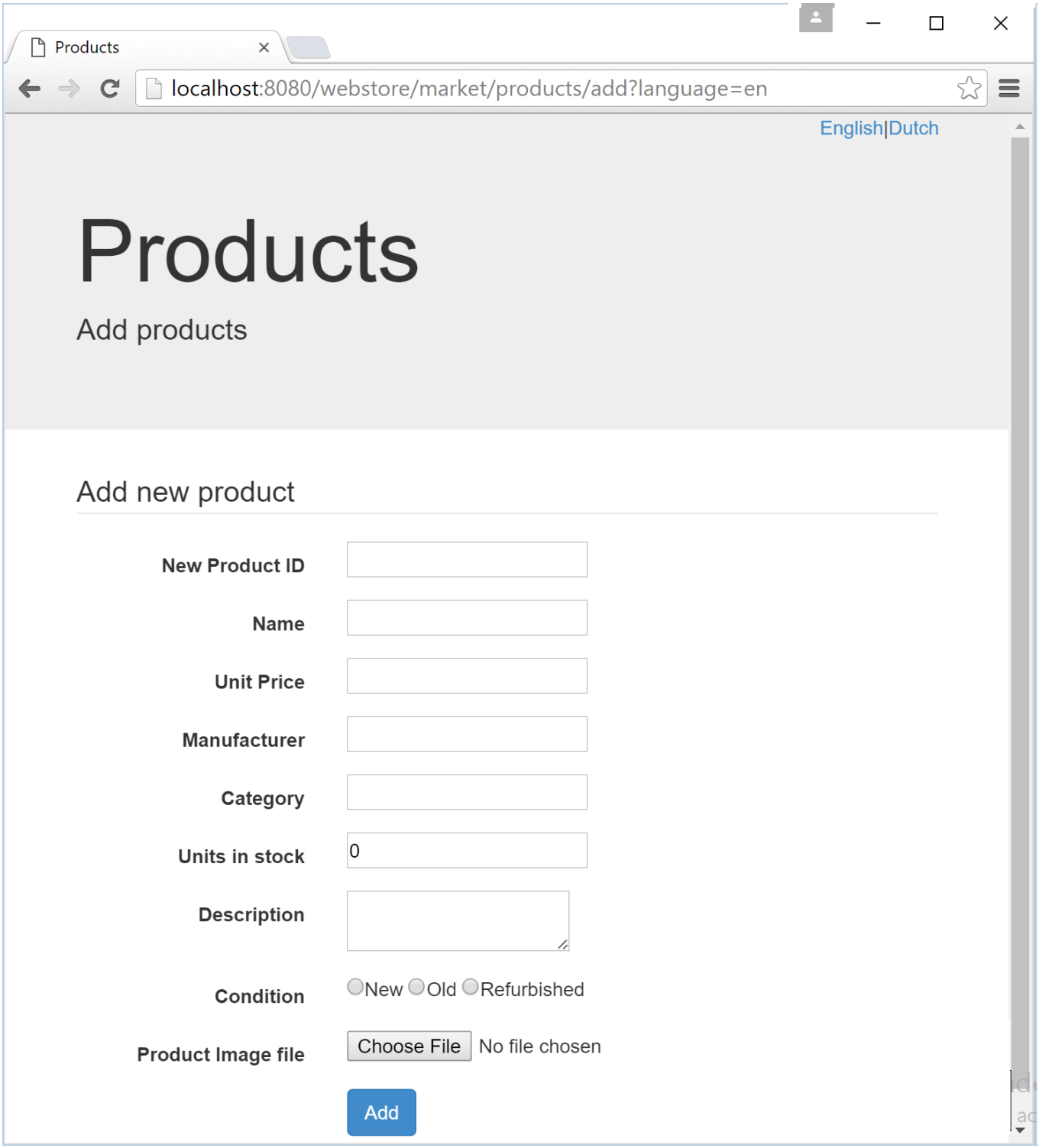
http://localhost:8080/webstore/market/product?id=P1000

