Phase-3 Practice Project

Searching for a Specific User and Updating the User Information.
source code

pom.xml

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

<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
<modelVersion>4.0.0</modelVersion>


<groupId>com</groupId>
<artifactId>Eproduct</artifactId>
<version>0.0.1-SNAPSHOT</version>
<packaging>war</packaging>


<name>Eproduct Maven Webapp</name>
<!-- FIXME change it to the project's website -->
<url>http://www.example.com</url>


<properties>
<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
<org.springframework.version>6.0.4</org.springframework.version>
<maven.compiler.source>1.8</maven.compiler.source>
<maven.compiler.target>1.8</maven.compiler.target>
</properties>


<dependencies>


<dependency>
```

```xml
<groupId>org.springframework</groupId>
<artifactId>spring-core</artifactId>
<version>${org.springframework.version}</version>
</dependency>
<dependency>
<groupId>org.springframework</groupId>
<artifactId>spring-expression</artifactId>
<version>${org.springframework.version}</version>

</dependency>
<dependency>
<groupId>org.springframework</groupId>
<artifactId>spring-beans</artifactId>
<version>${org.springframework.version}</version>
</dependency>
<dependency>
<groupId>org.springframework</groupId>
<artifactId>spring-context</artifactId>
<version>${org.springframework.version}</version>
</dependency>
<dependency>
<groupId>org.springframework</groupId>
<artifactId>spring-context-support</artifactId>
<version>${org.springframework.version}</version>
</dependency>
<dependency>
<groupId>org.springframework</groupId>
<artifactId>spring-jdbc</artifactId>
<version>${org.springframework.version}</version>
</dependency>
<dependency>
<groupId>org.springframework</groupId>
<artifactId>spring-orm</artifactId>
<version>${org.springframework.version}</version>
</dependency>
<dependency>
<groupId>org.springframework</groupId>
<artifactId>spring-web</artifactId>
<version>${org.springframework.version}</version>
</dependency>
<dependency>
```

```xml
<groupId>org.springframework</groupId>
<artifactId>spring-webmvc</artifactId>
<version>${org.springframework.version}</version>
</dependency>
<dependency>
<groupId>javassist</groupId>
<artifactId>javassist</artifactId>
<version>3.12.1.GA</version>
</dependency>
<dependency>
<groupId>taglibs</groupId>
<artifactId>standard</artifactId>

<version>1.1.2</version>
<scope>runtime</scope>
</dependency>
<dependency>
<groupId>commons-dbcp</groupId>
<artifactId>commons-dbcp</artifactId>
<version>1.4</version>
</dependency>
<!--
https://mvnrepository.com/artifact/jakarta.servlet.jsp/jakarta.servlet.jsp-api HYPERLINK
"https://mvnrepository.com/artifact/jakarta.servlet.jsp/jakarta.servlet.jsp-api" -->
<!--<dependency>
<groupId>jakarta.servlet</groupId>
<artifactId>jakarta.servlet-api</artifactId>
<version>6.0.0</version>
</dependency>-->
<!-- https://mvnrepository.com/artifact/javax.servlet/javax.servlet-api HYPERLINK
"https://mvnrepository.com/artifact/javax.servlet/javax.servlet-api" -->
<dependency>
<groupId>javax.servlet</groupId>
<artifactId>javax.servlet-api</artifactId>
<version>3.0.1</version>
<scope>provided</scope>
</dependency>
<!--
https://mvnrepository.com/artifact/jakarta.servlet.jsp.jstl/jakarta.servlet.jsp.jstl-api HYPERLINK
"https://mvnrepository.com/artifact/jakarta.servlet.jsp.jstl/jakarta.servlet.jsp.jstl-api" -->
<dependency>
```

```xml
<groupId>jakarta.servlet.jsp.jstl</groupId>
<artifactId>jakarta.servlet.jsp.jstl-api</artifactId>
<version>3.0.0</version>
</dependency>


<dependency>
<groupId>mysql</groupId>
<artifactId>mysql-connector-java</artifactId>
<version>8.0.32</version>
</dependency>


<dependency>
<groupId>javax.persistence</groupId>
<artifactId>persistence-api</artifactId>
<version>1.0.2</version>
<scope>provided</scope>
</dependency>


<dependency>
<groupId>junit</groupId>
<artifactId>junit</artifactId>
<version>4.11</version>
<scope>test</scope>
</dependency>
<dependency>
<groupId>SpringHibernateWeb</groupId>
<artifactId>SpringHibernateWeb</artifactId>
<version>0.0.1-SNAPSHOT</version>
</dependency>
</dependencies>

<build>
<finalName>Eproduct</finalName>
<pluginManagement><!-- lock down plugins versions to avoid using Maven defaults (may be
moved to parent pom) -->
<plugins>
<plugin>
```

