Integration of Hibernate with Spring

EProduct :

```java
package com.ecommerce.entity;

import java.math.BigDecimal;
import java.util.Date;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
import javax.persistence.Table;

@Entity
@Table(name= "eproduct")
public class EProductEntity {


@Id @GeneratedValue
@Column(name = "ID")
private long ID;
@Column(name = "name")
private String name;
@Column(name = "price")
private BigDecimal price;
@Column(name = "date_added")
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;}
}
```

EProductDAO :

```java
package com.ecommerce.dao;

import java.util.List;

import org.hibernate.SessionFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Repository;
import org.springframework.stereotype.Service;
import org.springframework.transaction.annotation.Transactional;
import com.ecommerce.entity.EProductEntity;

@Repository
public class EProductDAO {
```

```
@Autowired
private SessionFactory sessionFactory;

@SuppressWarnings("unchecked")
public List<EProductEntity> getAllProducts() {
return this.sessionFactory.getCurrentSession().createQuery("from
EProducts").list();
}
}
```

EProductController :

```
package com.ecommerce.controller;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.ModelMap;
import org.springframework.validation.BindingResult;
import org.springframework.web.bind.annotation.ModelAttribute;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.RequestParam;
import com.ecommerce.entity.EProductEntity;
import com.ecommerce.service.EProductService;

@Controller
public class EProductController {

@Autowired
private EProductService eproductService;
@RequestMapping(value = "/productList", method = RequestMethod.GET)
public String listProducts(ModelMap map)
{
map.addAttribute("eproduct", new EProductEntity());
map.addAttribute("productList", eproductService.getAllProducts());
return "productList";
}
}
```

eproduct-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.xsd
```

```xml
        http://www.springframework.org/schema/aop/
        http://www.springframework.org/schema/aop/spring-aop.xsd
        http://www.springframework.org/schema/context/
        http://www.springframework.org/schema/context/spring-context.xsd
        http://www.springframework.org/schema/jee/
        http://www.springframework.org/schema/jee/spring-jee.xsd
        http://www.springframework.org/schema/lang/
        http://www.springframework.org/schema/lang/spring-lang.xsd
        http://www.springframework.org/schema/tx/
        http://www.springframework.org/schema/tx/spring-tx.xsd
        http://www.springframework.org/schema/util/
        http://www.springframework.org/schema/util/spring-util.xsd">
    <context:annotation-config />
    <context:component-scan base-package="com.ecommerce.controller" />
    <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>
    <bean id="propertyConfigurer"
    class="org.springframework.beans.factory.config.PropertyPlaceholderConfigur
    er"
    p:location="/WEB-INF/jdbc.properties"></bean>
    <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="sessionFactory"
    class="org.springframework.orm.hibernate3.LocalSessionFactoryBean">
    <property name="dataSource" ref="dataSource"></property>
    <property name="configLocation">
    <value>classpath:hibernate.cfg.xml</value>
    </property>
    <property name="configurationClass">
    <value>org.hibernate.cfg.AnnotationConfiguration</value>
    </property>
    <property name="hibernateProperties">
    <props>
    <prop key="hibernate.dialect">${jdbc.dialect}</prop>
    <prop key="hibernate.show_sql">true</prop>
    </props>
    </property>
    </bean>
    <bean id="eproductDAO" class="com.ecommerce.dao.EProductDAO"></bean>
    <bean id="eproductService"
    class="com.ecommerce.service.EProductService"></bean>
    <tx:annotation-driven />
    <bean id="transactionManager"
    class="org.springframework.orm.hibernate3.HibernateTransactionManager">
    <property name="sessionFactory" ref="sessionFactory"></property>
```

```
</bean>
</beans>
```

jdbc.properties :

```
jdbc.driverClassName=com.mysql.jdbc.Driver
jdbc.dialect=org.hibernate.dialect.MySQLDialect
jdbc.databaseurl=jdbc:mysql://127.0.0.1:3306/ecommerce
jdbc.username=root
jdbc.password=Dhanush@03
```

pom.xml :