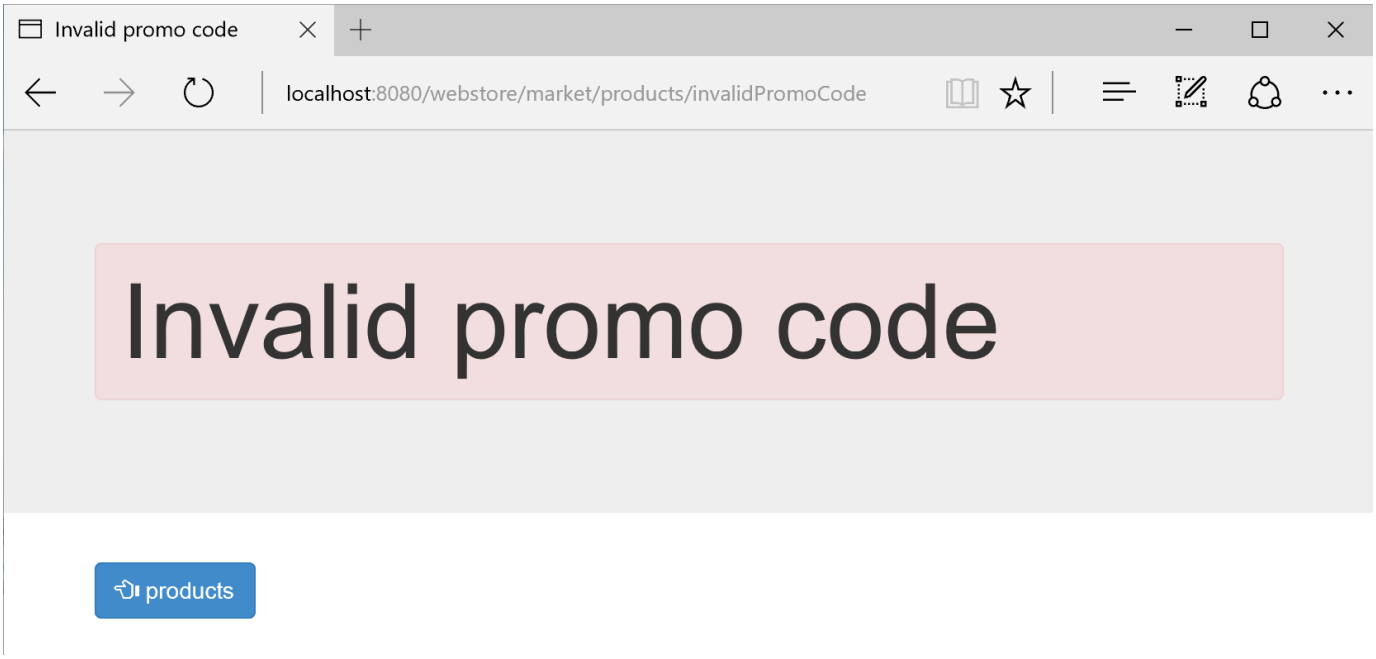
com.packt.webstore.exception.ProductNotFoundException

products

Chapter 6: Internalize Your Store with Interceptor




Products
localhost:8080/webstore/market/products/add?language=en
English|Dutch
Products
Add products
Add new product
New Product ID
Name
Unit Price
Manufacturer
Category
Units in stock
0
Description
Condition
New Old Refurbished
Product Image file
Choose File
No file chosen
Add


Invalid promo code
localhost:8080/webstore/market/products/invalidPromoCode
Invalid promo code
products

Products

localhost:8080/webstore/market/products

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

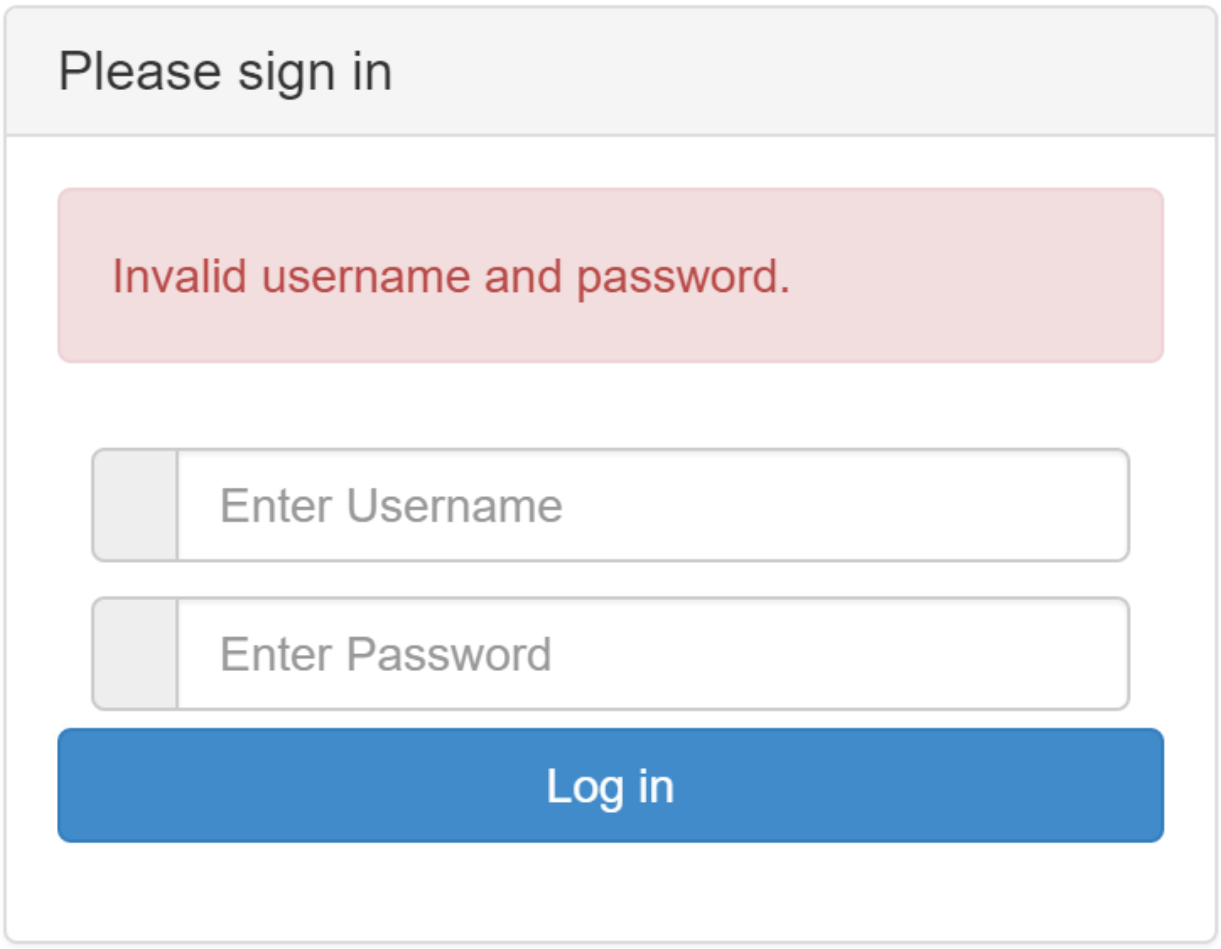
Google Nexus 7 is the lightest 7 inch tablet With a quad-core Qualcomm Snapdragon? S4 Pro processor

