LAKSHYA INSTITUTE OF TECHNOLOGY

BCA, BSc ITM and BSc CS

Affiliated to Utkal University
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ADVANCED JAVA TRAINING AT LIT

The course builds a strong understanding of JDBC Technology. It gives in to demonstrate why Servlets are the cornerstone of Java's Web platform. It then shows how JSP is built on the Servlet architecture. Additionally, the class shows students how to use JSTL, custom tags and expression language to reduce Java code in Web pages while adding tremendous power and capability to those pages. This is not a class that focuses on theory. Participants will find the course is loaded with practical labs and simulations. After taking this class, developers will be able to build Web applications that perform well, are scalable, and that are easier to maintain.

Prerequisite Knowledge

➡ Basic Knowledge of Core Java is required. An understanding of Web technologies like HTML and HTTP is helpful.

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Course Objective

➡ Learn the fundamentals of JDBC and using the different interfaces in the JDBC API. Learn how to use Java servlets in the role of Web application control. Identify the options to state management in a Java Web application and understand the pros/cons of each. Understand how JSPs can help to separate Web logic and functionality from page layout. Explore how to make JSPs smaller and more powerful with JSTL, custom tags and expression language. Explore strategies in the exchange of data between Web pages (views) and business processing (model).

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Module 1- INTRODUCTION TO J2EE

➡ Introduction to EE
➡ History of Java
➡ Features of Java
➡ Configuration
➡ Memory Management in Java
➡ Helping Tools
➡ Tips and Tricks

Module 2- ADVANCE COMPONENT

➡ Package in Java
➡ JAR file(.jar) file creation
➡ Executable file(.exe) file creation
➡ Collection framework
➡ What is Exception?
➡ How to handle Exception

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Module 3- OOPS FEATURES

- Basic concept of OOPS
- Class
- Different classes
- Constructor
- Use of this & super
- Abstract class
- Interface
- Interface Vs Abstract Class
- Static & Non-static members
- Method overloading
- Constructor overloading
- Method overriding
- Dynamic method dispatching
- Up-casting
- Down-casting

Module 4- JDBC

- Introduction to JDBC
- History of JDBC
- Features of JDBC
- Architecture of JDBC

Module 5- DRIVER USED IN JDBC

- What is Driver?
- Types of Driver
- JDBC-ODBC Bridge Driver
- Native API Driver
- Network Protocol Driver
- Thin Driver

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Module 6- SQL

➡ What is SQL?
➡ SQL statements
➡ DQL
➡ SELECT Statement
➡ DDL
➡ Create statement
➡ Alter statement
➡ Drop statement
➡ Rename statement
➡ Truncate statement
➡ DML
➡ Insert statement
➡ Update statement
➡ Delete statement
➡ TCL
➡ Commit
➡ Rollback
➡ Savepoint
➡ DCL
➡ Grant
➡ Revoke

Module 7- CONNECTION STYLE

➡ Different Database Connectivity
➡ Connection with Oracle
➡ Connection with MySQL
➡ Different ways of connection
➡ Single DB Connection
➡ Multi DB Connection
➡ Using Driver class
➡ Using BasicDataSource

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Module 8- CONNECTION POOLING

➡ What is connection pooling?
➡ Why we use connection pooling?
➡ Advantages of connection pooling

Module 9- EXECUTION OF NON-SELECT SQL QUERIES

➡ Static request
➡ Dynamic request
➡ Statement interface
➡ PreparedStatement interface

Module 10- EXECUTION OF SELECT SQL QUERY

➡ ResultSet interface
➡ Types of ResultSet
➡ Scrollable ResultSet
➡ Non-Scrollable ResultSet
➡ Updateable ResultSet

Module 11- EXECUTION OF PL/SQL PROGRAMS

➡ Stored Procedure
➡ Stored Function
➡ CallableStatement Interface

Module 12- JDBC WITH DATA DICTIONARY

➡ DatabaseMetaData
➡ ParameterMetaData
➡ ResultSetMetaData

Module 13- TRANSACTION & BATCH PROCESSING

➡ Processing of TCL commands
➡ Processing of bunch of SQL queries

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Module 14- ADVANCE FEATURES OF JDBC

➡ Date
➡ Time
➡ TimeStamp
➡ Blob
➡ Clob
➡ Storing & fetching image in DB
➡ Storing & fetching document in DB

