Assignment - 8

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Title - Design and develop any web applications using struts frameworks.

OBjectives -
1. To impart the efficient and available client side and server side technologies.
2. To implement the communication between computing nodes using Client side and server side technologies.
3. To design and implement the web services with content management.

Problem Statements -
Create a login module for the web application using struts frameworks.

Outcome - 1. implement the effective Client side and server side technologies Using Struts frameworks.

2. solve the complex problem of development using MVC frameworks.

Software & hardworks Requirements -
Software 'S : Java 1.7 or higher, Apache Tomcat 7 or higher, Structs API's Eclipse. IDE.

Theory -
- The frameworks plays a vital roles in Industries for manageable and well designed application development as well as enterporise application development.
- The core of the Struts frameworks is a flexible control layer based on standard technologies like Java servlets, JavaBeans. Resources Bundles, and XML as well as various common packages.
- The Structs system gives the understables underpinings each experts web application needs to survive. Structs causes you make an extensible advancements condition for your applications; in view of distributed guidelinesss and demonstrated outline designed.

The Model-View-Controller Architecture

"Model-View-Controller" is a way to build application that promotes complete seperations between business logic and presentations. It is not specific to web application, or java, or J2EE, but it can be applied to building J2EE web applications.

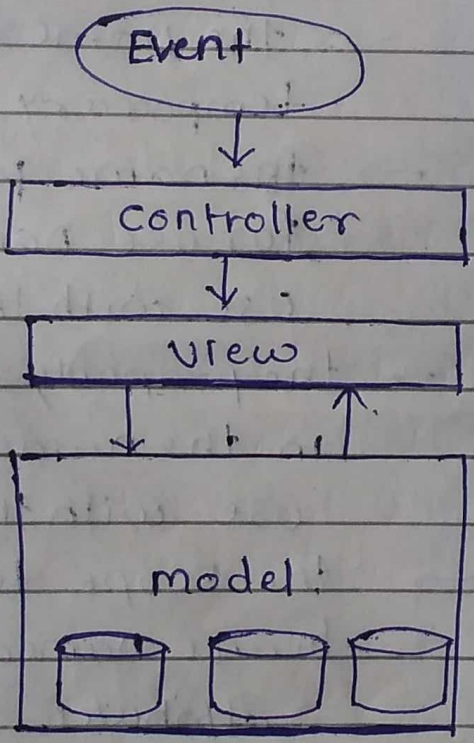

Fig 5: Basic MVC Architectures.

What is Structs?

- Structs is a framework that advances the utilizations of model-view-controller engineering for planning substantial scale applications.
- The structure incorported an arrangement of custom label libraries & their related java classes.

Struts Tags.

Common Attributes

- Almost all tags provided by the structs frameworks use the followings attributes.

Attributes	→	used for
Id	→	the name of a java bean for temporary use by the tag.
name	→	the name pre-existing bean, for use name attributes for use with the tags.
Property	→	the property of the bean namd. in the name attributes for use with the tags.
Scope	→	the scope to search for beans named in the name attributes.

Creating Beans -

Beans are created by java code or tags here on examples of bean creation with java code :

```
// creating a plumber bean in the
    request scope.
plumber aplumber = new plumber();
    request.setAttributes("plumber",
                          aplumber);
```

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Other Bean Tags -

The Structs frameworks provides other tags for dealings with issues concerning copying cookies, request headers, jsp implicity defined objects, request paramets, web applications resources.

- Struts configurations objects, and including the dynamics response data from an action.

```
<bean:cookie ....>
<bean:header....>
<bean:page ....>
<bean:paramter ....>
<bean:header ....>
<bean:resource ....>
<bean:structs ....>
```

Bean output -

The <bean:message> and <bean:write> tags from the structs frameworks will write bean and application resources properties into the current HttpResponse objects

Creating HTML forms.

- Frequently data should be gathered from a client and handled. without the capacity to gather client input, a web

would be futile. So as to get the clients data, a html shapes is utilized. Client informations can originates from a few gadgets. for examples, content fields, contents boxes, Check takes care of, pop ~~men~~ menus and radio catches. The information comparing to the

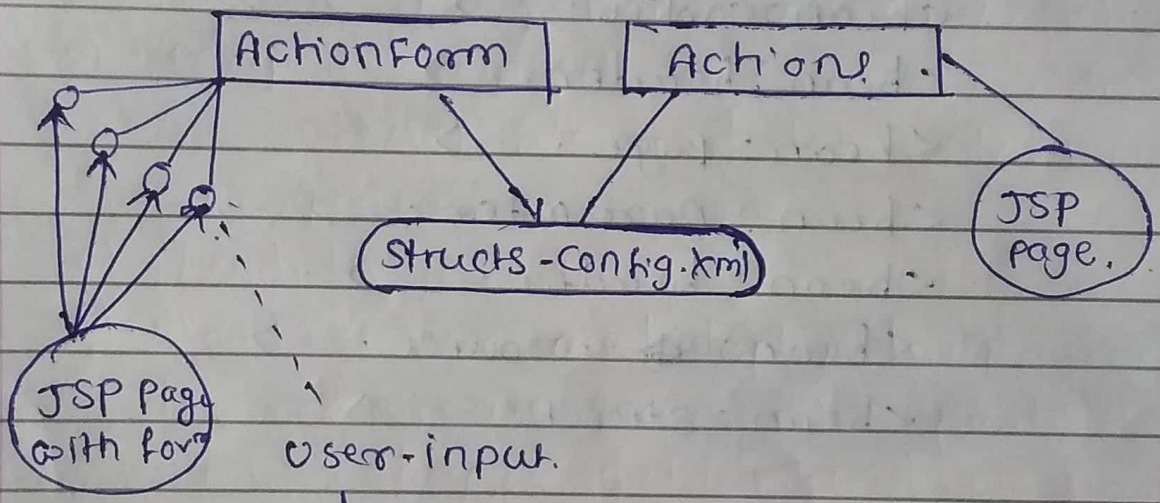

Fig 6: Struts for using forms.

Beloco are the tags provided by html Sections of the struts framworks and a shorts ~~for~~ descriphons of each.

<html:base> Generates <base> tags. This tags should be used inside of a <head> tags.

<html:button> Generates an <input type = "button"> tags.

<html: Cancel> - Generates an <input type = "submit"> tag and Causes the Action servlets not to invoke.

<html: checkbox> → Generates an <input type = "checkbox">

<html: multibox> Generates an <input type = "checkbox". checkedness"

<html: errors> Generates html to display any errors and may have occursed during invocation of the validate() method

<html: file>

<html: form> Generated <form>

<html: hidden> There are hidden element here which is invisible. Generates <input type = "hidden>

The Action Form class.

- The purpose of the Action form class to certain and provides validation of the user input data. This class is subclass- for application specific customization.

Technology / Tool. -

1) Eclipse IDE
2) Apache Tomcat 7.0 or higher

Design / Executions Steps -

1) Create the directory structure as.
2) Create input as below.
3) provide the entry of controller in (web.xml) file as given above.
4) Create the action class (LoginAction.java)
5) map the request in (Struct.config.xml) file and define the view Components.
6) Load the jar files.
7) Start server and deploy the project the or create .war files paste it in webapps folder and run from manager-app.

Conclusion → Hence, we have Successfully tested the Struts frameworks and tested the results.