$300

Available 1000 units in stock

Details

Chapter 7: Incorporating Spring Security



Please sign in

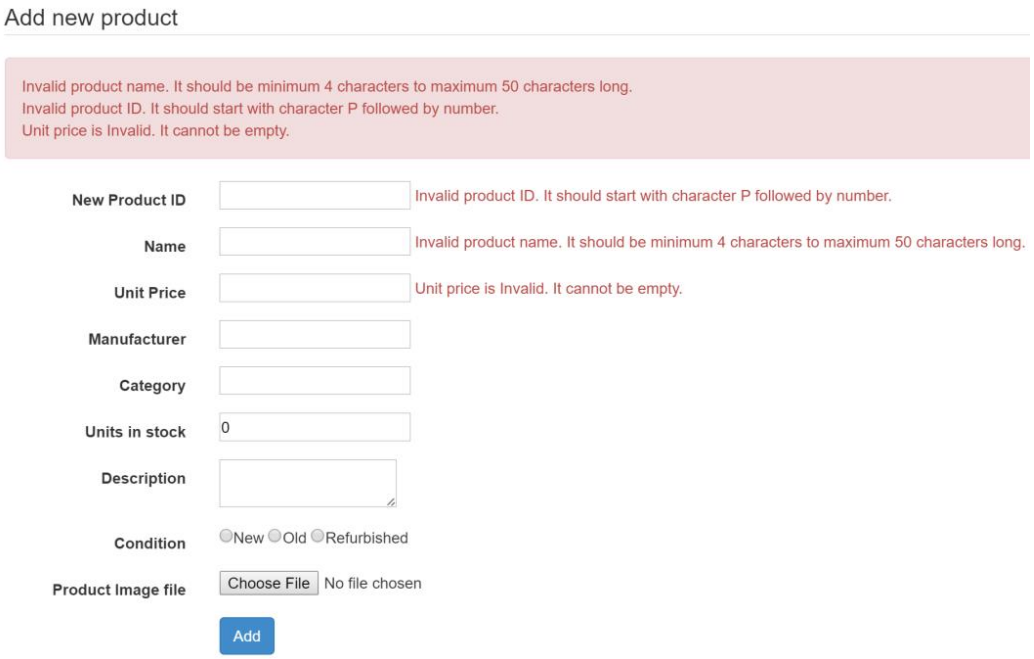
Access Denied: You are not authorised!

