ARYATECHNO

JAVA Training

Topics :
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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