



Module Presenter's Manual

for

Architecting Web Applications
using JSF and Struts

Effective from: September 2017
Ver. 1.0

Amendment Record

Version No.	Effective Date	Change	Replaced Pages
1.0	September 2017	New	-

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1. Introduction

At the end of this course, students will be able to:

- Describe JSP Model I and Model II Architecture.
- Describe the role of a framework.
- Explain struts framework.
- Describe the purpose of Struts bean tag library and its elements.
- Explain the role of JSF in a UI framework.
- Describe the use and purpose of different JSF model.
- Describe JSF Core tag library and HTML Core tag library.
- Explain OGNL and Annotations.

2. Information on Session Allocation

Module	Online Session (No. of Hrs)
Architecting Web Applications using JSF and Struts	16

Throughout this Presenter's Manual, the module **Architecting Web Applications using JSF and Struts** will be referred to as **JSFSTRUTS**.



3. Module Deliverables on OnlineVarsity




To aid the learning process, following are the deliverables

Student Deliverables:

1. Learner's Guide (eBook)

Resources available on OnlineVarsity for Students:

Icons	Feature - Description/Functionality
	Download Book - Student has the option to download the subject related e-book and read offline.
	Glossary - Student can access a list of subject related specialized words with their definitions.
	FAQ - Student can access frequently asked questions and their answers.
	Show Me How - Student can view a step-wise simulation/demonstration of the module related topics.
	Practice 4 Me - Student can test and evaluate their understanding of module related topics.
	Work Assignments - Student can solve scenario based lab assignments (Hands-on). The faculty will evaluate and give their feedbacks.
	Download Source code/Files – Student can download courseware related source files.

	References - Student can access additional subject related material for reading.
	Feedback - Student can provide feedback on the course material.
	Ask to Learn – Student can submit subject related technical queries. Queries submitted will be directed to the particular course coordinator/head.

4. Week-wise Session Schedule

- A Session has duration of 2 hrs
- The Concepts session is to be conducted in the classroom
- Lab session is to be conducted in the lab

➤ Week-Wise Schedule

Wk	Day 1	Day 2	Day 3	Day 4
1	Session 1 JSFSTRUTS– TL1	Session 2 JSFSTRUTS– TL2	Session 3 JSFSTRUTS– TL3	Session 4 JSFSTRUTS– TL4
2	Session 5 JSFSTRUTS– TL5	Session 6 JSFSTRUTS– TL6	Session 7 JSFSTRUTS– TL7	Session 8 JSFSTRUTS– TL8

