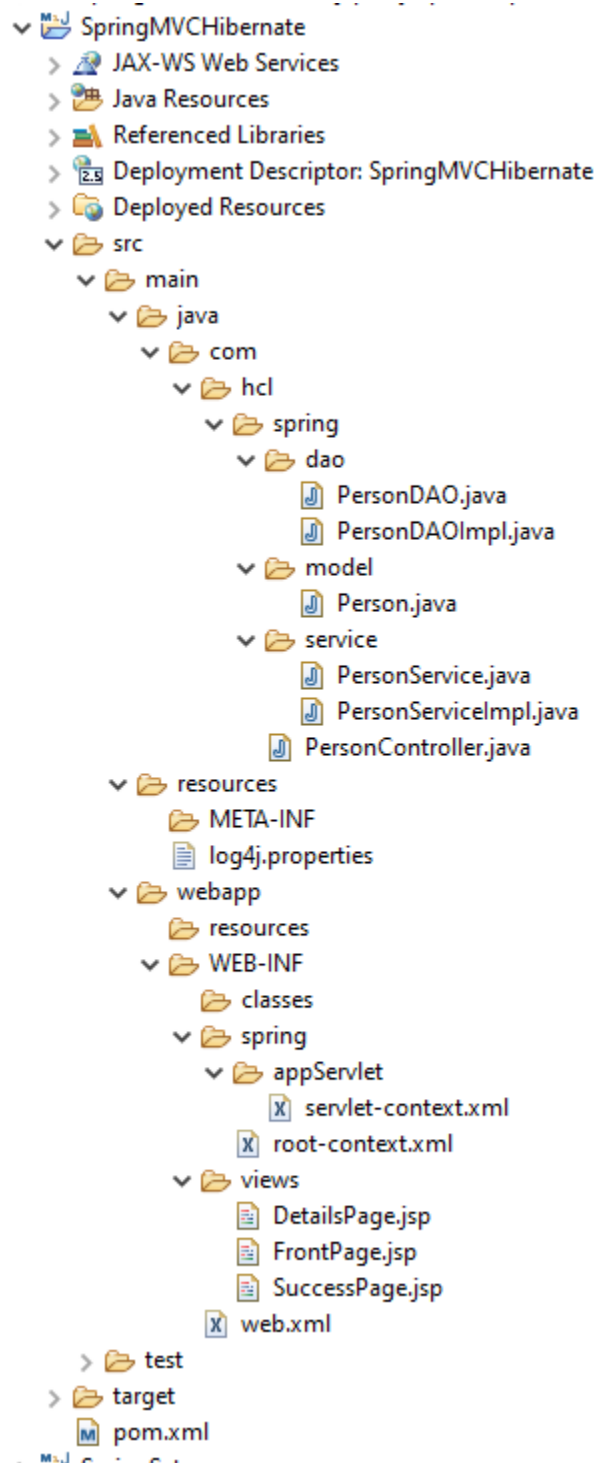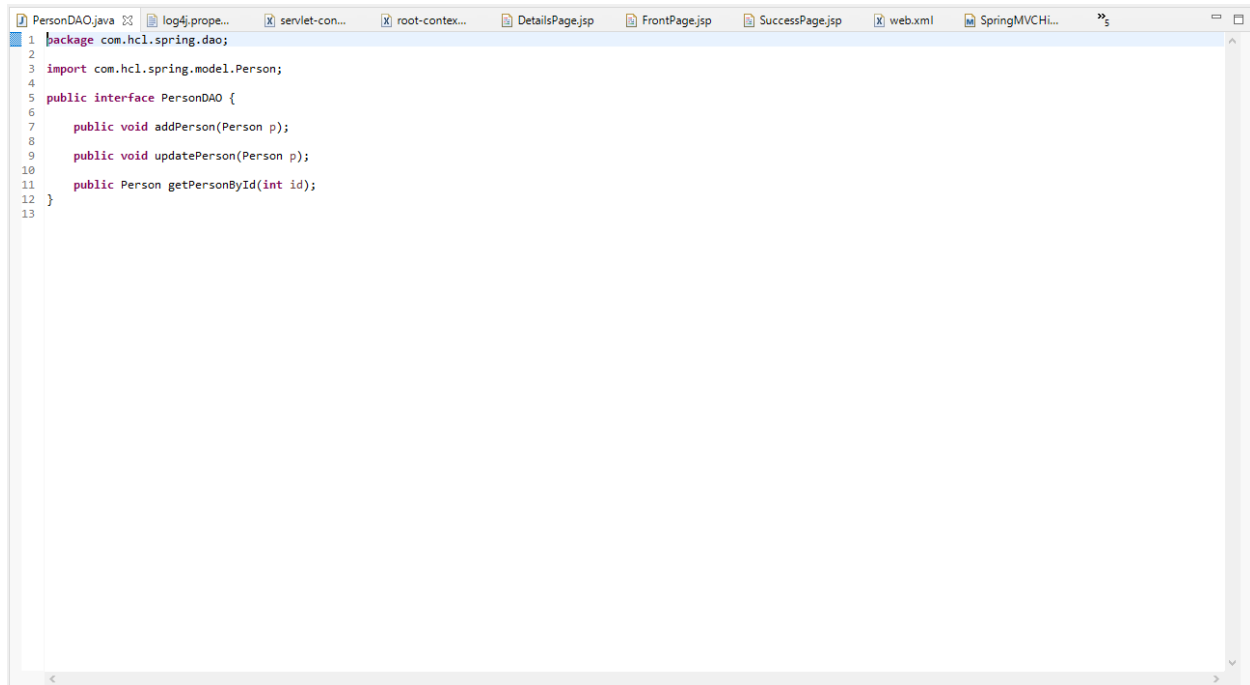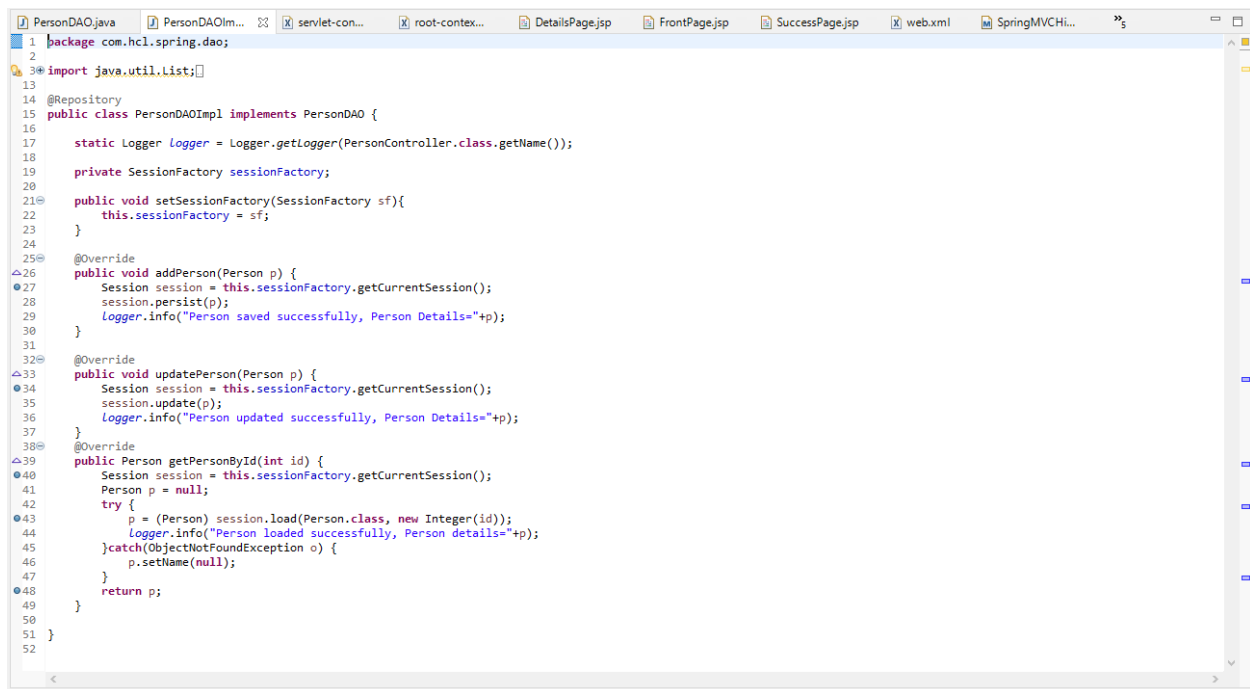Folder Structure:

PersonDao.java

```java
1  package com.hcl.spring.dao;
2
3  import com.hcl.spring.model.Person;
4
5  public interface PersonDAO {
6
7      public void addPerson(Person p);
8
9      public void updatePerson(Person p);
10
11     public Person getPersonById(int id);
12 }
13
```
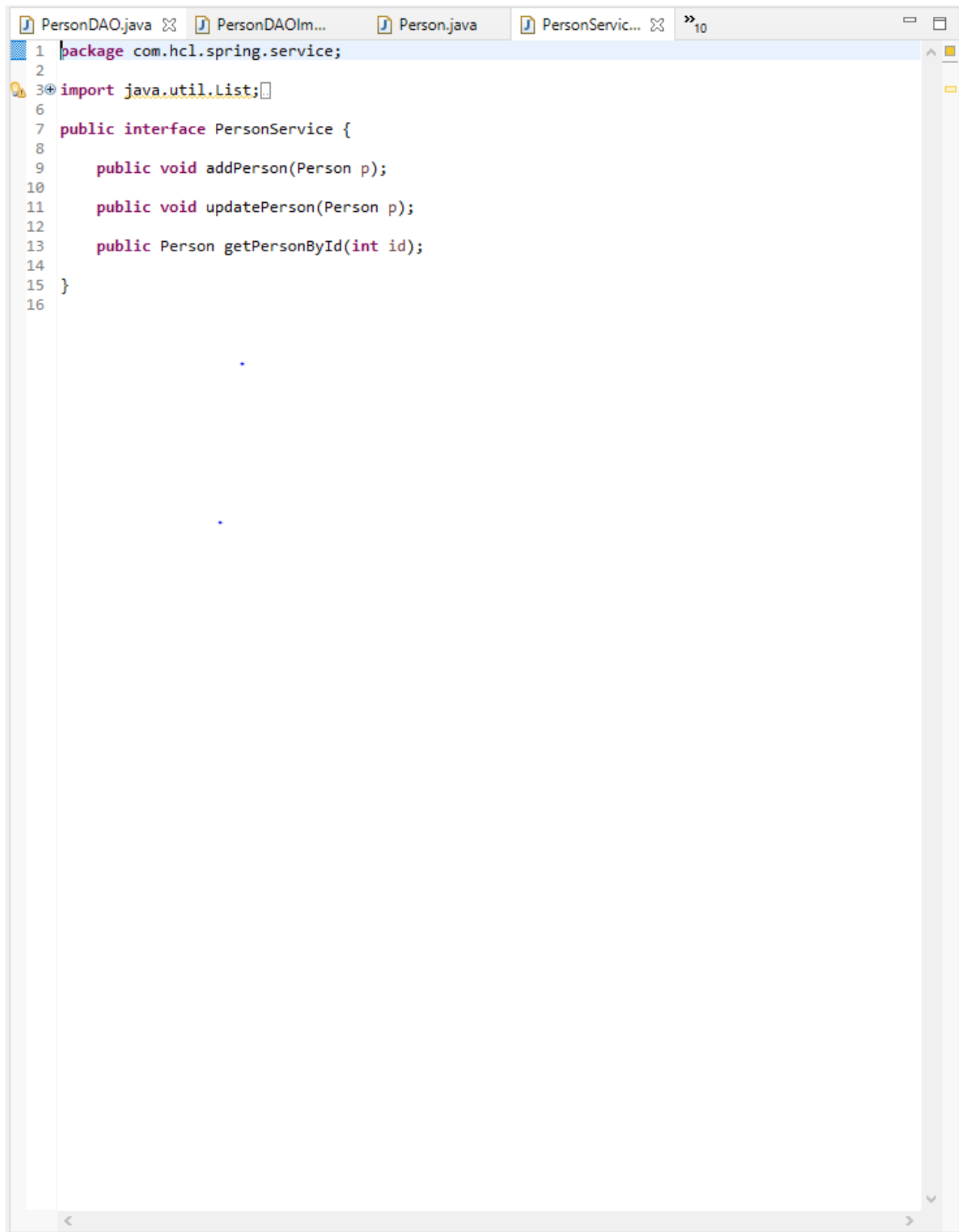
PersonDaoImpl.java

```java
1   package com.hcl.spring.dao;
2
3   import java.util.List;
13
14  @Repository
15  public class PersonDAOImpl implements PersonDAO {
16
17      static Logger logger = Logger.getLogger(PersonController.class.getName());
18
19      private SessionFactory sessionFactory;
20
21      public void setSessionFactory(SessionFactory sf){
22          this.sessionFactory = sf;
23      }
24
25      @Override
26      public void addPerson(Person p) {
27          Session session = this.sessionFactory.getCurrentSession();
28          session.persist(p);
29          logger.info("Person saved successfully, Person Details="+p);
30      }
31
32      @Override
33      public void updatePerson(Person p) {
34          Session session = this.sessionFactory.getCurrentSession();
35          session.update(p);
36          logger.info("Person updated successfully, Person Details="+p);
37      }
38      @Override
39      public Person getPersonById(int id) {
40          Session session = this.sessionFactory.getCurrentSession();
41          Person p = null;
42          try {
43              p = (Person) session.load(Person.class, new Integer(id));
44              logger.info("Person loaded successfully, Person details="+p);
45          }catch(ObjectNotFoundException o) {
46              p.setName(null);
47          }
48          return p;
49      }
50
51  }
52
```
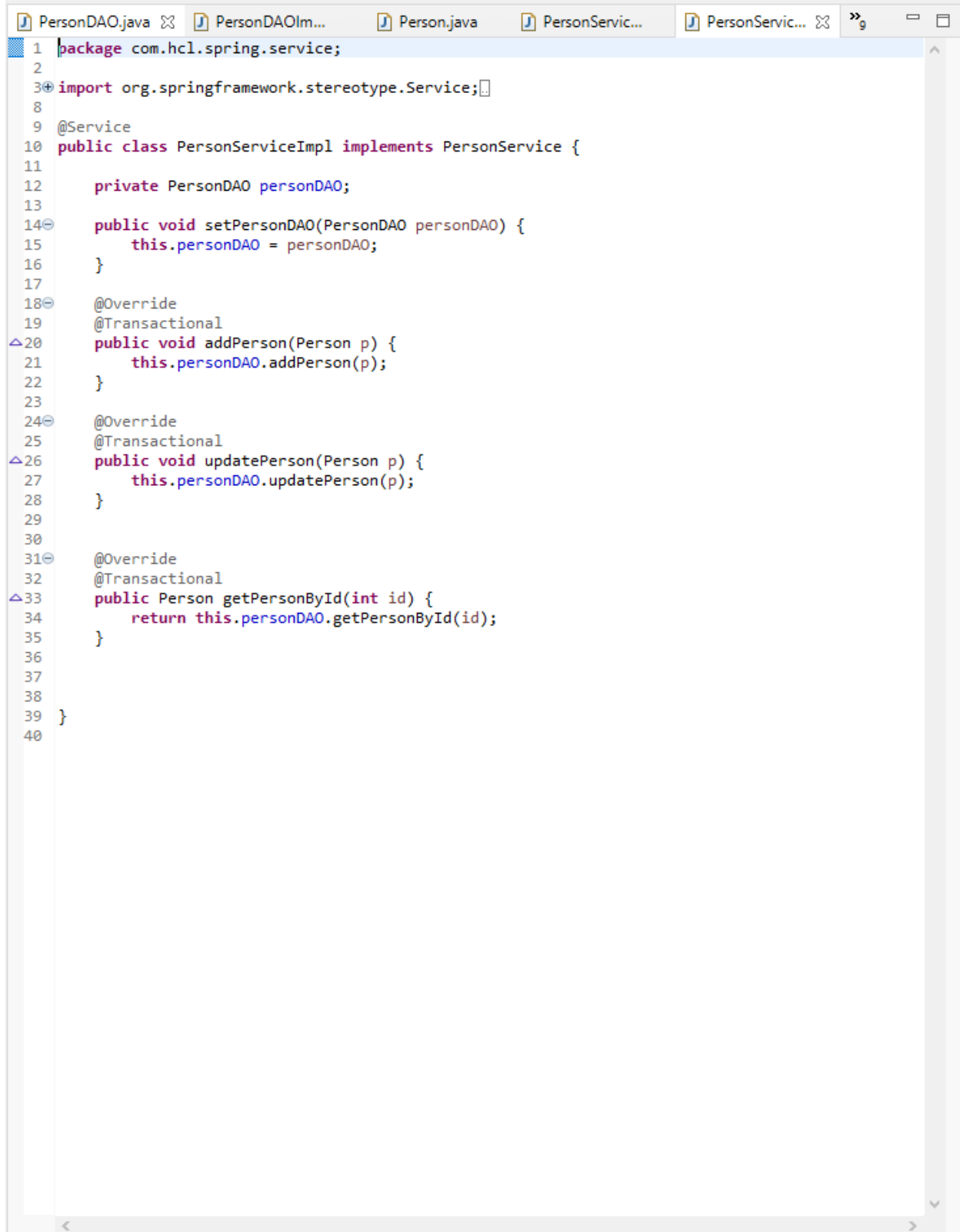
Person.java

```java
1  package com.hcl.spring.model;
2
3⊕ import javax.persistence.Column;⎕
9
10⊖ /**
11   * Entity bean with JPA annotations
12   * Hibernate provides JPA implementation
13   * @author pankaj
14   *
15   */
16  @Entity
17  @Table(name="PERSON")
18  public class Person {
19
20⊖     @Id
21      @Column(name="id")
22      @GeneratedValue(strategy=GenerationType.IDENTITY)
23      private int id;
24
25      private String name;
26
27      private String country;
28
29⊖     public int getId() {
30          return id;
31      }
32
33⊖     public void setId(int id) {
34          this.id = id;
35      }
36
37⊖     public String getName() {
38          return name;
39      }
40
41⊖     public void setName(String name) {
42          this.name = name;
43      }
44
45⊖     public String getCountry() {
46          return country;
47      }
48
49⊖     public void setCountry(String country) {
50          this.country = country;
51      }
52
53⊖     @Override
54      public String toString(){
55          return "id="+id+", name="+name+", country="+country;
56      }
57  }
58
```

PersonService.java

```java
1  package com.hcl.spring.service;
2
3  import java.util.List;
6
7  public interface PersonService {
8
9      public void addPerson(Person p);