```xml
<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/maven-v4_0_0.xsd">
<modelVersion>4.0.0</modelVersion>
<groupId>SpringHibernateWeb</groupId>
<artifactId>SpringHibernateWeb</artifactId>
<packaging>war</packaging>
<version>0.0.1-SNAPSHOT</version>
<name>SpringHibernateWeb Maven Webapp</name>
<url>http://maven.apache.org</url>
<!-- JBoss repository for Hibernate -->
<repositories>
<repository>
<id>JBoss repository</id>
<url>http://repository.jboss.org/nexus/content/groups/public/</url>
</repository>
</repositories>
<properties>
<org.springframework.version>3.0.5.RELEASE</org.springframework.version>
</properties>
<dependencies>
<dependency>
<groupId>junit</groupId>
<artifactId>junit</artifactId>
<version>3.8.1</version>
<scope>test</scope>
</dependency>
<dependency>
<groupId>org.hibernate.javax.persistence</groupId>
<artifactId>hibernate-jpa-2.1-api</artifactId>
<version>1.0.0.Final</version>
</dependency>

<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>
```

```xml
    </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>log4j</groupId>
    <artifactId>log4j</artifactId>
    <version>1.2.16</version>
    <scope>runtime</scope>
    </dependency>
    <dependency>
    <groupId>org.hibernate</groupId>
    <artifactId>hibernate-core</artifactId>
    <version>3.6.3.Final</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>
```

```xml
<groupId>commons-dbcp</groupId>
<artifactId>commons-dbcp</artifactId>
<version>1.4</version>
</dependency>
<dependency>
<groupId>mysql</groupId>
<artifactId>mysql-connector-java</artifactId>
<version>5.1.9</version>
</dependency>

</dependencies>
<build>
<finalName>SpringHibernateWeb</finalName>
</build>
</project>
```

productList.jsp :

```jsp
<%@taglib uri="http://www.springframework.org/tags" prefix="spring"%>
<%@taglib uri="http://www.springframework.org/tags/form" prefix="form"%>
<%@taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<html>
<head>
<title>Spring With Hibernate</title>
</head>
<body>
<h3>Product List </h3>
<c:if test="${!empty productList}">
<table class="data">
<tr>
<th>Name</th>
<th>Price</th>
<th>Date Added</th>
</tr>
<c:forEach items="${productList}" var="product">
<tr>
<td>${product.name} </td>
<td>${product.price}</td>
<td>${product.date_added}</td>
</tr>
</c:forEach>
</table>
</c:if>
</body>
</html>
```

index.jsp :

```jsp
<html>
<body>
<h2>Spring With Hibernate</h2>
<a href="/productList">Product List</a>
</html>
</body>
```

hibernate.cfg.xml :

```xml
<?xml version='1.0' encoding='utf-8'?>
<!DOCTYPE hibernate-configuration PUBLIC
"-//Hibernate/Hibernate Configuration DTD//EN"
"http://hibernate.sourceforge.net/hibernate-configuration-3.0.dtd">
<hibernate-configuration>
<session-factory>
<mapping class="com.ecommerce.entity.EProductEntity"></mapping>
</session-factory>
</hibernate-configuration>
```

web.xml :

```xml
<!DOCTYPE web-app PUBLIC
"-//Sun Microsystems, Inc.//DTD Web Application 2.3//EN"
"http://java.sun.com/dtd/web-app_2_3.dtd" >

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

Mysql :

```sql
/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8 */;
/*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
```

```sql
/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS,
FOREIGN_KEY_CHECKS=0 */;
/*!40101 SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
/*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;


--
-- Table structure for table `eproduct`
--

DROP TABLE IF EXISTS `eproduct`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
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,
`parts_hdd` varchar(10) DEFAULT NULL,
`parts_cpu` varchar(10) DEFAULT NULL,
`parts_ram` varchar(10) DEFAULT NULL,
PRIMARY KEY (`ID`)
) ENGINE=InnoDB AUTO_INCREMENT=4 DEFAULT CHARSET=latin1;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `eproduct`
--

LOCK TABLES `eproduct` WRITE;
/*!40000 ALTER TABLE `eproduct` DISABLE KEYS */;
INSERT INTO `eproduct` VALUES (1,'HP Laptop ABC',21900.00,'2019-06-04
07:18:57','2 Gb HDD','AMD Phenom','4 Gb'),(2,'Acer Laptop
ABC',23300.00,'2019-06-04 07:19:07','500 Gb HDD','Core-i7','4
Gb'),(3,'Lenovo Laptop ABC',33322.00,'2019-06-04 07:19:19','1 Tb
HDD','Core-i7','8 Gb');
/*!40000 ALTER TABLE `eproduct` ENABLE KEYS */;
UNLOCK TABLES;
/*!40103 SET TIME_ZONE=@OLD_TIME_ZONE */;


/*!40101 SET SQL_MODE=@OLD_SQL_MODE */;
/*!40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS */;
/*!40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS */;
/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;
/*!40111 SET SQL_NOTES=@OLD_SQL_NOTES */;
```