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JAVA COURSE

WHY LITZ TECH?

Learn IT Zone is a pioneer in facilitating education using breakthrough technologies. With dedicated teams academic experts, the company has been on the forefront of heralding the next advancement in learning, thus becoming a distinctive player in bridging geographical and cultural borders, we are well connected with the networks of colleges and IT solutions. LITZ TECH INDIA PVT LTD recruits well performing students of Learn IT Zone that provides an effective career.

KEY FEATURES

- ➔ Train from professionals with industry experience
- ➔ Learn theoretical concepts and gain hands-on training simultaneously
- ➔ Real time Hands-On Practical Experience Training to imbibe corporate practices
- ➔ Get certified at the end of the training
- ➔ Receive placement support once the training is completed ➔

Getting exposure to latest technology up gradations.

- ➔ Advanced lab facility and most updated syllabus and materials will be provided with learning tools for easy learning
- ➔ You will have the access to contact the trainers at any time.

Course Syllabus

Core Java

Introduction To Java

History of Java

What is Java , Java Flavors, characteristics

JVM Architecture

Bytecode

Class Loader

Unicode

Class path

Path

Fundamentals of Java Programming

Object oriented concepts (OOP)

Keywords, Datatypes, Variables, Operators, Casting

Selection statement (if, switch) Control

statements (while, do while , for)

Conditional statements (if, else, elseif, ?

static

Arrays

Object Oriented Programming with Java

Classes and Objects

Structure of a class – its internals (Data Members, methods)

Using static

Constructor this

keyword

modifiers

playing with the object (copying, casting)

Garbage collection

Abstract class

Inheritance

Basics (extends keyword)

Modifiers and their scope Deriving a class super,
final keyword why java does not support multiple
inheritance? **Polymorphism** overloading a method
overloading a constructor method overriding
accessing base class method **Packages and**

Interfaces basics

modifiers and their scope class setting

classpath

compiling and accessing a packaged class

types of packages user defined package

Exploring java.lang package

String, StringBuffer, Arrays,

Wrapper classes

Exception Handling

Basics

Hierarchy of exceptions

Handling exception – Try, catch, finally, throw, throws

User defined exceptions

Threads

Basics, Thread class , Runnable Interface

Thread model

Life cycle – start(), run()

Scheduling

Deadlocks / concurrency issues

Synchronization – as a block, as a modifier

Daemon thread

I/O Streams

Introduction

Hierarchy of streams

IO Stream, Byte Stream, Character Streams

BufferedInputStream, BufferedOutputStream

Reader and Writer class

BufferedReader, PrintWriter

Serialization **Collection**

Framework basics,

hierarchy

legacy classes – Vector, Queue, Stack, Enumeration, Dictionary, Properties

List, ArrayList, LinkedList

Set, HashSet, TreeSet,

Map, HashMap, TreeMap,

Generics

Annotations

Boxing / Unboxing

Enums

Introduction to functional style of programming **Mini application – discussion / implementation**

Tools

Javadoc

javap jar

IDE Tools

eclipse myeclipse

Spring

Spring core

Types of containers

Xml configuration

Core annotations

Component – scan

What can be injected into a bean

Understanding core annotations

Spring MVC

Handler Mapping

Controllers

View resolvers

Validators interceptors

Spring DAO

Jdbc templates

Exception hierarchy

Spring ORM

Hibernate template

Integration with hibernate

Spring AOP

Point cut

Advisors

Types of advices

Spring – webservices (Restful API) Spring security Spring JPA

Hibernate

Introduction

Introduction to ORM (Object Relational Management)

Benefits of ORM

Contrast JDBC with ORM

Hibernate Jar files

Hibernate Architecture

SessionFactory , Session, Transaction, Query

Understanding config files .hibernate.xml, .hbm.xml

Performing CRUD operations load, get, save,
saveOrUpdate, delete **SQL**

working with various SQL commands

accessing more than one object from the table

Mapping

Inheritance

Collection

Composition

Association

Cache

Level – I and II

Using third party to configure L2 cache

Criteria

Interfaces / classes implementation

Note : an application using the above technologies –

Domains : Telecom , LMS, etc...

Spring Boot

Introduction / benefits

Spring Boot overview

Bootstrapping an Boot application –

Initializer

Auto Configuration

Spring Boot annotations

Spring Boot properties

Spring Boot profiles

Accessing data with Spring Boot and h2 database

Configuring Spring Boot with spring MVC application

Building a Restful web application with Spring Boot

Highlights of Training

An application based on Spring boot – Either migration / new one

Industry experienced Professional

Hands-on experience with Project orientation

Interview based Questions

Advanced Java Training Syllabus

Fundamentals

Client, Server, Port, Application, Web Server, Application Server, Web Client and Web Application

Installation of Java and Understanding PATH and CLASSPATH

Installation of Eclipse

Installation of Tomcat and structure of Tomcat

Linking any Web Server with Eclipse

Static Resource Access from Tomcat

Servlets

Servlet Internals and Servlet Programming

What are Servlets and why do we need Servlets?