10
11      public void updatePerson(Person p);
12
13      public Person getPersonById(int id);
14
15  }
16
```

PersonServiceImpl.java

```java
package com.hcl.spring.service;

import org.springframework.stereotype.Service;

@Service
public class PersonServiceImpl implements PersonService {

    private PersonDAO personDAO;

    public void setPersonDAO(PersonDAO personDAO) {
        this.personDAO = personDAO;
    }

    @Override
    @Transactional
    public void addPerson(Person p) {
        this.personDAO.addPerson(p);
    }

    @Override
    @Transactional
    public void updatePerson(Person p) {
        this.personDAO.updatePerson(p);
    }


    @Override
    @Transactional
    public Person getPersonById(int id) {
        return this.personDAO.getPersonById(id);
    }



}
```

PersonController.java

```java
 1  package com.hcl.spring;
 2
 3⊕ import org.apache.log4j.Logger;□
16
17  @Controller
18  public class PersonController {
19      static Logger log = Logger.getLogger(PersonController.class.getName());
20      private PersonService personService;
21
22⊖     @Autowired(required = true)
23      @Qualifier(value = "personService")
24      public void setPersonService(PersonService ps) {
25          this.personService = ps;
26      }
27
28⊖     @RequestMapping(value = "/viewuser", method = RequestMethod.GET)
29      public String frontPage(Model model) {
30          model.addAttribute("person", new Person());
31          log.info("Loading Frontpage");
32          return "FrontPage";
33      }
34
35⊖     @RequestMapping(value = "/viewuser", method = RequestMethod.POST)
36      public String getUserDetails(@RequestParam("id") String id, Model model) {
37          int idnum = 0;
38          try {
39              idnum = Integer.parseInt(id);
40              try {
41                  model.addAttribute("person", this.personService.getPersonById(idnum));
42              } catch (Exception e) {
43                  model.addAttribute("person", new Person());
44                  model.addAttribute("message", "The user does not exist! ");
45                  log.info("The user does not exist! ");
46              }
47          } catch (Exception e) {
48              model.addAttribute("message", "Enter correct ID number!");
49              log.info("Enter correct ID number!");
50          }
51
52          return "DetailsPage";
53      }
54
55      // For add and update person both
56⊖     @RequestMapping(value = "/userdetails", method = RequestMethod.POST)
57      public String addPerson(@ModelAttribute("person") Person p) {
58          this.personService.getPersonById(p.getId());
59          if (p.getId() == 0) {
60              this.personService.addPerson(p);
61              log.info("Added Person");
62          } else {
63              this.personService.updatePerson(p);
64              log.info("Updated Person");
65          }
66          return "SuccessPage";
67
68      }
69
70  }
71
```

Log4j.properties

Person.java   PersonServic...   PersonServic...   PersonContr...   log4j.prope... ⌗ »₉   ⬚ ⊟

```properties
1 # Root logger option
2 log4j.rootLogger=DEBUG, stdout, file
