

Core java (Java SE) Training Syllabus

Duration:45 days

Fee: Rs. 4500 only

Course Overview :

The Core Java technologies and application programming interfaces (APIs) are the foundation of the Java Platform, Standard Edition (Java SE). They are used in all classes of Java programming, from desktop applications to Java EE applications.

After completing this module you are ready to:

- Appear exams on java under any technical university of India.
- Develop Desktop applications in java.
- Appear SCJP(Sun Certified Java Programmer) exams
- Update yourself with Advance frameworks of java.

Core Java Syllabus

Introduction

Programming language Types and Paradigms. Computer Programming Hierarchy. How Computer Architecture Affects a Language ? Why Java ? Flavors of Java. Java Designing Goal. Role of Java Programmer in Industry. Features of Java Language. JVM –The heart of JavaJava’s Magic Bytecode

Language Fundamentals

The Java Environment:

Installing Java. Java Program Development. Java Source File Structure .Compilation .Executions.

Basic Language Elements:

Lexical Tokens,Identifiers ,Keywords,Literals, Comments ,Primitive Datatypes,Operators ,Assignments.

Object Oriented Programming

Class Fundamentals. Object & Object reference. Object Life time & Garbage Collection. Creating and Operating Objects. Constructor & initialization code block. Access Control, Modifiers, methods, Nested , Inner Class &Anonymous Classes Abstract Class & Interfaces ,Defining Methods, Argument Passing Mechanism ,Method Overloading, Recursion. Dealing with Static Members. Finalize() Method. Native Method. Use of “this “ reference. Use of Modifiers with Classes & Methods. Design of Accessors and Mutator Methods .Cloning Objects, shallow and deep cloning .Generic Class Types

Extending Classes and Inheritance

Use and Benefits of Inheritance in OOP,Types of Inheritance in Java,Inheriting Data Members and Methods, Role of Constructors in inheritance, Overriding Super Class Methods. Use of “super”. Polymorphism in inheritance. Type Compatibility and Conversion, Implementing interfaces.

Package

Organizing Classes and Interfaces in Packages. Package as Access Protection, Defining Package. CLASSPATH Setting for Packages. Making JAR Files for Library Packages, Import and Static Import, Naming Convention For Packages

Exception Handling:

The Idea behind Exception,Exceptions & Errors,Types of Exception,Control Flow In Exceptions,JVM reaction to Exceptions,Use of try, catch, finally, throw, throws in Exception Handling.In-built and User Defined Exceptions,Checked and Un-Checked Exceptions.

Array & String :

Defining an Array,Initializing & Accessing Array, Multi –Dimensional Array, Operation on String, Mutable & Immutable String, Using Collection Bases Loop for String, Tokenizing a String, Creating Strings using StringBuffer.

Thread :

Understanding Threads, Needs of Multi-Threaded Programming. Thread Life-Cycle, Thread Priorities, Synchronizing Threads, Inter Communication of Threads, Critical Factor in Thread –DeadLock.

Applet

Applet & Application,Applet Architecture.Parameters to Applet,Embedding Applets in Web page. Applet Security Policies.

A Collection of Useful Classes

Utility Methods for Arrays,Observable and Observer Objects,Date & Times,Using Scanner, Regular Expression.

Input/Output Operation in Java(java.io Package)

Streams and the new I/O Capabilities,Understanding Streams,The Classes for Input and Output, The Standard Streams,Working with File Object,File I/O Basics,Reading and Writing to Files,Buffer and Buffer Management,Read/Write Operations with File Channel, Serializing Objects.

GUI Programming ,Designing Graphical User Interfaces in Java Components and Containers

Basics of Components,Using Containers,Layout Managers,AWT Componets,Adding a Menu to Window, Extending GUI Features Using Swing Components.

Java Utilities (java.util Package) The Collection Framework :

Collections of Objects,Collection Types,Sets,Sequence,Map,Understanding Hashing,Use of ArrayList & Vector.

Event Handling

Event-Driven Programming in Java,Event- Handling Process,Event-Handling Mechanism,The Delegation Model of Event Handling,Event Classes,Event Sources,Event Listeners,Adapter Classes as Helper Classes in Event Handling,Anonymous Inner classes a Short –cut to Event Handling,Avoiding Deadlocks in GUI Code,Event Types & Classes.

JDBC

(What Is the JDBC API?, Driver Types , Two-tier and Three-tier Models ,Connection Overview, Transactions, DriverManager Overview ,Statement Overview ,Sending Batch Updates ,ResultSet Overview , Types of Result Sets , Concurrency Types , PreparedStatement Overview ,CallableStatement Overview)

SQL(DDL And DML)

Note:

Project Work is Compulsory after the Completion of training Program.