

# Java EE Web Development with JSF

# **Audience Course Java EE Web Development with JSF**

The course Java EE Web Development with JSF is intended for developers who want to build Java Web applications with the standard JSF 2.x Framework.

#### Prerequisites Java EE Web Development with JSF

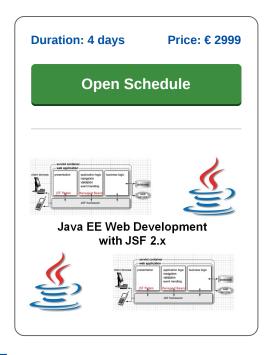
To participate in this course experience with Java programming and object orientation is required. Prior knowledge of Java EE Web Applications is beneficial for a proper understanding.

# Realization Training Java EE Web Development with JSF

In this hands-on course the theory is treated on the basis of presentation slides and interchanged with exercises. Demos are used to clarify the theory. The course material is in English.

#### Official Certificate JSF

Participants receive an official certificate Java EE Web Development with JSF after successful completion of the course.



# **Content Course Java EE Web Development with JSF**

The course Java EE Web development with JSF course covers how modern state of the art Java EE Web Applications are built with the standard Java Server Faces (JSF 2.x) framework.

#### **JSF Architecture**

The course starts with the foundations of the JSF Framework which is built on top of the Java Web Programming model uses the MVC pattern with a Front Controller as central element. The architecture of the JSF Framework which uses a statefull component model on the server is discussed.

## **JSF Request Life Cycle**

Next attention is paid to the role of the Faces Servlet and the different phases of the JSF Request Life Cycle. The role of the central configuration file faces-config.xml is explained and the navigation rules in JSF and the role of the managed beans are treated.

# **Facelets**

Also the structure of a JSF page using Facelets, the use of expression language and the usage of the different UI components and custom tag libraries is discussed.

# **Event Handling**

The handling of events coming from the UI elements is also covered. Next attention is paid to the validation and conversion of input from the User Interface using JSF built-in or custom validators and converters. Also it is discussed how the modern Ajax asynchronous request model can cooperate with JSF.

### **Custom Components**

Finally attention is paid to the creation of custom components, facelet templates and view parameters.



# **Modules Course Java EE Web Development with JSF**

Module 1 : JSF Intro	Module 2 : JSF Basics	Module 3 : Managed Beans
JSF Background Servlet and JSP Problems	Choose JSF Implementation Deployment Descriptor	Java Beans Bean properties
Classic MVC Pattern	PROJECT STAGE Development	Accessor Usage
Model 2 Architecture	Faces Configuration File	Placeholder for Results
Struts Framework	Facelets Page Structure	Dual Role Bean Properties
JSF Framework	Managed Beans	Textfields and Checkboxes
JSF Feature Overview	@ManagedBean Annotation	Prepopulating Input Fields
Server Side UI Components	Default Navigation	Naming Beans
JSF Application Architecture	Facelet Default Navigation	Bean Scopes
Request Processing Phases	@FacesComponent	Application and Session Scope
JSF Implementation	Handling Request Parameters	Raw Request and Response
JSF API	Facelet Input Form	Dependency Injection
Common JSF Problems	Selecting Result Pages	ManagedProperty
Module 4 : Navigation	Module 5 : Properties	Module 6 : Expression Language
Static Navigation	Properties	JSF versus JSP EL
Navigation Rule Syntax	Using Property Files	Outputting Bean Properties
Explicit Mapping Considerations	Using Subfolders	Nested Bean Properties
Dynamic Navigation	Resources Bundles	Submitting Bean Properties
Dynamic Navigation Logic	Facelet using Properties	Getter versus Setter Calls
Explicit Dynamic Navigation Rule	Parameterized Messages	Accessing Collections
Configuring Managed Beans	Parameterizing Display	Using Square Brackets
Sharing Result Pages	Using f:param	Implicit Objects
Using Wildcards Omitting from-outcome	Using Parameterized Properties Internationalized Messages	EL Operators Conditional Text
Conditional Navigation Rules	Localizing Strings	Rendered Attribute
Common Navigation Problems	Using Localized Messages	Method Arguments
Module 7 : Event Handling	Module 8 : Validation	Module 9 : Ajax
User Interface Events	Validation Approaches	Ajax in JSF
Event Handlers versus Ajax Types of Event Listeners	Manual Validation Standard Error System	General Form f:ajax
ActionListener in Facelets	Displaying Error Messages	Ajax Facelets Pages Ajax Controller Methods
Implementing ActionListener	Manual Validation in Bean	render Attribute
Change CSS Style	Action Controller Method	Facelet Non-Ajax Version
Change Style Input Form	Implicit Automatic Validation	Facelet Ajax Version
Change Style Bean	Precedence Validity Tests	execute Attribute
Bean for Action Controller	Explicit Automatic Validation	Facelets Code execute
Locale from User Settings	Format Validator Tags	event Attribute
Switch Locale	Conversion versus Validation	Default Events
ValueChangedListener	Custom Validator Methods	onevent Attribute
Module 10 : Data Tables	Module 11 : Composite Components	Module 12 : Facelet Templating
Handling Variable-Length Data	Composite Components	Page Templating
h:dataTable	Component Definition	Using Templates
Using h:dataTable	Using Components	Namespaces Template Files
h:Column	Components with Attributes	Template File Details
Headers and Captions	Using Composite Attribute	Using ui:include
StyleSheets	Component Structure	Handling Relative URL's
Ajax-enabled tables	Using ui:repeat	View Params
Tables conditional values	Relative URL's	JSF page use f:viewParam
Looping with ui:repeat	Nested Components	Capture Request Parameters
Conditional Text	Component Files	Using POST-redirect-GET

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