3
4 # Redirect log messages to console
5 log4j.appender.stdout=org.apache.log4j.ConsoleAppender
6 #log4j.appender.stdout.Target=System.out
7 log4j.appender.stdout.layout=org.apache.log4j.PatternLayout
8 log4j.appender.stdout.layout.ConversionPattern=[%t] %-5p %c %x - %m%n
9
10 # Redirect log messages to a log file
11 log4j.appender.file=org.apache.log4j.RollingFileAppender
12 #outputs to Tomcat home
13 log4j.appender.file.File=${catalina.home}/logs/SpringMVCHibernate.log
14 log4j.appender.file.MaxFileSize=5MB
15 log4j.appender.file.MaxBackupIndex=10
16 log4j.appender.file.layout=org.apache.log4j.PatternLayout
17 log4j.appender.file.layout.ConversionPattern=[%t] %-5p %c %x - %m%n
```

Servlet-context.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<beans:beans
    xmlns="http://www.springframework.org/schema/mvc"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:beans="http://www.springframework.org/schema/beans"
    xmlns:context="http://www.springframework.org/schema/context"
    xmlns:tx="http://www.springframework.org/schema/tx"
    xsi:schemaLocation="http://www.springframework.org/schema/mvc
http://www.springframework.org/schema/mvc/spring-mvc.xsd
        http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd
        http://www.springframework.org/schema/context
http://www.springframework.org/schema/context/spring-context.xsd
        http://www.springframework.org/schema/tx
http://www.springframework.org/schema/tx/spring-tx-4.0.xsd">
    <annotation-driven />
    <resources mapping="/resources/**" location="/resources/" />
    <beans:bean

        class="org.springframework.web.servlet.view.InternalResourceViewResolver">
        <beans:property name="prefix" value="/WEB-INF/views/" />
        <beans:property name="suffix" value=".jsp" />
    </beans:bean>
    <beans:bean id="dataSource"
        class="org.apache.commons.dbcp.BasicDataSource" destroy-method="close">
        <beans:property name="driverClassName"
            value="com.mysql.cj.jdbc.Driver" />
        <beans:property name="url"
            value="jdbc:mysql://127.0.0.1:3306/drinks?useSSL=false" />
        <beans:property name="username" value="root" />
        <beans:property name="password" value="root" />
    </beans:bean>
    <!-- Hibernate 4 SessionFactory Bean definition -->
    <beans:bean id="hibernate4AnnotatedSessionFactory"
        class="org.springframework.orm.hibernate4.LocalSessionFactoryBean">
        <beans:property name="dataSource" ref="dataSource" />
        <beans:property name="annotatedClasses">
            <beans:list>
                <beans:value>com.hcl.spring.model.Person</beans:value>
            </beans:list>
        </beans:property>
        <beans:property name="hibernateProperties">
            <beans:props>
                <beans:prop
key="hibernate.dialect">org.hibernate.dialect.MySQLDialect
                </beans:prop>
                <beans:prop key="hibernate.show_sql">true</beans:prop>
            </beans:props>
        </beans:property>
    </beans:bean>
    <beans:bean id="personDAO"
        class="com.hcl.spring.dao.PersonDAOImpl">
