Assignment No.8

Name: Shardul Vikram Dharmadhikari.

Class: TE Comp.

Roll No: 8016.

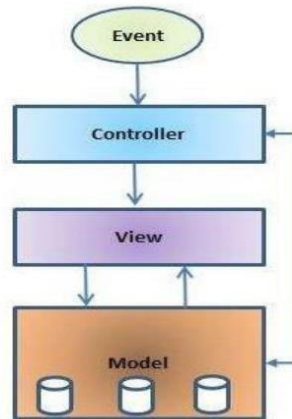**Title:**

Create a login module for the web application using struts framework.

Theory:

The frameworks plays a vital role in industries for manageable and well designed application development as well as enterprise application development. The core of the Struts framework is a flexible control layer based on standard technologies like Java Servlets, JavaBeans, Resource Bundles, and XML, as well as various Jakarta Commons packages. Struts encourages application architectures based on the Model 2 approach, a variation of the classic Model-View-Controller(MVC) Struts gives its own particular Controller segment and incorporates with different advancements to give the Model and the View. For the Model, Struts can collaborate with standard information get to advances, as JDBC and EJB, and also most any outsider bundles, as Hibernate, iBATIS, or Object Relational Bridge. For the View, Struts functions admirably with Java Server Pages, including JSTL and JSF, and in addition Velocity Templates, XSLT, and other introduction frameworks. The Struts system gives the undetectable underpinnings each expert web application needs to survive. Struts causes you make an extensible advancement condition for your application, in view of distributed guidelines and demonstrated outline designs. ORM remains for Object/Relational mapping. It is the customized and translucent constancy of items in a Java application in to the tables of a social database utilizing the metadata that portrays the mapping between the articles and the database. It works by changing the information starting with one portrayal then onto the next.

The Model-View-Controller Architecture:

"Model-View-Controller" is a way to build applications that promotes complete separation between business logic and presentation. It is not specific to web applications, or Java, or J2EE (it predates all of these by many years), but it can be applied to building J2EE web applications.

The "view" is the user interface, the screens that the end user of the application actually sees and interacts with. In a J2EE web application, views are JSP files. For collecting user input, you will have a JSP that generates an HTML page that contains one or more HTML forms. For displaying output (like a report), you will have a JSP generates an HTML page that probably contains one or more HTML tables. Each of these is a view: a way for the end user to interact with the system, putting data in, and getting data out.

What is Struts?

Struts is a framework that advances the utilization of the Model-ViewController engineering for planning substantial scale applications. The structure incorporates an arrangement of custom label libraries and their related Java classes, alongside different utility classes. The most intense part of the Struts system is its help for making and preparing electronic structures. We will perceive how this functions later in this section.

Struts Tags Common Attributes

Almost all tags provided by the Struts framework use the following attributes:

Attribute	Used for
Id	the name of a bean for temporary use by the tag

Name	the name of a pre-existing bean for use with the tag
Property	the property of the bean named in the name attribute for use with the tag
Scope	the scope to search for the bean named in the name attribute

Program: web.xml

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

<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

   xmlns="http://java.sun.com/xml/ns/javaee" xmlns:web="http://java.sun.com/xml/ns/javaee/web-app_2_5.xsd"

   xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
```

href="http://java.sun.com/xml/ns/javaee/web-app_2_5.xsd"
rel="nofollow">http://java.sun.com/xml/ns/javaee/web-app_2_5.xsd"   id="WebApp_ID"
version="2.5">

  <display-name>LoginFormStruts1</display-name>

  <servlet>

    <servlet-name>action</servlet-name>

    <servlet-class>org.apache.struts.action.ActionServlet</servlet-class>

    <init-param>

      <param-name>config</param-name>

      <param-value>

    /WEB-INF/struts-config.xml

  </param-value>

  </init-param>

  <load-on-startup>1</load-on-startup>

  </servlet>

  <servlet-mapping>

    <servlet-name>action</servlet-name>

    <url-pattern>*.do</url-pattern>

  </servlet-mapping>

  <welcome-file-list>

    <welcome-file>index.jsp</welcome-file>

```
    </welcome-file-list>

</web-app>
```

LoginForm.java

```java
package com.example.javawebtutor.form;

import javax.servlet.http.HttpServletRequest;

import org.apache.struts.action.ActionForm;   import
org.apache.struts.action.ActionMapping;

public class LoginForm extends ActionForm {

    private String userName = null;
    private String password = null;

    public String getUserName() {        return
userName;
    }

    public void setUserName(String userName) {        this.userName
= userName;
    }

    public String getPassword() {        return
password;
    }

    public void setPassword(String password) {        this.password
= password;
    }

    @Override
    public void reset(ActionMapping mapping, HttpServletRequest request) {
this.password = null;
    }
```

}

LoginAction.java

package com.example.javawebtutor.action;

import javax.servlet.http.HttpServletRequest; import javax.servlet.http.HttpServletResponse;

import org.apache.struts.action.Action; import org.apache.struts.action.ActionForm; import org.apache.struts.action.ActionForward; import org.apache.struts.action.ActionMapping;

import com.example.javawebtutor.form.LoginForm;

