

ADVANCED JAVA

- Duration of Training : 40 hrs
- Batch type : Weekdays/Weekends
- Mode of Training :
Classroom/Online/Corporate
Training



Module 1: Advanced Object-Oriented Programming

- Review of object-oriented principles in Java.
 - In-depth exploration of inheritance, polymorphism, and encapsulation.
 - Advanced topics like abstract classes, interfaces, and inner classes.
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Module 2: Java Collections Framework

- Comprehensive study of collections in Java (List, Set, Map).
 - Implementations and use cases of different collection types.
 - Iterators and enhancements in Java Collections Framework.
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Module 3: Exception Handling and Logging

- Advanced exception handling techniques.
 - Custom exceptions and exception chaining.
 - Logging using frameworks like Log4j.
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Module 4: Multithreading and Concurrency

- Understanding multithreading in Java.
 - Synchronization and thread safety.
 - Advanced topics like Java concurrency utilities (java.util.concurrent).
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Module 5: Java I/O and NIO

- Input and output streams.
- File handling and file I/O.
- Introduction to Java NIO (New I/O) for non-blocking I/O.

Module 6: Networking and Socket Programming

- Network fundamentals.
 - Socket programming in Java.
 - Building client-server applications.
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Module 7: Java Database Connectivity (JDBC)

- Introduction to JDBC and database fundamentals.
 - Performing database operations in Java.
 - Connection pooling and data source management.
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Module 8: Java EE (Enterprise Edition) Technologies

- Overview of Java EE and its components.
 - Servlets and JavaServer Pages (JSP).
 - Enterprise JavaBeans (EJB) and Java Persistence API (JPA).
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Module 9: Spring Framework

- Introduction to the Spring Framework.
 - Dependency injection and inversion of control.
 - AOP (Aspect-Oriented Programming) with Spring.
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Module 10: Hibernate

- Object-relational mapping (ORM) with Hibernate.
 - Configuration and mapping files.
 - Hibernate Query Language (HQL) and criteria queries.
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Module 11: Web Services

- Introduction to web services and SOAP.
 - Developing and consuming web services in Java.
 - RESTful web services with JAX-RS.
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Module 12: Design Patterns

- Introduction to design patterns (e.g., Singleton, Factory, Observer).
 - Applying design patterns in Java applications.
 - Design patterns for enterprise-level development.
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Module 13: Advanced Topics

- Security and encryption in Java.
 - Java memory management and performance optimization.
 - Introduction to Java 9+ features
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Module 14: Project Work

- A practical project that incorporates advanced Java concepts learned during the course.



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✉ Training Queries : training@radicaltechnologies.co.in

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