

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"
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";
    }
}
```

EProductDAO.java :

```
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"
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.ReloadableResourceBundleMessageS
ource">
<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" />
<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="Salmasaleem@04"></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 version="1.0" encoding="UTF-8"?>
<web-app xmlns="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">
<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>
```

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</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>
<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>${org.springframework.version}</version>
</dependency>
<dependency>
<groupId>org.springframework</groupId>
<artifactId>spring-webmvc</artifactId>
<version>${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 -->
<!--<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 -->
<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 -->
<dependency>
<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>
</dependencies>
<build>
<finalName>Eproduct</finalName>
<pluginManagement><!-- lock down plugins versions to avoid using Maven
defaults (may be
moved to parent pom) -->
<plugins>
<plugin>
<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 -->
<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>
```