Servlet Development with Eclipse

- Developing Servlets
- Compiling Servlets
- Deployment and Invoking of Servlets

Purpose of Servlet Mapping and web.xml

Servlet Architecture

- Detailed Architecture of Servlets
- Discussion of GenericServlet, HttpServlet Interfaces
- Programming examples

Servlet Life Cycle

HTTP Internals

Detailed discussion of all parameters of request and response packets

Discussion of HttpServletRequest and HttpServletResponse interfaces

Session Tracking API

- Practical visualization of Http Session objects and Session table
- Session Tracking API
- Session Tracking Programming

Cookies, URL Rewriting and Hidden Form Fields

ServletConfig Object

ServletContext Object

RequestDispatcher Object

Filters

- Why do we need filters?
- Filter, FilterChain, FilterConfig interfaces
- Programming examples

Application / Attribute Lifecycle Listeners Why do

we need Lifecycle Listeners?

ServletContext and ServletContext Attribute Listeners

Session and Session Attribute Listeners

Programming examples

JSP

Java Server Pages(JSP) Internals and Programming

What is JSP? Why do we need JSP?

JSP development with Eclipse

JSP Life Cycle Predefined Objects of JSP

request, response, out and session objects

config, application, pagecontext objects

Scripting Tags (Writing Java code inside JSP)

Directives

@page, @include directives

Action tags of JSP

Difference between jsp:forward, jsp:include and @include tags

Programming examples to illustrate each tag

Expression Language

Why do we need EL?

Reading scoped attributes using EL

Reading bean properties using EL

Reading collections using EL

Operators of EL

Programming examples to illustrate each usage

JSTL (JSP standard tag library) Why do

we need JSTL?

Looping tags

Control tags

Database tags

118N tags

Programming examples to illustrate each category of tags

Custom tags

Custom tag creation based on Servlets

Custom tag creation based on JSP concept of

tld file

programming examples to illustrate each concept

Java Beans

What are Java beans and why do we need Java beans?

Action tags for java beans

Application of Java beans

MVC Architecture

Why do we need MVC?

Discussion of pros and cons of Servlets, JSP and JavaBeans

Programming example to illustrate Business logic, Controller logic, Presentation logic and Bean creation

JDBC

Java Data Base Connectivity (JDBC) internals and programming What is

JDBC ? Why do we need JDBC ?

Discussion of JDBC driver types and Driver Manager

Connection object

Statement types and Discussion of each type of Statement Objects

ResultSet Types and Discussion of each type

Stored Procedure Access from java applications

Transaction Programming with JDBC

Savepoint and RowSet

DataSource and Connection Pooling

Batch Updates

JNDI

Explanation on Usage of important Practical Tools

Eclipse

Jboss, Weblogic, Tomcat

Database – Overview

Introduction to MySQL

MySQL Installation

DDL Commands

DML Commands

Operators

Functions

Constraints

Joins
Views
Indexes
DCL Commands
TCL Commands
MySQL Cursors
Exception Handling
Stored Procedure
Stored Functions

[MicroServices – Overview](#)

MicroServices Introduction
Principle and Characteristics
Use cases and Benefits
Challenges
Design standards
Micro Services Communication
Pitfalls

UI Development

HTML 5
CSS 3
JavaScript
Advanced JavaScript
BootStrap
Angular jQuery
Ajax

DevSecOps Tools – Overview

Docker

Agile with Jira

Chef

LOG4J / SLF4J

GitHub

Gradle

Maven

ELK

Heroku

SonarQube

Amazon Cloud Watch

Datadog *****

[Cloud – Application Deployment on Cloud](#)

AWS Cloud

What is AWS

Introduction to AWS Services

Amazon Cloud Services

Create EC2 Instance in AWS

Deploy Spring Boot Application on AWS | Elastic Beanstalk

AWS Advanced Research and Development- Live Deployment

Our Training Benefits

Check out our innovative key features in training methodologies. Our flexible training mechanisms incorporate all techniques right from knowledge assessment till setting placement records.

- ➔ Gain knowledge from experienced professionals in the field.
- ➔ Learn both theoretical concepts and gain practical experience at the same time.
- ➔ Training that provides real-world, hands-on experience in order to teach proper workplace practices.
- ➔ Grab certification upon completion of training
- ➔ Receive placement assistance following completion of training ➔
Being exposed to the most recent technological advancements.
- ➔ Learning tools will be provided along with the most up-to-date lab facilities, curriculum, and course materials
- ➔ You will be able to connect with the trainers at any time.