Module 15 – HTML 5

➡ What is HTML?
➡ History of HTML
➡ HTML pages
➡ HTML tags
➡ HTML attributes
➡ DHTML

Module 16- STYLE SHEET

➡ What is Style Sheet?
➡ Types of Style Sheet
➡ Style attribute
➡ CSS 3

Module 17- JAVASCRIPT

➡ Introduction to JavaScript
➡ Declaration
➡ Syntax
➡ Data type
➡ Operators
➡ Function in JavaScript
➡ Function
➡ Anonymous Function
➡ Events
➡ Event Handling
➡ Form Validation

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Module 18- BOOTSTRAP

- What is bootstrap?
- Bootstrap file structure
- Basic HTML template
- Default Grid System
- Container Layout
- Responsive Design
- Typography
- Tables
- Forms
- Images and Icons
- Navs and Nav bars
- Pagination

Module 19 - AJAX

- What is AJAX?
- Synchronous and Asynchronous
- $.ajax
- $.get
- $.post

Module 20 - JQUERY

- Introduction
- Features
- Syntax
- Steps to use JQuery
- Function

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Module 21- SERVLET
- Basic of web technology
- Need for server side programming
- What is Server?
- Types of Server
- Web server
- Application Server
- Introduction to Servlet
- Servlet Life cycle

Module 22- CREATION OF SERVLET
- Manual creation of Servlet
- Creation of Servlet in Eclipse IDE
- Using Servlet interface
- Using GenericServlet class
- Using HttpServlet class
- XML file configuration
- Deployment Descriptor
- Zero Configuration

Module 23- REQUEST AND RESPONSE MECHANISM IN SERVLET
- ServeltRespone and ServletRequest
- HttpServeltRespone and
- HttpServletRequest
- Request methods
- Get method
- Post method
- Request Handling
- ServletConfig and ServletContext
- Include and forward mechanism

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Module 23- DATABASE OPERATION IN SERVLET
➡ Storing request in DB
➡ Fetching DB content and provide as response

Module 24- SESSION TRACKING
➡ What is Session?
➡ Handling session
➡ Hidden Form Field
➡ URL Rewriting
➡ Cookies
➡ Dealing with HttpSession

Module 25- LOGIN & REGISTRATION
➡ Registration
➡ Login
➡ Forgot Password
➡ Change Password
➡ Logout

Module 26- FILTER & LISTENER
➡ What is Filter?
➡ FilterChain and FilterConfig
➡ What is Listener?
➡ Types of Listener

Module 27- JSP
➡ Disadvantages of Servlet
➡ Introduction to JSP
➡ JSP Architecture
➡ JSP Life Cycle

