

Advance Java Syllabus

UNIT	TOPIC	CONTENTS	
Servlet	Basics of Servlet	<ul style="list-style-type: none"> • Servlet: What and Why? • Basics of Web • Servlet API • Servlet Interface • GenericServlet • HttpServlet • Servlet Life Cycle • Working with Apache Tomcat Server • Steps to create a servlet in Tomcat • How servlet works? • servlet in Myeclipse • servlet in Eclipse • servlet in Netbeans 	
	ServletRequest	<ul style="list-style-type: none"> • ServletRequest methods • Registration example with DB 	
	Servlet Collaboration	<ul style="list-style-type: none"> • RequestDispatcher • sendRedirect 	
	ServletConfig	<ul style="list-style-type: none"> • ServletConfig methods • ServletConfig example 	
	ServletContext	<ul style="list-style-type: none"> • ServletContext methods • ServletContext example 	
	Attribute	<ul style="list-style-type: none"> • How to set, get and remove example? 	
	Session Tracking	<ul style="list-style-type: none"> • Cookies • Hidden Form Field • URL Rewriting • HttpSession 	
	Event and Listener	<ul style="list-style-type: none"> • 	
	Filter	<ul style="list-style-type: none"> • Filter • Authentication Filter • FilterConfig • Useful examples 	
	ServletInputStream and ServletOutputStream		
	Annotation Servlet		
	Project Development		
	JSP	Basics of JSP	<ul style="list-style-type: none"> • Life cycle of JSP • JSP API • JSP in Eclipse and other IDE's
Scripting elements		<ul style="list-style-type: none"> • • scriptlet tag • expression tag • declaration tag 	
9 Implicit Objects		<ul style="list-style-type: none"> • • out • request • response 	

		<ul style="list-style-type: none"> • config • application • session • pageContext • page • exception
	Directive Elements	<ul style="list-style-type: none"> • page directive • include directive • taglib directive
	Exception Handling	
	Action Elements	<ul style="list-style-type: none"> • jsp:forward • jsp:include • Bean class • jsp:useBean • jsp:setProperty & jsp:getProperty • Displaying applet in JSP
	Expression Language	
	MVC in JSP	
	JSTL	
	Custom tags	<ul style="list-style-type: none"> • Custom Tag : What and Why? • Custom Tag API? • Custom Tag Example • Attributes • Iteration • Custom URI
	Project Development in JSP	
JavaMail API	JavaMail API	<ul style="list-style-type: none"> • Sending Email • Sending email through Gmail server • Receiving Email • Sending HTML content
Design Pattern	Design Pattern	<ul style="list-style-type: none"> • Singleton • DAO • DTO • MVC • Front Controller • Factory Method • etc.
JUnit	JUnit	<ul style="list-style-type: none"> • JUnit: What and Why? • Types of Testing • Annotations used in JUnit • Assert class • Test Cases
Maven	Maven	<ul style="list-style-type: none"> • Maven: What and Why? • Ant Vs Maven • How to install Maven? • Maven Repository • Understanding pom.xml • Maven Example • Maven Web App Example • Maven using Eclipse
Struts 2	Basics of Struts2	<ul style="list-style-type: none"> • Struts : What and Why?

		<ul style="list-style-type: none"> • Model1 vs Model2 • Struts2 Features • Steps to create Struts2 application • Understanding Action class • Understanding struts.xml file • Struts2 in Eclipse IDE • Struts2 in Myeclipse IDE
	Core Components	<ul style="list-style-type: none"> • Interceptors • ValueStack • ActionContext • ActionInvocation • OGNL
	Struts 2 Architecture	
	Struts2 Action	<ul style="list-style-type: none"> • Action Interface • ActionSupport class
	Struts2 Configuration	<ul style="list-style-type: none"> • multi configuration • multi namespace
	Interceptors	<ul style="list-style-type: none"> • Custom Interceptor : Life Cycle of Interceptor • params interceptor • execAndWait interceptor • prepare interceptor • modelDriven interceptor • exception interceptor • fileUpload interceptor
	Struts 2 Validation	<ul style="list-style-type: none"> • Custom Validation : workflow interceptor • Input Validation : validation interceptor • Ajax Validation : jsonValidation interceptor
	Aware Interfaces	<ul style="list-style-type: none"> • ServletActionContext • SessionAware • Login and Logout Application • ServletContextAware
	Struts2 with I18N	
	Zero Configuration	<ul style="list-style-type: none"> • By convention • By annotation
	Struts2 with Tiles2	
	Hibernate with Struts2	
	Spring with Struts2	
	Project Development in Struts2	
Working with IDE	IDE	<ul style="list-style-type: none"> • Eclipse IDE • Netbeans IDE • Myeclipse IDE
Working with Servers	Servers	<ul style="list-style-type: none"> • Apache Tomcat • Glassfish Server • JBoss Server • Weblogic Server
EJB 3	Introduction to JavaEE	<ul style="list-style-type: none"> • The Need for JavaEE. • Overview on the JavaEE Architecture

		<ul style="list-style-type: none"> • 1 tier • 2 tier • 3 tier • N tier • JavaEE Key Standards
	Introduction to EJB3	<ul style="list-style-type: none"> • The EJB Model • Key Services of the Application Server
	Developing Session Beans	<ul style="list-style-type: none"> • Stateless Session Beans • Stateful Session Beans • Packaging • Writing Clients
	Using Dependency Injection	<ul style="list-style-type: none"> • No More JNDI • Injection of EJBContext
	JMS	<ul style="list-style-type: none"> • JMS Overview • JMS Messaging Domains • Example of JMS using Queue • Example of JMS using Topic
	Message Driven Beans	
	Persistence Introduction to JPA	<ul style="list-style-type: none"> • Object Relational Mapping • Mapping configurations • Embedded Objects • EJBQL
Web Technology	HTML 5	<ul style="list-style-type: none"> • Introduction to HTML • HTML Tags • Creating Forms • Creating tables • Managing home page
	CSS	<ul style="list-style-type: none"> • Introduction to CSS • Three ways to use CSS • CSS Properties • Designing website • Working with Templates
	Javascript	<ul style="list-style-type: none"> • Introduction to Javascript • Three ways to use Javascript • Working with events • Client-side Validation
	JQuery	<ul style="list-style-type: none"> • Introduction to JQuery • Validation using JQuery • JQuery Forms • JQuery Examples
	AJAX	<ul style="list-style-type: none"> • Introduction to AJAX • Servlet and JSP with AJAX • Interacting with database