

National Institute of Electronics and Information Technology

Lucknow

Name of Group: IT Division

Name of Course: Certificate Course in J2EE

Objective: This course has the perfect mix of contents to prepare the participants to become a java developer. The participant would get to develop a stand-alone and web application in java which includes problem definition, requirement analysis, system design, and java coding and testing.

Duration: 6 week / 90 Hours

Eligibility: 10+2, Diploma/ B.Tech. / MCA/BCA pursuing

Course Fees: 6000/- + GST

Registration process: Candidate has to apply in prescribed application form. The form can be purchased from NIELIT Lucknow office. The duly filled admission form along with the course fees, required documents and photograph has to be submitted at NIELIT Lucknow Centre. The fees deposited is Non-Refundable.

Course Content:

Modules:	Duration	Contents
Module 1(Core Java)	2 Week	Introduction to Java – History and Creation of Java, Features of Java, Byte Code, OOPs Principles. Data Types and Variable – Primitive, non-primitive; Primitive Data types defined in java, etc. Declaration, Assignment, Dynamic Initialization, Scope and Life time, Type Conversion and Casting, Type Promotion etc. Arrays – Declaration, Types, Storage, Alternative Array Declaration etc. Operators – Arithmetic Operators, Bitwise Operators, Relational, Boolean Logic, Assignment, Conditional Operator; Operator Precedence etc., Control Statements – Selection Statements

		<p>Iteration Statements – while, do—while, for, Nesting of loops, for, for-each version of the for loop, Nesting of loops,</p> <p>Classes and Objects –Classes and objects, Object Reference Variables and Methods, Constructors, use of this keyword, Garbage Collection, finalize method, Overloading Methods, Argument Passing, Access Control, static, final, Nested and Inner Classes, String Class, Inheritance and Types of inheritance, Multilevel Hierarchy, using super keyword etc., Method Overriding, Dynamic Method Dispatch, Using final with Inheritance, The Object Class</p> <p>Packages: Defining a Package, Package and Class Path etc., Access Protection, Importing Packages</p> <p>Interfaces – Defining an Interface, Implementation, Applying Interfaces etc.</p> <p>Exception Handling – Fundamentals, Exception types, Uncaught Exceptions, Using try and catch, Multiple catch Clauses, Nested try statements, throw, throws, finally, Java’s Built in Exceptions, Chained Exceptions, Creating Own Exception Subclass.</p> <p>Multithreading – Introduction of threads, Main Thread, Creating Threads, Multiple Threads, isAlive() and join() methods, Thread Priorities, Synchronization; Deadlock; Suspending, Resuming and Stopping threads etc.</p> <p>I/O Basics and Definitions – Streams, Byte Streams and Character Streams, Reading and Writing Console Input Characters and Strings.</p> <p>String – Constructors, Special String Operations, Character Operations, String Comparison, Searching Strings, Modifying a String, valueof() method etc.</p> <p>String Buffer, String Builder etc.</p>
<p>Module 2 (GUI Programming and Database Connectivity)</p>	<p>2 Week</p>	<p>AWT – AWT Classes, Window Fundamentals, Working With Graphics, Working with color, Paint Mode, Fonts etc., Control Fundamentals, Labels, Buttons, Check Boxes, Choice, Lists, Text Field, Scroll Bars, Text Area, Layout Manager, Menu, Dialog Box, FileDialog, Event Handling with AWT Controls etc.</p> <p>Applets – Basics, Architecture, An Applet Architecture,</p>

		<p>Display Methods, Repaint() Method, Status Window, HTML Applet Tag, Passing Parameters to Applets, Event Handling (Event Classes, Event Listener Interfaces, Delegation Event Model, Adapter Classes)</p> <p>Swing – JApplet, JLabels, Uses of swing components like - JTextField, JButton, JCheckBox, JRadioButton, JComboBox, JTabbedPane, JScrollPane, JTable etc. uses of Layout Manager, Menu, Dialog Box, FileDialog, Event Handling with swing Controls.</p> <p>JDBC – JDBC Components, JDBC Architecture, Introduction to RDBMS, JDBC Programming, Database Concepts, Select, DML Commands like Insert, Update, SQL Function and Group by Clause, Join, Nested Query, JDBC Types, Error Checking and The SQL Exception Class, The SQL Warning Class, Executing SQL Queries, ResultSet, Metadata.</p>
Module 3 (Web Application)	1 Week	<p>Java Server Pages (JSP) – JSP Overview: The Problem with Servlets, Life Cycle of JSP Page, JSP Processing, JSP Application Design with MVC, Setting Up the JSP Environment, JSP Directives, JSP Action, JSP Implicit Objects JSP Form Processing, JSP Session and Cookies Handling, JSP Session Tracking JSP Database Access, JSP Standard Tag Libraries, JSP Custom Tag, JSP Exception Handling.</p> <p>Servlets – Servlet Model: Overview of Servlet, Servlet Life Cycle, HTTP Methods Structure and Deployment descriptor ServletContext and ServletConfig interface, Attributes in Servlet, Request Dispatcher interface The Filter API: Filter, FilterChain, Cookies and Session Management: Understanding state and session, Understanding Session Timeout and Session Tracking, URL Rewriting.</p> <p>HTML fundamentals - Tags and there attributes: table , input, select, form , Passing data between pages-Using hidden variables , Form attributes: action , method , Advantages and disadvantages , Session variable and hidden variable</p> <p>Java Script – Introduction</p> <p>Web Server- Introduction</p>

- There will be 3 Hours Session per day.
- These sessions will include Theory Classes, Demo and Practical.

Mode od Payment: Fees can be paid either by swiping debit/credit card .

For any queries and more details please Contact to

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