        <beans:property name="sessionFactory"
            ref="hibernate4AnnotatedSessionFactory" />
    </beans:bean>
```

```xml
        <beans:bean id="personService"
                class="com.hcl.spring.service.PersonServiceImpl">
                <beans:property name="personDAO" ref="personDAO"></beans:property>
        </beans:bean>
        <context:component-scan
                base-package="com.hcl.spring" />
        <tx:annotation-driven
                transaction-manager="transactionManager" />
        <beans:bean id="transactionManager"
                class="org.springframework.orm.hibernate4.HibernateTransactionManager">
                <beans:property name="sessionFactory"
                        ref="hibernate4AnnotatedSessionFactory" />
        </beans:bean>
</beans:beans>
```
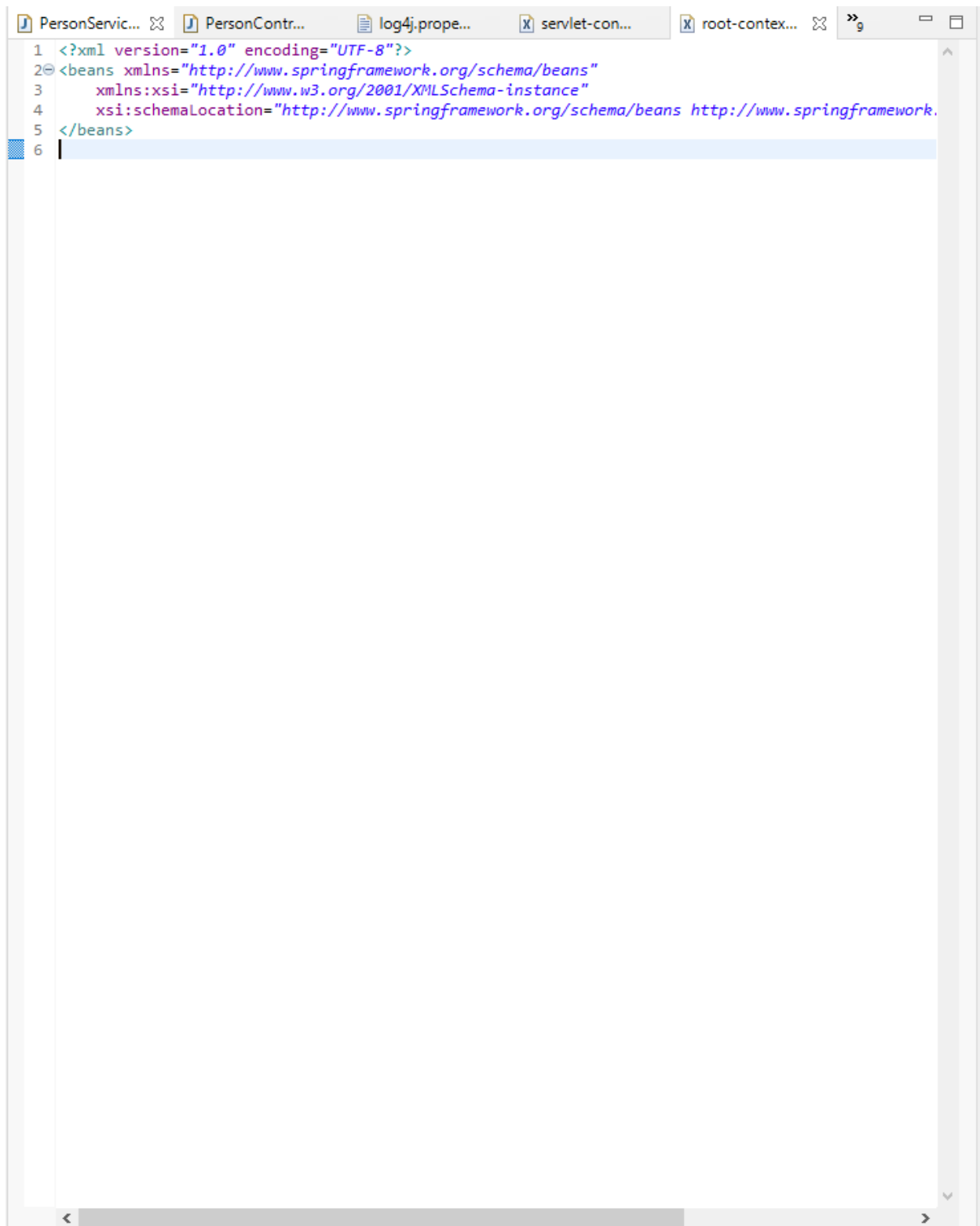
Root-context.xml

```
1  <?xml version="1.0" encoding="UTF-8"?>
2⊖ <beans xmlns="http://www.springframework.org/schema/beans"
3      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4      xsi:schemaLocation="http://www.springframework.org/schema/beans http://www.springframework.
5  </beans>
6  |
```

DetailsPage.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
      pageEncoding="ISO-8859-1"%>
```

```jsp
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<%@ taglib uri="http://www.springframework.org/tags" prefix="spring"%>
<%@ taglib uri="http://www.springframework.org/tags/form" prefix="form"%>
<%@ page session="false"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>User Details</title>
</head>
<body>
        <c:url var="addAction" value="/userdetails"></c:url>
        <form:form action="${addAction}" commandName="userdetails">
            <c:if test="${!empty person.name}">
                <fieldset>
                    <legend>User Details:</legend>
                    <table>
                        <tr>
                            <td>ID:</td>
                            <td>${ person.id}</td>
                        </tr>
                        <tr>

                            <td>Name:</td>
                            <td>${ person.name}</td>
                        </tr>
                        <tr>

                            <td>Country:</td>
                            <td>${ person.country}</td>
                        </tr>
                    </table>
                </fieldset>
                <label for="find">Do you want to edit the user?</label>
            </c:if>
            <table>
                <c:if test="${empty person.name}">
                    <label for="error">${message} Do you want to find another
                        user?</label>
                </c:if>
                <c:if test="${empty person.name}">
                    <tr>
                        <td><a href="<c:url value='/viewuser' />">Find
User</a></td>
                    </tr>
                </c:if>
                <c:if test="${!empty person.name}">
                    <tr>
                        <td>ID:</td>
                        <td><input type="text" id="id" placeholder="ID"
name="id"
                                readonly="true" min="0" max="2147483647"