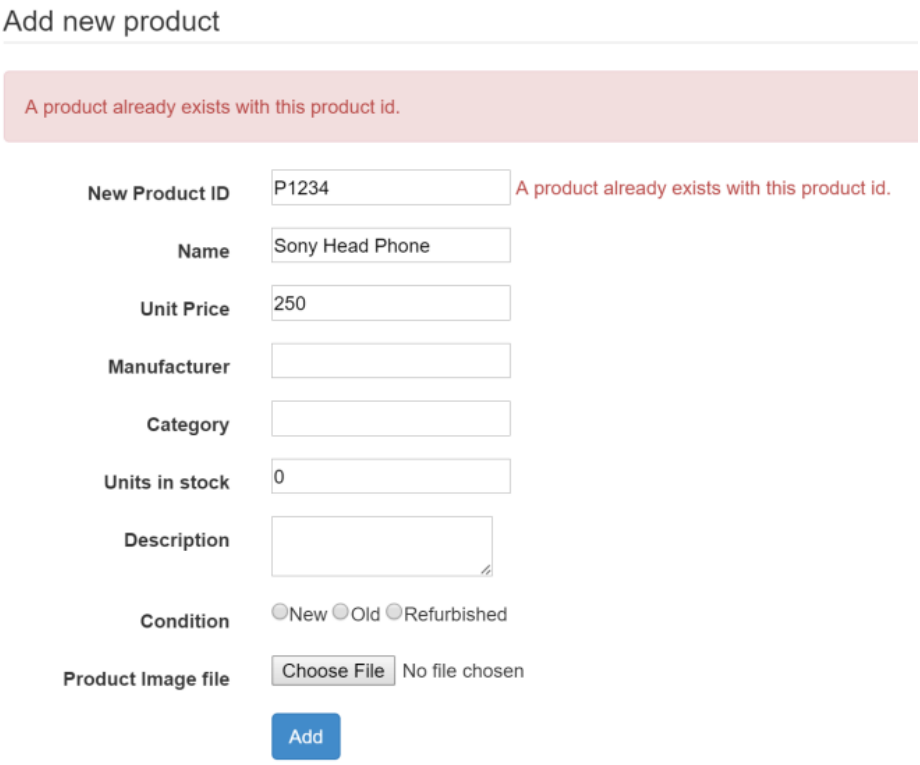
Enter Username

Enter Password

Log in

Chapter 8: Validate Your Products with a Validator





Add new product

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

New Product ID	P1237
Name	Sony Head Phone
Unit Price	1500
Manufacturer	Sony
Category	Head phones
Units in stock	150
Description	With built-in noise canceling technology
Condition	(•) New ( ) Old ( ) Refurbished
Product Image file	Choose File No file chosen

Add

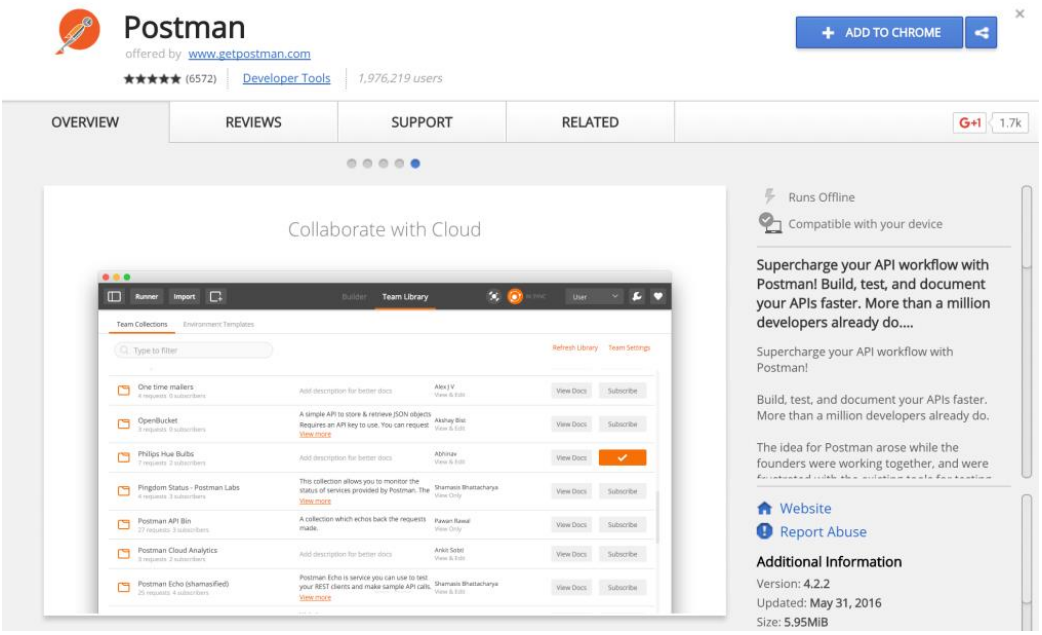
Add new product

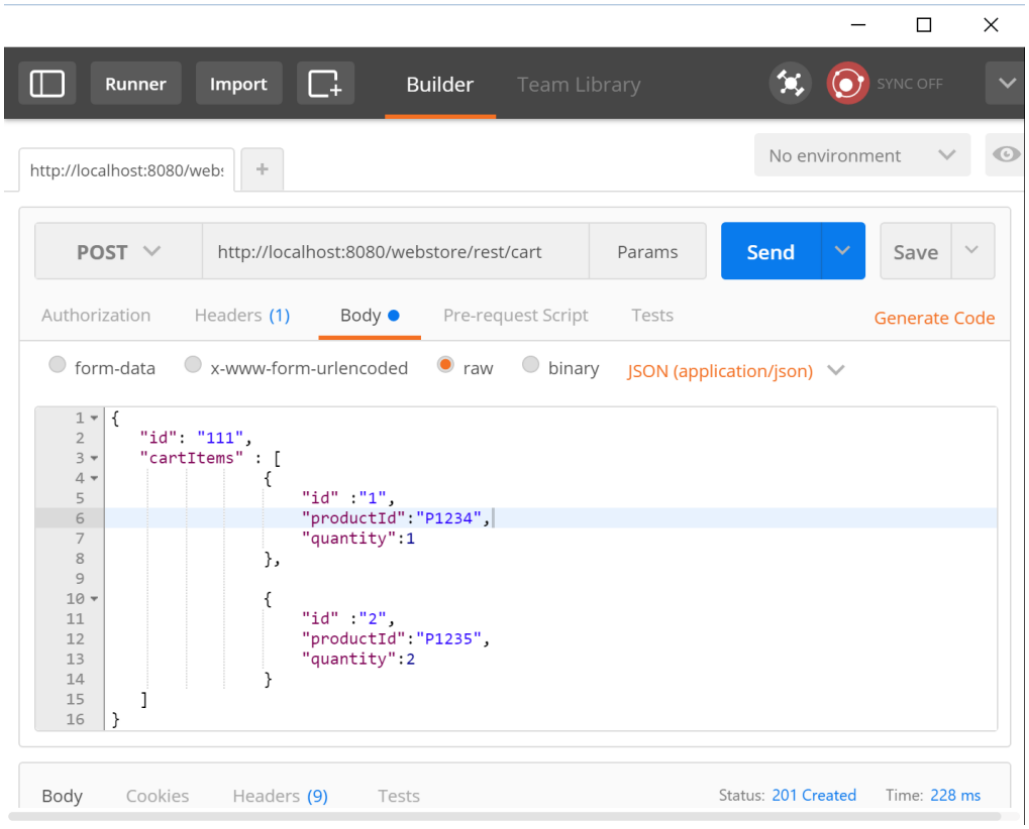
Invalid product name. It should be minimum 4 characters to maximum 50 characters long.
A product already exists with this product id.
You cannot add more than 99 units if the unit price is greater than 1000.