```java
public class LoginAction extends Action {
    @Override    public ActionForward execute(ActionMapping mapping,
ActionForm form,        HttpServletRequest request, HttpServletResponse
response)        throws Exception {
        LoginForm loginForm = (LoginForm) form;

        if (loginForm.getUserName() == null || loginForm.getPassword() == null
            || !loginForm.getUserName().equalsIgnoreCase("Mukesh")
|| !loginForm.getPassword().equals("kumar")) {         return
mapping.findForward("success");
        } else
          return mapping.findForward("failure");
    }
    }
```

struts-config.xml

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

<!DOCTYPE struts-config PUBLIC

"-//Apache Software Foundation//DTD Struts Configuration 1.3//EN"

"http://struts.apache.org/dtds/strutsconfig_1_3.dtd">

```xml
<struts-config>

    <form-beans>

        <form-bean name="loginForm"
type="com.example.javawebtutor.form.LoginForm"/>

    </form-beans>

    <action-mappings>

        <action name="loginForm" path="/login"
type="com.example.javawebtutor.action.LoginAction" scope="request"
input="/login.jsp">

            <forward name="failure" path="/login.jsp" redirect="true"/>

            <forward name="success" path="/success.jsp" redirect="true"/>

</action>

    </action-mappings>

</struts-config>
```

login.jsp

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

<%@ taglib uri="http://struts.apache.org/tags-html"
prefix="html"%>

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "<a
class="vglnk" href="http://www.w3.org/TR/html4/loose.dtd"
  rel="nofollow"><span>http</span><span>://</span><span>www</span><spa
n>.</span><span>w3</span><span>.</span><span>org</span><span>/</span
><span>TR</span><span>/</span><span>html4</span><span>/</span><span
>loose</span><span>.</span><span>dtd</span></a>">

<html>

<head>

<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">

<title>Login Example</title>

</head>

<body>

   <html:form action="/login" focus="userName">

   Username : <html:text property="userName" />

      <br>

   Password : <html:password property="password" />

      <br>

      <html:submit value="login" />

   </html:form>

</body>
```
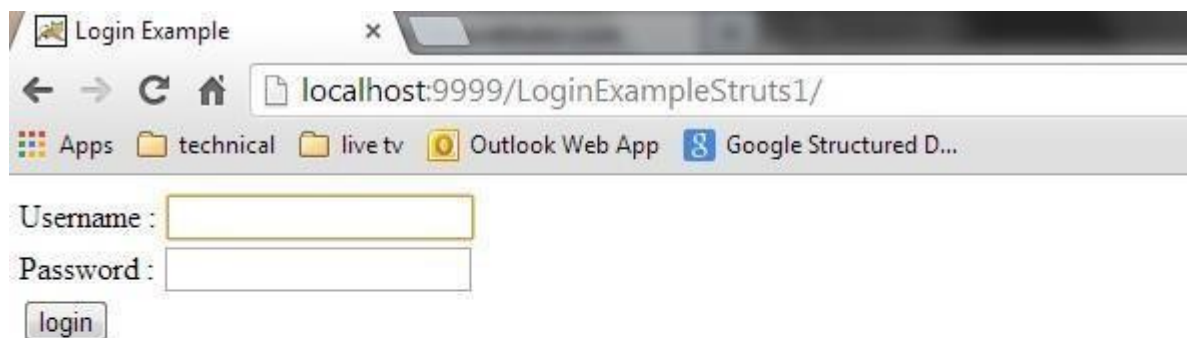
success.jsp

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

pageEncoding="ISO-8859-1"%>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "<a
class="vglnk" href="http://www.w3.org/TR/html4/loose.dtd"
  rel="nofollow"><span>http</span><span>://</span><span>www</span><spa
n>.</span><span>w3</span><span>.</span><span>org</span><span>/</span
```

```
><span>TR</span><span>/</span><span>html4</span><span>/</span><span>loose</span><span>.</span><span>dtd</span></a>">
```

```html
<html>
<head>

<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">

<title>Successful Login Page</title>

</head>

<body>

  <h2>Welcome Boss</h2>

</body>

</htm
```
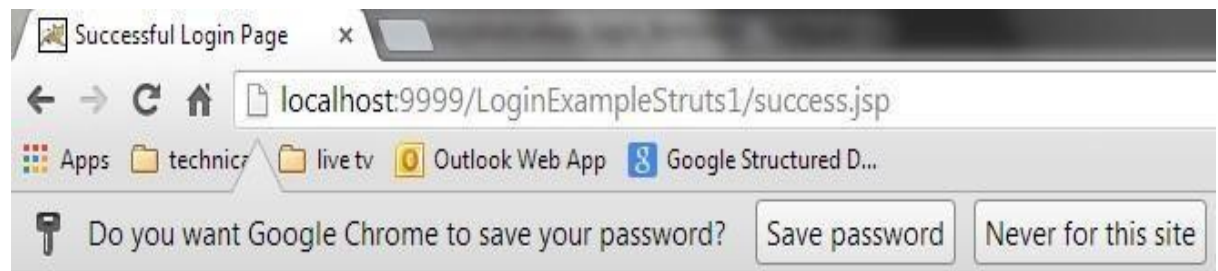
Output:

Welcome Boss

Conclusion:

Hence we have successfully tested the struts framework and tested the results.