value=${ person.id}></td>
                    </tr>
                    <tr>
                        <td>Name:</td>
                        <td><input type="text" id="name" placeholder="name"
```

```jsp
                                        maxlength="100" name="name" value=${
person.name}></td>
                                </tr>
                                <tr>
                                        <td>Country:</td>
                                        <td><input type="text" id="country"
placeholder="country"
                                                maxlength="100" name="country" value=${
person.country}></td>
                                </tr>
                        </c:if>
                        <tr>
                                <td colspan="2"><c:if test="${!empty person.name}">
                                        <input type="submit" value="<spring:message
text="Edit Person"/>" />
                                </c:if></td>
                        </tr>
                </table>
        </form:form>
</body>
</html>

FrontPage.jsp
```

```
 1  <%@ page language="java" contentType="text/html; charset=ISO-8859-1"
 2      pageEncoding="ISO-8859-1"%>
 3  <%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
 4  <%@ taglib uri="http://www.springframework.org/tags" prefix="spring"%>
 5  <%@ taglib uri="http://www.springframework.org/tags/form" prefix="form"%>
 6  <%@ page session="false"%>
 7  <!DOCTYPE html>
 8  <html>
 9  <head>
10  <meta charset="ISO-8859-1">
11  <title>Welcome to Admin Portal</title>
12  </head>
13  <body>
14      <h1>Do you want the details of User?</h1>
15      <c:url var="addAction" value="/viewuser"></c:url>
16      <form:form action="${addAction}" commandName="viewuser">
17          <table>
18              <tr>
19                  <td>Enter ID:</td>
20                  <td><input type="text" id="id" placeholder="ID"
21                      value=${ person.id} name="id" required></td>
22              </tr>
23              <tr>
24                  <td> </td>
25                  <td><button type="submit" class="btn btn-primary">View
26                      User</button></td>
27              </tr>
28          </table>
29      </form:form>
30      <br>
31  </body>
32  </html>
```

SuccessPage.jsp

```
 1  <%@ page language="java" contentType="text/html; charset=ISO-8859-1"
 2      pageEncoding="ISO-8859-1"%>
 3  <%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
 4  <%@ taglib uri="http://www.springframework.org/tags" prefix="spring"%>
 5  <%@ taglib uri="http://www.springframework.org/tags/form" prefix="form"%>
 6  <%@ page session="false"%>
 7  <!DOCTYPE html>
 8  <html>
 9  <head>
10  <meta charset="ISO-8859-1">
11  <title>User Details</title>
12  </head>
13  <body>
14      <h4>Edit Successful!</h4>
15      <c:url var="addAction" value="/userdetails"></c:url>
16      <form:form action="${addAction}" commandName="userdetails">
17          <fieldset>
18              <legend>User Details:</legend>
19              <table>
20                  <tr>
21                      <td>ID:</td>
22                      <td>${ person.id}</td>