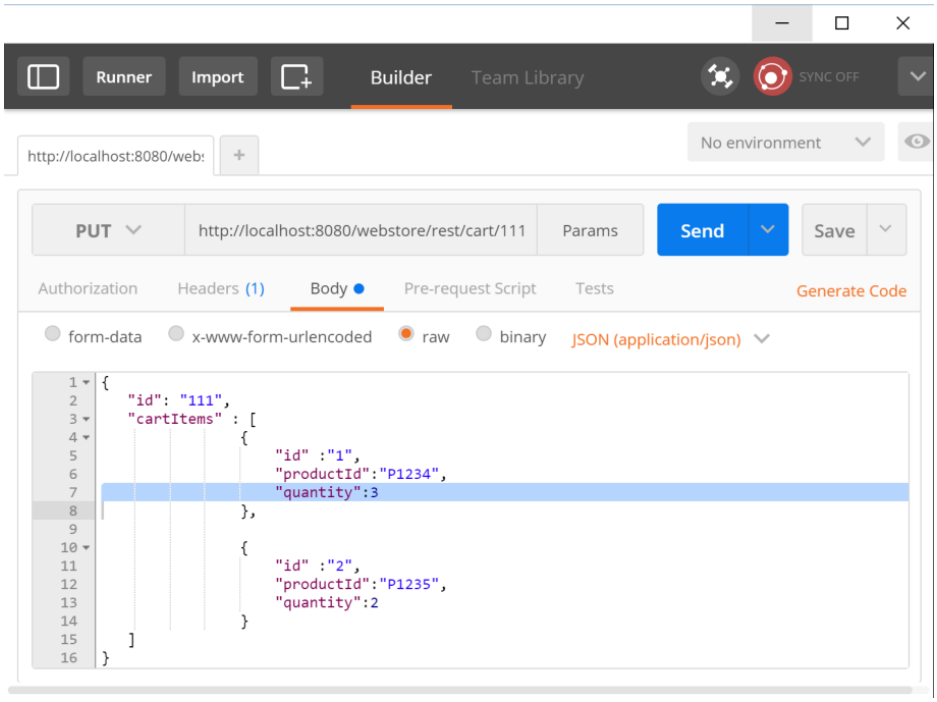
New Product ID	P1234	A product already exists with this product id.
Name		Invalid product name. It should be minimum 4 characters to maximum 50 characters long.
Unit Price	1500	
Manufacturer	Sony	
Category	Head phones	
Units in stock	150	
Description	With built-in noise canceling technology	
Condition	(•) New ( ) Old ( ) Refurbished	
Product Image file	Choose File No file chosen	

