Create a Java program to demonstrate JDBC and Spring Integration

```
index.jsp :
<html>
<body>
<h3><a href="listProducts">List Products</a></h3>
</body>
</html>
listProduct.jsp:
<%@ page language="java" contentType="text/html; charset=UTF-8"</pre>
pageEncoding="UTF-8"%>
<%@ taglib uri="http://www.springframework.org/tags/form" prefix="form"%>
<%@ taglib uri="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>
MailController.java :
package com.ecommerce.controller;
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 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";
}
```

<u>EProductDAO.java:</u>

```
package com.ecommerce.dao;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.List;
import org.springframework.jdbc.core.JdbcTemplate;
import org.springframework.jdbc.core.RowMapper;
import com.ecommerce.entity.EProduct;
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;
});
```

EProduct.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;
 }
}
```

main-servlet.xml :

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"</pre>
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"</pre>
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/">
cproperty name="suffix" value=".jsp"></property>
</bean>
<bean id="messageSource"</pre>
class="org.springframework.context.support.ReloadableResourceBundleMessageS
ource">
property name="basename" value="classpath:messages">
</bean>
<context:annotation-config />
<context:component-scan</pre>
base-package="com.ecommerce" />
<context:component-scan</pre>
base-package="com.ecommerce.dao" />
<bean id="dataSource"</pre>
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 name="url"
value="jdbc:mysq1://localhost:3306/ecommerce">//property>
cproperty name="username" value="root"></property>
</bean>
<bean id="jt" class="org.springframework.jdbc.core.JdbcTemplate">
property name="dataSource" ref="ds">
</bean>
<bean id="dao" class="com.ecommerce.dao.EProductDAO">
cproperty name="template" ref="jt"></property>
</bean>
<tx:annotation-driven />
</beans>
```

```
web.xml:
```

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns="http://java.sun.com/xml/ns/javaee" version="2.5"</pre>
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">
<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-</pre>
<load-on-startup>1</load-on-startup>
</servlet>
<servlet-mapping>
<servlet-name>main</servlet-name>
<url-pattern>/</url-pattern>
</servlet-mapping>
tener>
stener-
class>org.springframework.web.context.ContextLoaderListener</listener-
</listener>
</web-app>
pom.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
<packaging>war</packaging>
<name>Eproduct Maven Webapp</name>
<!-- FIXME change it to the project's website -->
<url>http://www.example.com</url>
properties>
<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>
<groupId>org.springframework
<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>${org.springframework.version}
</dependency>
<dependency>
<groupId>org.springframework
<artifactId>spring-context-support</artifactId>
<version>${org.springframework.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>${org.springframework.version}</version>
</dependency>
<dependency>
<groupId>org.springframework</groupId>
<artifactId>spring-webmvc</artifactId>
<version>${org.springframework.version}
</dependency>
<dependency>
<groupId>javassist
<artifactId>javassist</artifactId>
<version>3.12.1.GA
</dependency>
<dependency>
<groupId>taglibs
<artifactId>standard</artifactId>
<version>1.1.2
<scope>runtime</scope>
</dependency>
<dependency>
<groupId>commons-dbcp
<artifactId>commons-dbcp</artifactId>
<version>1.4</version>
</dependency>
<!--
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
</dependency>-->
<!-- https://mvnrepository.com/artifact/javax.servlet/javax.servlet-api -->
<dependency>
<groupId>javax.servlet
<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 -->
<dependency>
<groupId>jakarta.servlet.jsp.jstl</groupId>
<artifactId>jakarta.servlet.jsp.jstl-api</artifactId>
<version>3.0.0
</dependency>
<dependency>
<groupId>mysql</groupId>
<artifactId>mysql-connector-java</artifactId>
<version>8.0.32
</dependency>
<dependency>
<groupId>javax.persistence</groupId>
<artifactId>persistence-api</artifactId>
<version>1.0.2
<scope>provided</scope>
</dependency>
<dependency>
<groupId>junit
<artifactId>junit</artifactId>
<version>4.11
<scope>test</scope>
</dependency>
</dependencies>
<build>
<finalName>Eproduct</finalName>
<pluginManagement><!-- lock down plugins versions to avoid using Maven</pre>
defaults (may be
moved to parent pom) -->
<plugins>
<plugin>
<artifactId>maven-clean-plugin</artifactId>
<version>3.1.0
</plugin>
<!-- see 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
</plugin>
<plugin>
<artifactId>maven-compiler-plugin</artifactId>
<version>3.8.0
</plugin>
<plugin>
<artifactId>maven-surefire-plugin</artifactId>
<version>2.22.1
</plugin>
<plugin>
<artifactId>maven-war-plugin</artifactId>
```

```
<version>3.2.2
</plugin>
<plugin>
<artifactId>maven-install-plugin</artifactId>
<version>2.5.2
</plugin>
<plugin>
<artifactId>maven-deploy-plugin</artifactId>
<version>2.8.2
</plugin>
</plugin>
</plugin>
</plugin>
</plugin>
</plugin>
</plugins>
</plugins>
</pluginManagement>
</build>
</project>
```