23                  </tr>
24                  <tr>
25                      <td>Name:</td>
26                      <td>${ person.name}</td>
27                  </tr>
28                  <tr>
29                      <td>Country:</td>
30                      <td>${ person.country}</td>
31                  </tr>
32              </table>
33          </fieldset>
34          <label for="find">Do you want to find another user?</label>
35          <table>
36              <tr>
37                  <td> </td>
38                  <td><a href="<c:url value='/viewuser' />">Find User?</a></td>
39              </tr>
40          </table>
41      </form:form>
42  </body>
43  </html>
```

Web.xml

```xml
1  <?xml version="1.0" encoding="UTF-8"?>
2  <web-app version="2.5" xmlns="http://java.sun.com/xml/ns/javaee"
3      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4      xsi:schemaLocation="http://java.sun.com/xml/ns/javaee http://java.sun.com/xml/ns/javaee/wel
5
6      <!-- The definition of the Root Spring Container shared by all Servlets
7          and Filters -->
8      <context-param>
9          <param-name>contextConfigLocation</param-name>
10         <param-value>/WEB-INF/spring/root-context.xml</param-value>
11     </context-param>
12
13     <!-- Creates the Spring Container shared by all Servlets and Filters -->
14     <listener>
15         <listener-class>org.springframework.web.context.ContextLoaderListener</listener-class>
16     </listener>
17
18     <!-- Processes application requests -->
19     <servlet>
20         <servlet-name>appServlet</servlet-name>
21         <servlet-class>org.springframework.web.servlet.DispatcherServlet</servlet-class>
22         <init-param>
23             <param-name>contextConfigLocation</param-name>
24             <param-value>/WEB-INF/spring/appServlet/servlet-context.xml</param-value>
25         </init-param>
26         <load-on-startup>1</load-on-startup>
27     </servlet>
28
29     <servlet-mapping>
30         <servlet-name>appServlet</servlet-name>
31         <url-pattern>/</url-pattern>
32     </servlet-mapping>
33
34 </web-app>
35
```

Pom.xml

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

```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>com.hcl.spring</groupId>
    <artifactId>SpringMVCHibernate</artifactId>
    <name>SpringMVCHibernate</name>
    <packaging>war</packaging>
    <version>1.0.0-BUILD-SNAPSHOT</version>
    <properties>
        <java-version>1.6</java-version>
        <org.springframework-version>4.0.3.RELEASE</org.springframework-version>
        <org.aspectj-version>1.7.4</org.aspectj-version>
        <org.slf4j-version>1.7.5</org.slf4j-version>
        <hibernate.version>4.3.5.Final</hibernate.version>
    </properties>
    <dependencies>
        <!-- Spring -->
        <dependency>
            <groupId>org.springframework</groupId>
            <artifactId>spring-context</artifactId>
            <version>${org.springframework-version}</version>
            <exclusions>
                <!-- Exclude Commons Logging in favor of SLF4j -->
                <exclusion>
                    <groupId>commons-logging</groupId>
