SAMBODHI

Java

Core Java Training Course

Project Based Immersive Learning Course

Course Overview?

Education Nest offers a Java certification course that follows the latest industry standards and meets the current market demands. The course covers the basic programming language of Java known as 'Core Java', which is widely used and has been around for a long time. Java is a general-purpose programming language that uses Object-Oriented Programming (OOPs) concepts. It is an independent and strong programming language that is easy to understand. Core Java is just one part of Java, which has different editions. This online Java training course will teach you everything you need to know about Core Java.

Benefits of Core Java Training Course :

Core Java training is essential for anyone looking to build a career in software development. The course provides a solid foundation in the fundamentals of programming, including variables, data types, control structures, and object-oriented programming concepts. By learning core Java, students gain a deep understanding of how to write efficient and effective code that can run on any platform. Additionally, core Java skills are in high demand. Across a wide range of industries, making it an excellent investment for anyone looking to advance their career in technology.

Who should learn:

- Fresher
- Software Developers
- Programming enthusiasts
- Web Designer
- Professionals
- Engineering graduates

Why do you need Core Java Training Course?

Average Salary Growth:

The average salary growth of a Java developer can vary depending on a variety of factors such as location, years of experience, industry, and the specific skills and technologies they possess. However, according to various sources, the average salary of a Java developer in the United States typically increases by about 5% to 10% per year with experience. According to Glassdoor, the average base salary for a Java developer in the United States is around $83,000 per year, with some top-paying companies offering salaries of over $140,000 per year.

Industries:

Java is one of the most popular programming languages used by businesses of all sizes, and many MNCs rely heavily on Java for developing their software applications and systems. According to various job market analysis, MNCs such as IBM, Accenture, Capgemini, Cognizant, TCS, and Infosys are among the top companies that frequently hire Java developers. These companies have a significant presence in the IT industry and offer a wide range of opportunities for Java developers with various levels of experience, from entry-level to senior roles.

Position in Market:

According to the US Bureau of Labor Statistics, the employment of software developers, including Java developers, is projected to grow by 22% from 2019 to 2029, which is much

faster than the average for all occupations. This growth is driven by the continued demand for software and applications in various industries. In addition, according to various job market reports, Core Java remains one of the most widely used programming languages in the industry, and is expected to continue to be so in the years to come.

Designations:

- Java Developer
- Java Architect
- Java Programmer
- Database Administrator
- Web Developer

Why Core Java Course from Education Nest

- **Free Demo on Request**
- **Live Interactive Learning**
- **Lifetime Access**
- **Flexible Schedules**
- **24x7 Support**
- **One on One Doubt Clearing**
- **Real Time Project-Based Learning**
- **Certificate Oriented Curriculum**

Key Skills Covered:

- Object-Oriented Programming
- Java Collections
- SOA and Web Services
- Java Web Frameworks
- Working with JDBC
- Design Patterns

Core Java Course Syllabus

History

- Why Java
- Differences with others
- Need of Java

Introduction

- Introduction of Java
- Features of Java Language
- JVM - The heart of Java
- Java's Magic Bytecode
- Installing Java
- Java Program Development
- Java Source File Structure
- Compile Java File
- Execute Java Applications

Language Fundamentals

- Operators
- Identifiers
- Literals
- Data Types and Type Casting
- Arrays
- Functions
- The concept of Static Polymorphism
- String

Object Oriented Programing Concepts(OOPS)

- What is an Object ?
- What is Class ?

- What is an Inheritance ?
- What is Package ?

Classes and Objects

Classes

- Declaring Classes
- Declaring Member Variables
- Defining Methods
- Constructor
- Passing Info to Method or Constructor

Objects

- Creating Objects
- Using Objects

More On Classes

- Return statement to method
- This Keyword
- Access Specifiers
- Instance and Class Members or Methods
- Initializing Fields

Nested Classes

- Inner Class
- Local Inner
- Anonymous Inner Class
- Enumerations

Interface and Inheritance

Interfaces

- Defining Interface
- Implementing Interface

- Using Interface as Type
- Rewriting Interfaces

Inheritances

- Overriding and Method hiding
- Polymorphism
- Hiding Fields
- Super keyword
- Object father of all Classes
- Final Class and Methods
- Abstract classes and Methods

Numbers and Strings

Numbers

- Wrapper Classes
- Formatting
- Beyond Basic Arithmetic
- Rewriting Interfaces

Characters

Strings

Number and String Conversion

Manipulating Characters in String

SubString Manipulation

String Builder class

Autoboxing and Unboxing

Packages

- Creating Package
- Naming Package

- Using Package Members

Exception Handling

- What is an Exception?
- Catch or Specify Requirement
- Catching and Handling Exceptiontry block

    try block

    catch block

    finally block

- Specifying Exceptions thrown by method
- Throw Exceptions

    Chained Exceptions

    Creating Own Exceptions

- Unchecked Exception - Controversial

File Handling

Java I/O Fundamentals

- Byte Streams
- Character Streams
- Buffered Streams
- Scanning And Formatting
- I/O from Command Line
- Data Streams
- Object Streams and Serialization
- file IO

Generics

- Why Generics?
- Generic Raw Type
- Generic Methods

- Bounded Parameters
- Generics
- Inheritance and SubTypes
- Type Inference

Collection

- Collection Framework
- Collection Classes and Interfaces

Threading

Processes And Threads

Thread Objects

- Defining and Starting Threads
- Sleeping Threads
- Interrupting Threads
- Joining Threads

Synchronization

- Thread Interference
- Memory Consistency Error
- Synchronized Methods
- Volatile Keyword

Generics

- Why Generics?
- Generic Raw Type
- Generic Methods
- Bounded Parameters
- Generics
- Inheritance and SubTypes
- Type Inference

Collection

- Collection Framework
- Collection Classes and Interfaces

Java Database Connectivity

JDBC Introduction

- JDBC Architecture
- Database Overview

JDBC Basics

- Getting Started
- Establishing Connections
- Processing SQL statements with JDBC
- Handling SQL Exceptions.
- Result Sets
- Using Statements
- Using Prepared Statements
- Using Callable Statements

Introduction to Java 8 Lambda Expressions

- Introduction to Java 8
- Overview of Java 8 Features and Enhancements
- Anonymous Functions, Streams
- Interfaces in Java 8
- Functional Programming
- Lambda Expressions and Functional Interfaces
- Type Inference in Java 8

Streams and Lambda Expressions - Java 8

- Streams
- The Stream Interface
- Reduction and Parallelism

- Collections and Collectors
- Using Lambda Expressions
- Using Method References in Lambda Expressions
- Optional vs. Null

Java 8 Enhancements

- New Java 8 features
- The New Date/Time API
- LocalDate, LocalDateTime
- Formatting Dates
- StringJoiner
- Static Methods on Interfaces
- Repeating and Type Annotations
- Parallel Array Sorting
- Improved Type Inference
- Method Parameter Reflection
- Java 8 Concurrency updates

Career Support

Profile Building :

Experienced professionals are available to offer tailored assistance in crafting your CV and online profiles, taking into account your unique educational and experiential background.

Interview Preparation :

The upcoming interview preparation service will include personalized one-on-one sessions and the option for mock interviews if needed.

Job Referrals :

At Education Nest, we receive a variety of job requirements from diverse sources such as organizations, our clients, HR consultants, and a vast network of Education Nest

currently employed in different companies. We strive to meet these varied requirements to the best of our abilities.

Continuous Support :

We offer continuous support for as much time as you need it, and a considerable number of our learners receive multiple interviews offers and promising employment opportunities as a result of the abilities they gain during the program.