```xml
<artifactId>maven-clean-plugin</artifactId>
<version>3.1.0</version>
</plugin>
<!-- see http://maven.apache.org/ref/current/maven-core/default-bindings.html#Plugin_bindings_for_war_packaging HYPERLINK "http://maven.apache.org/ref/current/maven-core/default-bindings.html#Plugin_bindings_for_war_packaging" -->
<plugin>
<artifactId>maven-resources-plugin</artifactId>
<version>3.0.2</version>
</plugin>
<plugin>
<artifactId>maven-compiler-plugin</artifactId>
<version>3.8.0</version>
</plugin>
<plugin>
<artifactId>maven-surefire-plugin</artifactId>
<version>2.22.1</version>
</plugin>
<plugin>
<artifactId>maven-war-plugin</artifactId>
<version>3.2.2</version>
</plugin>
<plugin>
<artifactId>maven-install-plugin</artifactId>

<version>2.5.2</version>
</plugin>
<plugin>
<artifactId>maven-deploy-plugin</artifactId>
<version>2.8.2</version>
</plugin>
</plugins>
</pluginManagement>
</build>
</project>
```

main-sevlet.xml

```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:aop="http://www.springframework.org/schema/aop"
xmlns:context="http://www.springframework.org/schema/context"
xmlns:jee="http://www.springframework.org/schema/jee"
xmlns:lang="http://www.springframework.org/schema/lang"
xmlns:p="http://www.springframework.org/schema/p"
xmlns:tx="http://www.springframework.org/schema/tx"
xmlns:util="http://www.springframework.org/schema/util"
xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans-2.5.xsd
http://www.springframework.org/schema/aop
http://www.springframework.org/schema/aop/spring-aop-2.5.xsd
http://www.springframework.org/schema/context
http://www.springframework.org/schema/context/spring-context-2.5.xsd
http://www.springframework.org/schema/tx
http://www.springframework.org/schema/tx/spring-tx-2.5.xsd">


<bean id="jspViewResolver"
class="org.springframework.web.servlet.view.InternalResourceViewResolver">
<property name="viewClass"
value="org.springframework.web.servlet.view.JstlView"></property>
<property name="prefix" value="/WEB-INF/view/"></property>

<property name="suffix" value=".jsp"></property>
</bean>
<bean id="messageSource"
class="org.springframework.context.support.ReloadableResourceBundleMessageSource">
<property name="basename" value="classpath:messages"></property>

<property name="defaultEncoding" value="UTF-8"></property>
</bean>

<context:annotation-config />

<context:component-scan
base-package="com.ecommerce" />
<context:component-scan
base-package="com.ecommerce.dao" />
```

```xml
<bean id="dataSource"
class="org.apache.commons.dbcp.BasicDataSource" destroy-method="close"
p:driverClassName="${jdbc.driverClassName}"
p:url="${jdbc.databaseurl}" p:username="${jdbc.username}"
p:password="${jdbc.password}"></bean>

<bean id="ds"
class="org.springframework.jdbc.datasource.DriverManagerDataSource">
<property name="driverClassName"
value="com.mysql.jdbc.Driver"></property>
<property name="url"
value="jdbc:mysql://localhost:3306/ecommerce"></property>
<property name="username" value="root"></property>
<property name="password" value="123456"></property>
</bean>


<bean id="jt" class="org.springframework.jdbc.core.JdbcTemplate">
<property name="dataSource" ref="ds"></property>
</bean>


<bean id="dao" class="com.ecommerce.dao.EProductDAO">
<property name="template" ref="jt"></property>
</bean>

<tx:annotation-driven />


</beans>
```

web.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns="http://java.sun.com/xml/ns/javaee" HYPERLINK
"http://java.sun.com/xml/ns/javaee" version="2.5"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_2_5.xsd">
```

```xml
<display-name>Archetype Created Web Application</display-name>
<welcome-file-list>
<welcome-file >index.jsp</welcome-file >
</welcome-file-list>
<context-param>
<param-name>contextConfigLocation</param-name>
<param-value>/WEB-INF/main-servlet.xml</param-value>
</context-param>
<servlet>
<servlet-name>main</servlet-name>
<servlet-class>org.springframework.web.servlet.DispatcherServlet</servlet-class>
<load-on-startup>1</load-on-startup>
</servlet>
<servlet-mapping>
<servlet-name>main</servlet-name>
<url-pattern>/</url-pattern>
</servlet-mapping>


<listener>
<listener-class>org.springframework.web.context.ContextLoaderListener</listener-class>
</listener>
</web-app>
```

SQL Query

```sql
DROP TABLE IF EXISTS `eproduct`;

CREATE TABLE `eproduct` (

 `ID` bigint(20) NOT NULL AUTO_INCREMENT,
 `name` varchar(100) DEFAULT NULL,
 `price` decimal(10,2) DEFAULT NULL,
 `date_added` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP,
 PRIMARY KEY (`ID`)
) ENGINE=InnoDB AUTO_INCREMENT=4 DEFAULT CHARSET=latin1;

LOCK TABLES `eproduct` WRITE;
```

```
INSERT INTO `eproduct` VALUES (1,'HP Laptop ABC',21900.00,'2019-06-04
07:18:57'),(2,'Acer Laptop ABC',23300.00,'2019-06-04 07:19:07'),(3,'Lenovo Laptop
ABC',33322.00,'2019-06-04 07:19:19');

UNLOCK TABLES;
```