                    <artifactId>commons-logging</artifactId>
                </exclusion>
            </exclusions>
        </dependency>
        <dependency>
            <groupId>mysql</groupId>
            <artifactId>mysql-connector-java</artifactId>
            <version>8.0.22</version>
        </dependency>
        <dependency>
            <groupId>org.springframework</groupId>
            <artifactId>spring-webmvc</artifactId>
            <version>${org.springframework-version}</version>
        </dependency>
        <dependency>
            <groupId>org.springframework</groupId>
            <artifactId>spring-tx</artifactId>
            <version>${org.springframework-version}</version>
        </dependency>

        <!-- Hibernate -->
        <dependency>
            <groupId>org.hibernate</groupId>
            <artifactId>hibernate-core</artifactId>
            <version>${hibernate.version}</version>
        </dependency>
        <dependency>
            <groupId>org.hibernate</groupId>
```

```xml
        <artifactId>hibernate-entitymanager</artifactId>
        <version>${hibernate.version}</version>
</dependency>

<!-- Apache Commons DBCP -->
<dependency>
        <groupId>commons-dbcp</groupId>
        <artifactId>commons-dbcp</artifactId>
        <version>1.4</version>
</dependency>
<!-- Spring ORM -->
<dependency>
        <groupId>org.springframework</groupId>
        <artifactId>spring-orm</artifactId>
        <version>${org.springframework-version}</version>
</dependency>

<!-- AspectJ -->
<dependency>
        <groupId>org.aspectj</groupId>
        <artifactId>aspectjrt</artifactId>
        <version>${org.aspectj-version}</version>
</dependency>

<!-- Logging -->
<dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>slf4j-api</artifactId>
        <version>${org.slf4j-version}</version>
</dependency>
<dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>jcl-over-slf4j</artifactId>
        <version>${org.slf4j-version}</version>
        <scope>runtime</scope>
</dependency>
<dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>slf4j-log4j12</artifactId>
        <version>${org.slf4j-version}</version>
        <scope>runtime</scope>
</dependency>
<dependency>
        <groupId>log4j</groupId>
        <artifactId>log4j</artifactId>
        <version>1.2.15</version>
        <exclusions>
                <exclusion>
                        <groupId>javax.mail</groupId>
                        <artifactId>mail</artifactId>
                </exclusion>
                <exclusion>
                        <groupId>javax.jms</groupId>
                        <artifactId>jms</artifactId>
                </exclusion>
```

```xml
                        <exclusion>
                                <groupId>com.sun.jdmk</groupId>
                                <artifactId>jmxtools</artifactId>
                        </exclusion>
                        <exclusion>
                                <groupId>com.sun.jmx</groupId>
                                <artifactId>jmxri</artifactId>
                        </exclusion>
                </exclusions>