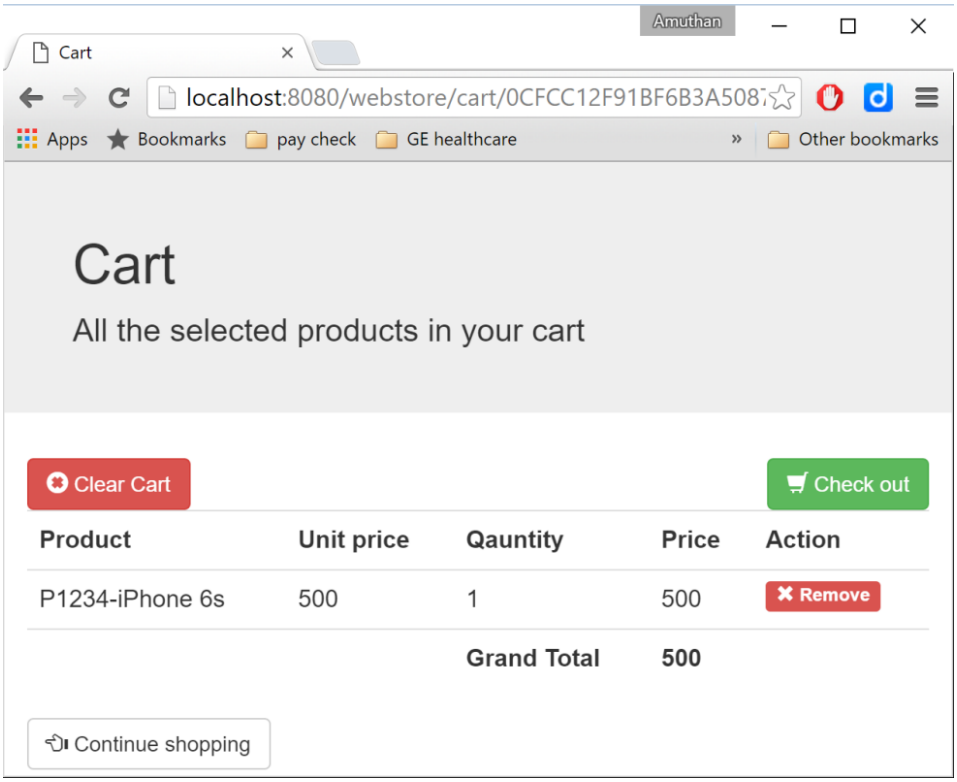
Add

Chapter 9: Give REST to Your Application with Ajax

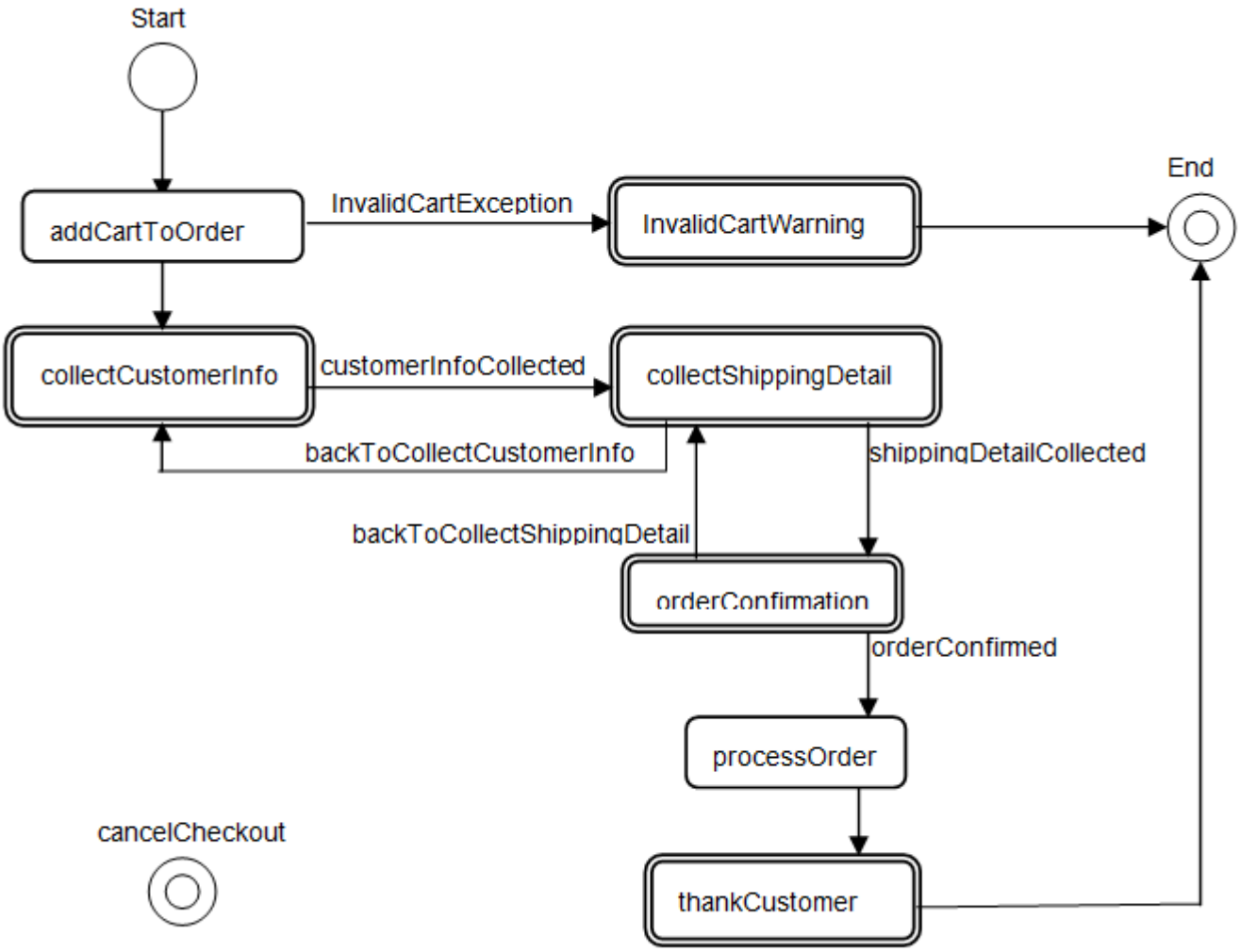





Runner
Import
Builder
Team Library
SYNC OFF
http://localhost:8080/webs
No environment
PUT
http://localhost:8080/webstore/rest/cart/111
Params
Send
Save
Authorization
Headers (1)
Body
Pre-request Script
Tests
Generate Code
form-data
x-www-form-urlencoded
raw
binary
JSON (application/json)
{
"id": "111",
"cartItems" : [
{
"id" :"1",
"productId":"P1234",
"quantity":3
},
{
"id" :"2",
"productId":"P1235",
"quantity":2
}
]
}