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Module 28- JSP TAGS

→ Declarative tags
→ Expression Tags
→ Action tags
→ Scriptlet tag
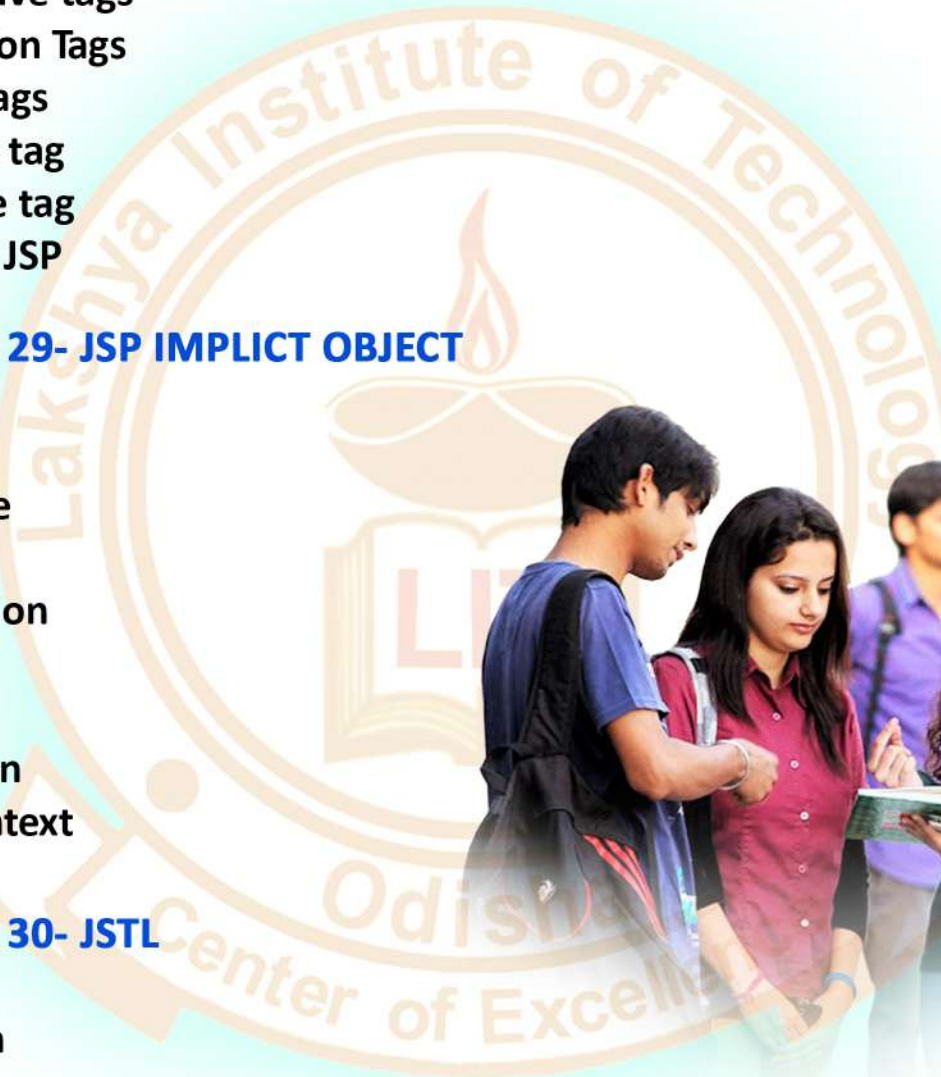→ Directive tag
→ Taglib in JSP

Module 29- JSP IMPLICT OBJECT

→ out
→ request
→ response
→ page
→ application
→ session
→ config
→ exception
→ pageContext

Module 30- JSTL

→ Core
→ Function
→ SQL
→ Expression Language

Module 31- JAVA MAIL

→ Introduction
→ Java-mail API
→ Sending e-mail

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Absentee Management System
- Advice - The Virtual Sales Assistant
- Appointment Scheduler
- Automatic Nesting System
- AUTOMATIC NESTING SYSTEM
- Automobile Dealer Office Automation
- BillPay System
- Browsing Center Automation
- Company Information Tracking System
- Computer Training Institute
- Management System
- Corporate Information System
- Courier Cargo Management System
- CUSTOMER RELATIONSHIP MANAGEMENT
- Cyber Voting System
- DayCare Management System
- Document Manager (Repaired)
- Document Manager
- E-Recruitment Solution
- EMI Distribution System
- Employee Feedback Evaluator
- Employee Shift Scheduler
- ERP for Small Busisness
- Financial Accounting System
- Financial Advisor
- Fleet Management System
- Flight School Management System
- Global Warming
- HelpDesk Automation System
- Hire Purchase System

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- Home Link Service System
- HomePage Design
- Hospital Management System
- Hotel Management System
- Legal Help Line
- Indian Music & Fine Arts
- Informartion Portal Site
- Online Matrimonial Service
- Online Personal Data
- Management System
- Online Railway Reservation System
- Online Shopping Mall
- Online Telephone Users Management
- Online Textile Shopping
- Online Tyre ReTrading
- Online Video Library
- Payroll System – New
- Pharmacy Maintenance System
- Point Of Sale
- Portal Site Development
- Production Planning and Control
- Pupil Management System
- Purchase Order System
- Railway Freight Tracking System
- Realtime Commentary System
- Resume Tracking System
- Retail CashBox
- Sales & Distribution System
- School Management System
- Shipping Management System
- Soft Apartment Manager

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➤ Spare Parts Management System
➤ Table Porter
➤ Time Billing System
➤ Total Management
➤ Travel & Tourism Management
➤ System
➤ Travel Agency Automation
➤ Vehicle Service Automation
➤ Vehicle Service Automation
➤ Virtual Class Room
➤ Workflow Automation
➤ Yellow Pages
➤ Library Management System
➤ MANSONRY CALCULATOR
➤ Map Information Syste