                <scope>runtime</scope>
        </dependency>

        <!-- @Inject -->
        <dependency>
                <groupId>javax.inject</groupId>
                <artifactId>javax.inject</artifactId>
                <version>1</version>
        </dependency>

        <!-- Servlet -->
        <dependency>
                <groupId>javax.servlet</groupId>
                <artifactId>servlet-api</artifactId>
                <version>2.5</version>
                <scope>provided</scope>
        </dependency>
        <dependency>
                <groupId>javax.servlet.jsp</groupId>
                <artifactId>jsp-api</artifactId>
                <version>2.1</version>
                <scope>provided</scope>
        </dependency>
        <dependency>
                <groupId>javax.servlet</groupId>
                <artifactId>jstl</artifactId>
                <version>1.2</version>
        </dependency>

        <!-- Test -->
        <dependency>
                <groupId>junit</groupId>
                <artifactId>junit</artifactId>
                <version>4.7</version>
                <scope>test</scope>
        </dependency>

</dependencies>
<build>
        <plugins>
                <plugin>
                        <artifactId>maven-eclipse-plugin</artifactId>
                        <version>2.9</version>
                        <configuration>
                                <additionalProjectnatures>
```

```xml
        <projectnature>org.springframework.ide.eclipse.core.springnature</projectnatur
e>
                            </additionalProjectnatures>
                            <additionalBuildcommands>

        <buildcommand>org.springframework.ide.eclipse.core.springbuilder</buildcommand
>
                            </additionalBuildcommands>
                            <downloadSources>true</downloadSources>
                            <downloadJavadocs>true</downloadJavadocs>
                        </configuration>
                    </plugin>
                    <plugin>
                        <groupId>org.apache.maven.plugins</groupId>
                        <artifactId>maven-compiler-plugin</artifactId>
                        <version>2.5.1</version>
                        <configuration>
                            <source>1.8</source>
                            <target>1.8</target>
                            <compilerArgument>-Xlint:all</compilerArgument>
                            <showWarnings>true</showWarnings>
                            <showDeprecation>true</showDeprecation>
                        </configuration>
                    </plugin>
                    <plugin>
                        <groupId>org.codehaus.mojo</groupId>
                        <artifactId>exec-maven-plugin</artifactId>
                        <version>1.2.1</version>
                        <configuration>
                            <mainClass>org.test.int1.Main</mainClass>
                        </configuration>
                    </plugin>
                </plugins>
                <finalName>${project.artifactId}</finalName>
            </build>
</project>
```