Amuthan
Cart
localhost:8080/webstore/cart/0CFCC12F91BF6B3A508
Apps
Bookmarks
pay check
GE healthcare
Other bookmarks
Cart
All the selected products in your cart
Clear Cart
Check out
Product
Unit price
Qauntity
Price
Action
P1234-iPhone 6s
500
1
500
Remove
Grand Total
500
Continue shopping

Chapter 10: Float Your Application with Web Flow



Checkout flow overview

Customer

Customer details

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

Add Cancel

Receipt

Shipping Address
John Doe
305,4625 Lake Trail Dr,
Lisle,IL
USA,60563

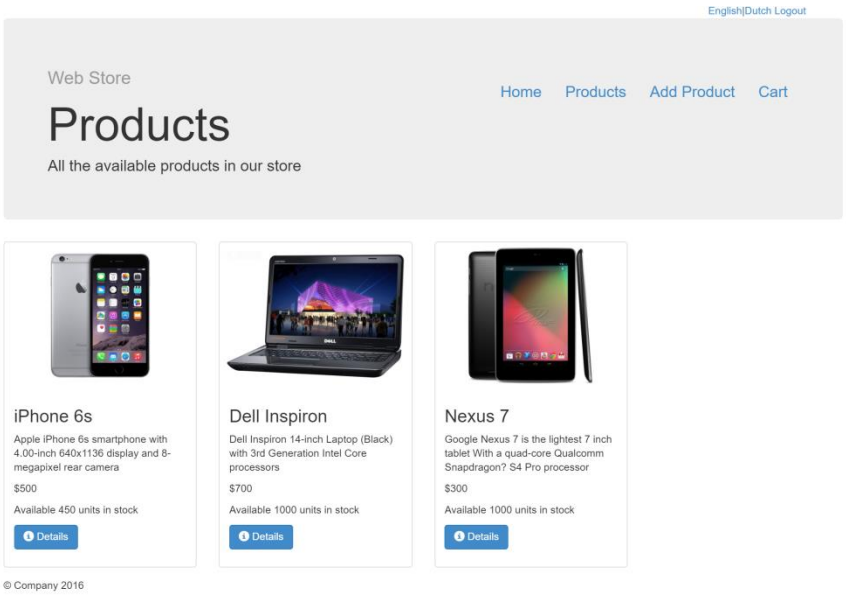
Shipping DateDate: Oct 10, 2016

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

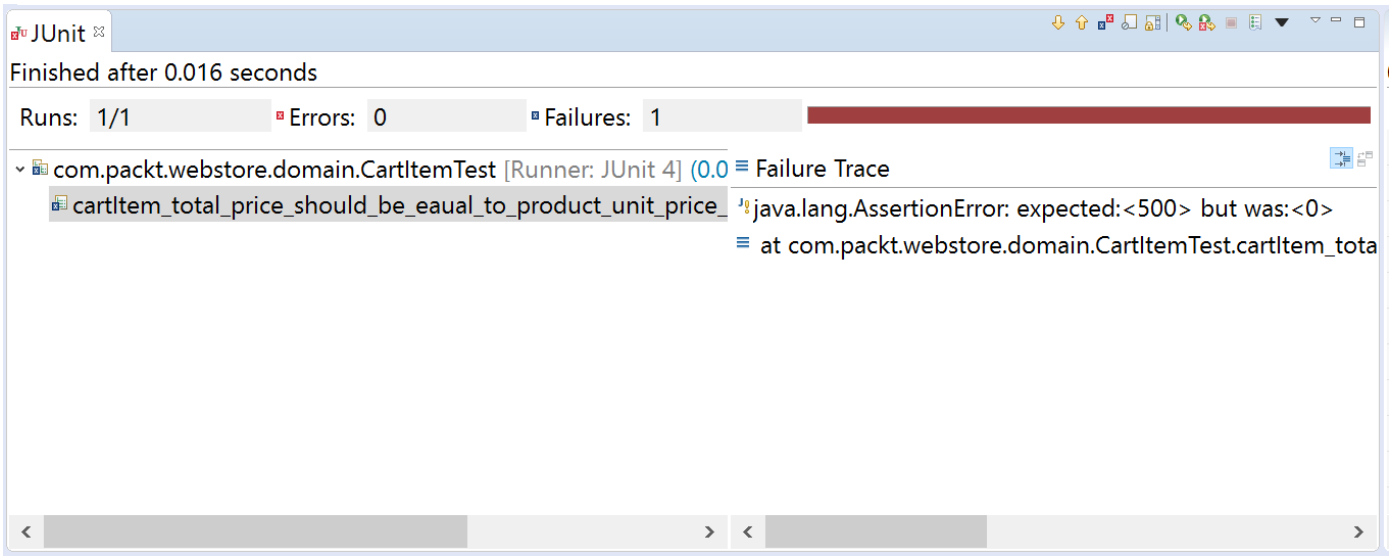
Product	#	Price	Total
iPhone 6s	2	$500	$1000
Dell Inspiron	1	$700	$700
Nexus 7	1	$300	$300
		Grand Total:	**$2000**