JSFSTRUTS: Architecting Web Applications using JSF and Struts

TL: Online Session

5. Session Coverage

Session No.	Session Title	Session Details	Deliverables' Mapping
1	JSFSTRUTS-TL1	<p>All the topics as listed below from Session 1 and Session 2 of <i>Developing Applications Using Java Web Frameworks</i> book should be covered in this session.</p> <p><u>Session 1 – Introduction to Struts Framework</u></p> <ul style="list-style-type: none"> ➤ Explain Model-View-Controller (MVC) architecture ➤ Explain the role of components involved in MVC architecture ➤ Explain JSP Model 1 and JSP Model 2 approaches ➤ Describe Struts framework ➤ List the features and components of Struts 1 framework ➤ Explain the architecture of Struts 1 framework ➤ Explain the process of developing Web applications using Struts 1 components <p><u>Session 2 – Working with Struts 2 Framework</u></p> <ul style="list-style-type: none"> ➤ Explain the features of Struts 2 framework ➤ Explain the architecture of Struts 2 framework ➤ Explain the components and request life cycle of Struts 2 framework ➤ Explain the difference between Struts 1 and Struts 2 framework ➤ Explain how to implement Struts 2 actions using Action interface and ActionSupport class 	<p><u>Developing Applications Using Java Web Frameworks</u></p> <p>Session 1 & 2</p> <p>XP – Session 1 & 2 TG- Session 1 & 2</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
		<ul style="list-style-type: none"> ➤ Explain the process of managing data from forms to JavaBean properties ➤ Explain how to configure Struts 2 components in the configuration file ➤ Explain Result and Result Types ➤ Explain the annotations provided by Struts 2 framework ➤ Explain how to develop a Java Web application using Struts 2 framework 	
2	JSFSTRUTS-TL2	The workshop lessons of Session 1 and Session 2 of <i>Web Component Development using Java</i> course should be covered in this session.	<p><u>Developing Applications Using Java Web Frameworks</u></p> <p>(OnlineVarsity)</p> <p>Session 1 Session 2</p>
3	JSFSTRUTS-TL3	<p>All the topics as listed below from Session 3 and Session 4 of <i>Developing Applications Using Java Web Frameworks</i> book should be covered in this session.</p> <p><u>Session 3 – Struts 2 - Interceptors and Tags</u></p> <ul style="list-style-type: none"> ➤ Describe the purpose of Interceptors in Struts 2 framework ➤ Explain different types of built-in Interceptors ➤ Explain how to configure Interceptors in Struts2 application ➤ Describe Interceptors Stacks ➤ Explain the process of creating custom Interceptors in Struts 2 framework ➤ List the different types of 	<p><u>Developing Applications Using Java Web Frameworks</u></p> <p>Session 3 & 4</p> <p>XP – Session 3 & 4 TG- Session 3 & 4</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
		<p>tags used in Struts 2 View page</p> <ul style="list-style-type: none"> ➤ Explain various Data tags ➤ Explain various Control tags ➤ Explain various User Interface (UI) tags <p><u>Session 4 – Struts 2 - OGNL, Validation, and Internationalization</u></p> <ul style="list-style-type: none"> ➤ Explain the use of ValueStack ➤ Explain OGNL expression language ➤ Explain the flow of data in and out of the Struts 2 framework ➤ Explain the use of converters and their types ➤ Explain Validator framework in Struts 2 ➤ Explain different types of validators present in the Validator framework ➤ Explain the Implementation of validation framework in Struts 2 ➤ Explain internationalization ➤ Explain the use of i18N interceptor and resource bundle in internationalization ➤ Create the Struts 2 Web application with internationalization 	
4	JSFSTRUTS-TL4	The workshop lessons of Session 3 and Session 4 of <i>Web Component Development using Java</i> course should be covered in this session.	<p><u>Developing Applications Using Java Web Frameworks</u></p> <p>(OnlineVarsity)</p> <p>Session 3 Session 4</p>
5	JSFSTRUTS-TL5	All the topics as listed below from Session 5 of <i>Developing</i>	<u>Developing Applications Using</u>

Session No.	Session Title	Session Details	Deliverables' Mapping
		<p><i>Applications Using Java Web Frameworks</i> book should be covered in this session.</p> <p><u>Session 5 – Introduction to JavaServer Faces</u></p> <ul style="list-style-type: none"> ➤ Explain JSF framework ➤ Explain the components of JSF framework ➤ Explain the different types of configuration files used in JSF applications ➤ Describe JSF architecture and JSF lifecycle ➤ Explain the process of developing JSF application ➤ Explain UI components and the renderers in JSF ➤ Explain the concept of managed beans in JSF ➤ Explain basic tag, converter tag, and validator tag in JSF 	<p><u>Java Web Frameworks</u></p> <p>Session 5</p> <p>XP – Session 5 TG- Session 5</p>
6	JSFSTRUTS-TL6	<p>The workshop lessons of Session 5 of <i>Web Component Development using Java</i> course should be covered in this session.</p>	<p><u>Developing Applications Using Java Web Frameworks</u></p> <p>(OnlineVarsity)</p> <p>Session 5</p>
7	JSFSTRUTS-TL7	<p>All the topics as listed below from Session 6 of <i>Developing Applications Using Java Web Frameworks</i> book should be covered in this session.</p> <p><u>Session 6 – Expression Language, Facelets, and Data Table</u></p> <ul style="list-style-type: none"> ➤ Describe the features of JSF 1.2 and JSF 2.0 ➤ Explain Expression language 	<p><u>Developing Applications Using Java Web Frameworks</u></p> <p>Session 6</p> <p>XP – Session 6 TG- Session 6</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
		and its types in JSF ➤ Explain the use of facelets View in JSF 2.0 ➤ Explain JSF 2.0 DataTables ➤ Explain JSF 2.0 Event Handling ➤ Explain the code to integrate JSF 2.0 with JDBC API.	
8	JSFSTRUTS-TL8	The workshop lessons of Session 6 of <i>Web Component Development using Java course</i> should be covered in this session.	<u>Developing Applications Using Java Web Frameworks</u> (OnlineVarsity) Session 6

6. Library References

➤	Mastering JavaServer Faces 2.2 by Anghel Leonard
➤	Struts 2 for Beginners, 3rd Edition by Sharanam Shah, Vaishali Shah

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