Master Core Java Programming

Powering Automation & Software Development Excellence

Presented by **VARUN IT - Software Training & Development**

🚀 Course Overview

Java remains the backbone of the software industry, especially in the realms of Automation Testing (Selenium) and Enterprise Development. This course is meticulously designed to take you from a complete beginner to a confident Java programmer, focusing on the concepts essential for modern software engineering and automation frameworks.

📚 Detailed Curriculum

1. Java Foundations

- **Environment Setup:** Installing JDK, configuring Environment Variables (JAVA_HOME), and setting up IDEs (Eclipse/IntelliJ).

- **Basics of Java:** Understanding the JVM, JRE, and JDK architecture.

- **Syntax Fundamentals:** * Variables and Data Types (Primitive vs. Non-Primitive)

    o Operators (Arithmetic, Relational, Logical, Assignment)

    o Naming Conventions and Best Practices

2. Control Flow & Logic

- **Conditional Statements:** Mastery of if, else-if, else, and switch-case.

- **Looping Constructs:** Efficiently using for, while, and do-while loops.

- **Jump Statements:** Utilizing break and continue for flow control.

3. Object-Oriented Programming (The Core)

- **Classes & Objects:** Building real-world blueprints and managing state/behavior.

- **Inheritance:** Implementing Single, Multilevel, and Hierarchical inheritance to promote code reuse.

- **Polymorphism:** Understanding Method Overloading (Compile-time) and Method Overriding (Runtime).

- **Encapsulation:** Securing data using private fields and Getter/Setter methods.

- **Abstraction:** Using Abstract Classes and Interfaces to define contracts for your code.

4. Advanced Java Concepts

- **Methods & Memory:** Understanding method signatures, return types, and static vs. instance members.

- **Exception Handling:** Managing runtime errors using try-catch-finally, throw, and throws to build robust applications.

- **File Handling:** Reading from and writing to external files—a crucial skill for data-driven testing.

5. Collections Framework & Data Structures

- **List Interface:** Working with ArrayList and LinkedList.

- **Set Interface:** Handling unique data with HashSet and LinkedHashSet.

- **Map Interface:** Key-Value pair management using HashMap.

- **Iterators:** Navigating through data collections efficiently.

🛠 Why Learn Java with Us?

- **Automation Ready:** Our syllabus specifically highlights the Java concepts required for Selenium WebDriver and TestNG.

- **Hands-on Coding:** Every session involves live coding exercises and logic-building tasks.

- **Real-world Scenarios:** Learn how Java is applied in professional environments, including API connectivity and database validation basics.

📞 Get Started Today!

Ready to build your foundation in Java? Join our upcoming batch!

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Location: VARUN IT Training Center

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