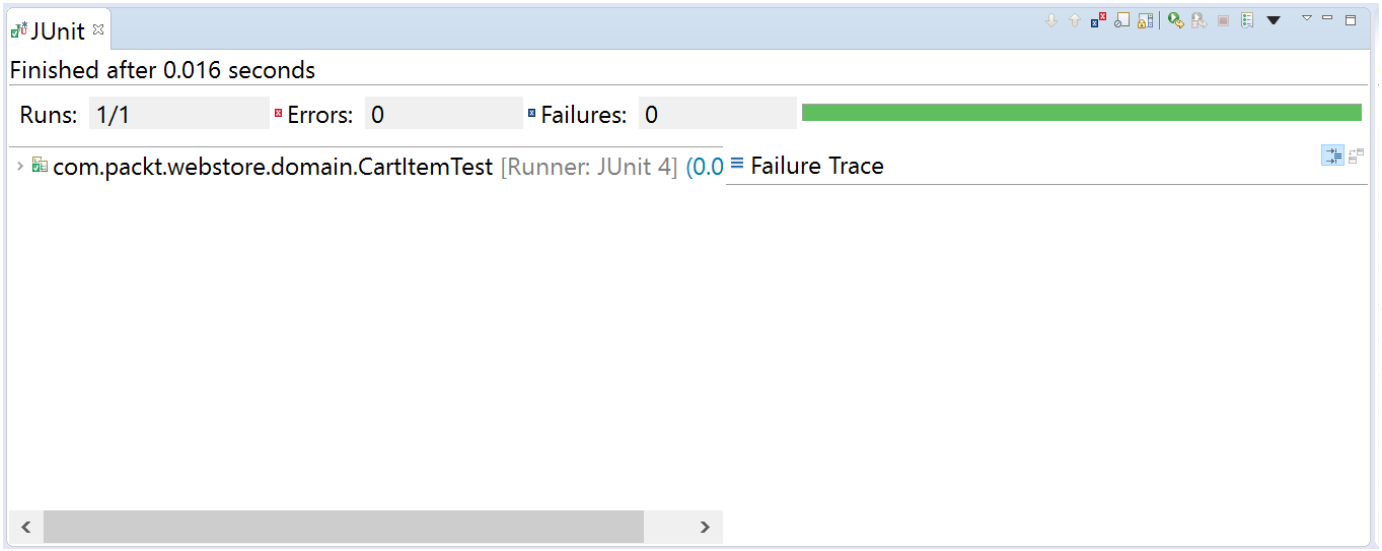
back Confirm Cancel

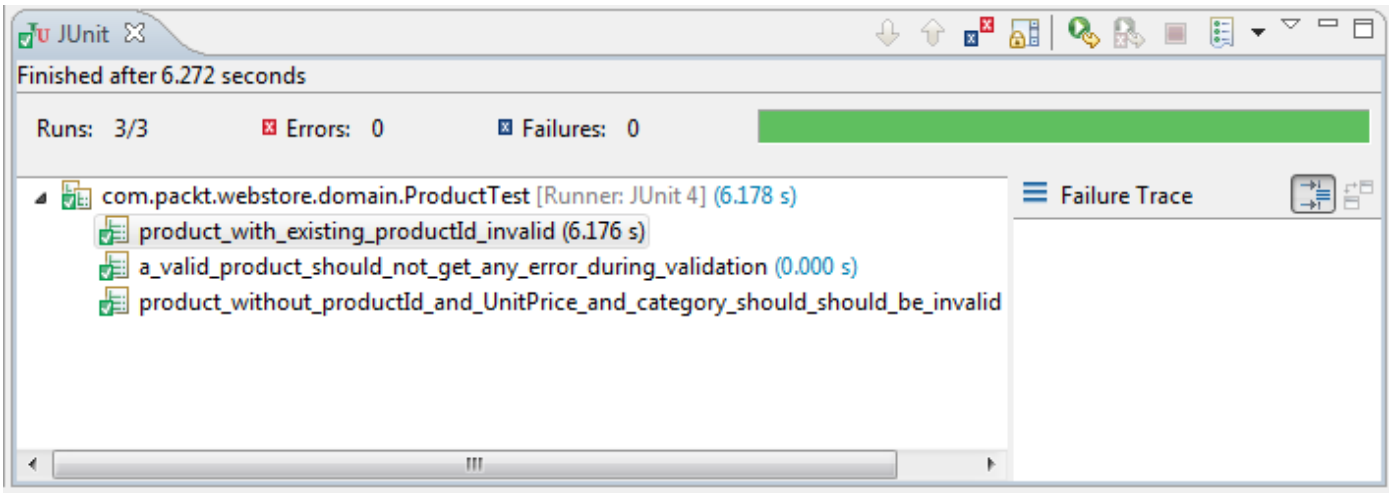
Chapter 11: Template with Tiles



Chapter 12: Testing Your Application






JUnit
Finished after 6.272 seconds
Runs: 3/3
Errors: 0
Failures: 0
com.packt.webstore.domain.ProductTest [Runner: JUnit 4] (6.178 s)
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
Failure Trace