

JAVA Training

Topics : [Courses](#)

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Module 1: Introduction to Java

- Overview of Java and its applications
- Setting up Java Development Environment (JDK, IDE - IntelliJ/Eclipse)
- Writing and executing the first Java program
- Understanding JVM, JRE, and JDK
- Java Compilation Process

Module 2: Java Basics

- Variables and Data Types
- Operators in Java (Arithmetic, Relational, Logical, Bitwise, etc.)
- Control Statements (if-else, switch-case)
- Loops (for, while, do-while)
- Type Casting and Type Conversion

Module 3: Object-Oriented Programming (OOP) in Java

- Understanding OOP concepts (Encapsulation, Inheritance, Polymorphism, Abstraction)

- Classes and Objects
- Constructors (Default, Parameterized, Copy Constructor)
- Method Overloading and Method Overriding
- Static and Final Keywords
- Super and This Keywords
- Abstract Classes and Interfaces

Module 4: String Handling

- String and StringBuffer Classes
- StringBuilder Class
- String Manipulation Methods

Module 5: Arrays and Collections

- One-dimensional and Multi-dimensional Arrays
- Introduction to Java Collections Framework
- List (ArrayList, LinkedList)
- Set (HashSet, TreeSet)
- Map (HashMap, TreeMap, LinkedHashMap)
- Iterators and Stream API

Module 6: Exception Handling

- Types of Exceptions (Checked and Unchecked)

- Try, Catch, Finally Blocks
- Throw and Throws Keywords
- Custom Exceptions

Module 7: File Handling in Java (I/O Operations)

- File Class and Methods
- Reading and Writing Files
- BufferedReader and BufferedWriter
- Serialization and Deserialization

Module 8: Multithreading in Java

- Thread Lifecycle
- Creating Threads (Extending Thread Class, Implementing Runnable Interface)
- Synchronization and Inter-thread Communication

Module 9: Java Database Connectivity (JDBC)

- Introduction to JDBC
- Connecting Java with MySQL/PostgreSQL
- CRUD Operations in JDBC
- Using PreparedStatement and CallableStatement