STRUTS

The **struts 2 framework** is used to develop **MVC-based web application**.

The struts framework was initially created by **Craig McClanahan** and donated to Apache Foundation in May, 2000 and Struts 1.0 was released in June 2001.

The current stable release of Struts is Struts 2.3.16.1 in March 2, 2014.

Struts 2 provides many features that were not in struts 1.

The **important features** of struts 2 framework are as follows:

1. Configurable MVC components
2. POJO based actions
3. AJAX support
4. Integration support
5. Various Result Types
6. Various Tag support
7. Theme and Template support

1) Configurable MVC components

In struts 2 framework, we provide all the components (view components and action) information in struts.xml file. If we need to change any information, we can simply change it in the xml file.

2) POJO based actions

In struts 2, action class is POJO (Plain Old Java Object) i.e. a simple java class. Here, you are not forced to implement any interface or inherit any class.

3) AJAX support

Struts 2 provides support to ajax technology. It is used to make asynchronous request i.e. it doesn't block the user. It sends only required field data to the server side not all. So it makes the performance fast.

4) Integration Support

We can simply integrate the struts 2 application with hibernate, spring, tiles etc. frameworks.

5) Various Result Types

We can use JSP, freemarker, velocity etc. technologies as the result in struts 2.

6) Various Tag support

Struts 2 provides various types of tags such as UI tags, Data tags, control tags etc to ease the development of struts 2 application.

7) Theme and Template support

Struts 2 provides three types of theme support: xhtml, simple and css_xhtml. The xhtml is default theme of struts 2. Themes and templates can be used for common look and feel.

Struts components :

1. Model Components:

- Many application's focus is on the view. The processing required for each submitted form / request by keeping the model's perspective in view.

- In general the focus for handling the model components is done by the creation of java beans that support the functionality requirements. The scope concept is related to the beans is used first.

- The concept of extending ActionForm class is assumed by the Struts framework for each input form.

- ActionForm is a bean that are declared in ActionMapping configurationfile.

- The struts controller servlet automatically performs the services required, before invoking the appropriate Action method.

2. View Components:

- Struts supports the interacting input forms and used for building internationalized applications.

- Some files are uploaded by using HTML forms. Most of the browsers support the uploading of files through a input tag like <input type="file">. This generates a file browse button. Struts handles these kind of forms in a way that is identical to building normal forms.

3. Controller Components:

- The primary function of mapping request URI to an Action class that is implemented by the servlet. This operation also included in Struts framework. So, the Controller responsibilities include:

i. Write an Action class for every request that may be received.

ii. Configuring an ActionMapping, that is in the form of XML file, for every logical requests that implements. The name of the file is struts-config.xml.

iii. Updating the deployment descriptor file for the application to include the necessary components.

iv. Adding the struts components to the application.