index.jsp

```
<html>
<body>
<h3><a href="listProducts">List Products</a></h3>
<h3><a href="update.jsp">Update Products</a></h3>
</body>
</html>
```

listProduct.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://www.springframework.org/tags/form" HYPERLINK
"http://www.springframework.org/tags/form" prefix="form"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" HYPERLINK
"http://java.sun.com/jsp/jstl/core" prefix="c"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>List Products</title>
</head>
<body>
<c:forEach var="product" items="${list}">
${product.name}, ${product.price}, ${product.dateAdded}<br>
</c:forEach>
</body>
</html>
```

update.jsp

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Product Details</title>
</head>
<body>
<form name=ID method="POST" action="updatedetails.jsp" id="form1">
<label for="ID">Product ID :
<input type="text" id="id" name="ID"></label><br><br>
<button type="submit" form="form1" value="Submit">Submit</button>
</form>
</body>
</html>
```

updatedetails.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
<!DOCTYPE html>
<html>
<head>
<title>Update Product</title>
</head>
<body>
<h1>Update Product</h1>
<form action="/updateProduct" method="GET">
<input type="hidden" name="id" value="${eproduct.id}" /> <!-- Assuming 'product' object is available in the model -->
<label for="name">Name:</label>
<input type="text" id="name" name="name" value="${eproduct.name}" /><br /><br />
<label for="price">Price:</label>
<input type="text" id="price" name="price" value="${eproduct.price}" /><br /><br />
<input type="submit" value="Update" />
</form>
</body>
```

```html
</html>
```

MainController.java

```java
package com.ecommerce.controller;


import java.math.BigDecimal;
import java.util.List;


import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.ModelMap;
import org.springframework.web.bind.annotation.RequestMapping;import
org.springframework.web.bind.annotation.RequestMethod; import
org.springframework.web.bind.annotation.RequestParam;


import com.ecommerce.dao.EProductDAO;
import com.ecommerce.entity.EProduct;


@Controller
public class MainController {


@Autowired
EProductDAO eproductDAO;


@RequestMapping(value = "/listProducts", method = RequestMethod.GET)
public String listProducts(ModelMap map) {
List<EProduct> list = eproductDAO.getProducts();
map.addAttribute("list", list);
return "listProduct";


}
```

```java
@RequestMapping(value = "/updateProduct", method = RequestMethod.GET) public
String updateProduct(@RequestParam long id, @RequestParam String name,
@RequestParam BigDecimal price,
ModelMap map) {
EProduct product = eproductDAO.getProductById(id);if
(product != null) {
product.setName(name);


product.setPrice(price); eproductDAO.updateProduct(product);
map.addAttribute("message", "Product updated successfully");
} else {
map.addAttribute("error", "Product not found");
}
return "redirect:/listProducts";
}


}
```

EProductDAO.java

```java
package com.ecommerce.dao;


import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Types;
import java.util.List;


import org.springframework.jdbc.core.JdbcTemplate;
import org.springframework.jdbc.core.RowMapper;


import com.ecommerce.entity.EProduct;
```

```java
public class EProductDAO {


JdbcTemplate template;


public void setTemplate(JdbcTemplate template)
{this.template = template;
}



public List<EProduct> getProducts() {
return template.query("select * from eproduct", new RowMapper<EProduct>() {

public EProduct mapRow(ResultSet rs, int row) throws SQLException
{EProduct e = new EProduct();
e.setID(rs.getInt(1));
e.setName(rs.getString(2));
e.setPrice(rs.getBigDecimal(3));
e.setDateAdded(rs.getDate(4));
return e;
}
});
}


public EProduct getProductById(long id) {
String sql = "SELECT * FROM eproduct WHERE ID=?";
Object[] params = { id };
int[] types = { Types.BIGINT };

return template.queryForObject(sql, params, types, new RowMapper<EProduct>()
{public EProduct mapRow(ResultSet rs, int row) throws SQLException {
EProduct e = new EProduct();
e.setID(rs.getLong("ID"));
e.setName(rs.getString("name"));
e.setPrice(rs.getBigDecimal("price"));
e.setDateAdded(rs.getDate("date_added"));
return e;
}
});
```

```java
}


public void updateProduct(EProduct product) {
String sql = "UPDATE eproduct SET name=?, price=?, date_added=? WHERE ID=?";
Object[] params = { product.getName(), product.getPrice(), product.getDateAdded(),
product.getID() };
int[] types = { Types.VARCHAR, Types.DECIMAL, Types.DATE, Types.BIGINT };
template.update(sql, params, types);
}


}
```

EProduct.java

```java
package com.ecommerce.entity;


import java.math.BigDecimal;
import java.util.Date;

public class EProduct {

    private long ID;
    private String name;
    private BigDecimal price;
    private Date dateAdded;

    public long getID() {return this.ID; }
    public String getName() { return this.name;}
    public BigDecimal getPrice() { return this.price;}
    public Date getDateAdded() { return this.dateAdded;}

    public void setID(long id) { this.ID = id;}
    public void setName(String name) { this.name = name;}
    public void setPrice(BigDecimal price) { this.price = price;}
    public void setDateAdded(Date date) { this.dateAdded = date;}
```

}