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Discover Learning

Advanced Java Certification Training

Course Curriculum : Your 10 module Learning Plan

https://www.edureka.co/advanced-java-sp

About Edureka

Edureka is a leading e-learning platform providing live instructor-led interactive online training. We cater to professionals and students across the globe in categories like Big Data & Hadoop, Business Analytics, NoSQL Databases, Java & Mobile Technologies, System Engineering, Project Management and Programming. We have an easy and affordable learning solution that is accessible to millions of learners. With our students spread across countries like the US, India, UK, Canada, Singapore, Australia, Middle East, Brazil and many others, we have built a community of over 1 million learners across the globe.

About Course

Advanced Java course is designed to give you a stepping stone to work on advanced and latest technologies like Hadoop and its ecosystem, other enterprises or mobile applications. For every topic the concepts are explained with a mix of theory and production quality code.

Curriculum

Java Basics

Learning Objectives - In this module you will learn about Variables, Operators, Java Wrapper Classes over Primitive Types, Expressions, Statements, Blocks and Control Flow Statements.

Topics - Variables: Primitive Data Types and Arrays, Operators: Arithmetic, Unary, Relational, Conditional, Bitwise and Bit Shift, Java Wrapper Classes over Primitive Types (String, Integer, Float, etc.), Expressions, Statements and Blocks, Control Flow Statements: if, if-else, switch statements, while loops, do-while loops, for loops (including for each loop introduced in JDK 1.5), branching statements.

Anatomy of a Class & Interface, Annotations

Learning Objectives - In this module you will learn about Data Hiding, Abstraction, Inheritance and Encapsulation, Constructors, Class Methods and Access Specifiers, Life Cycle of an Object, Types of Classes, Types of Methods, Interfaces and When to Use Them, Enum Types, Packages, Java Annotation.

Topics - Data Hiding, Abstraction, Inheritance and Encapsulation, Constructors, Class Methods and Access Specifiers, Life Cycle of an Object, Types of Classes: Abstract, Final, Types of Nested & General Classes, Types of Methods: Abstract, Final, Static, Instance Method, Interfaces and When to Use Them, Enum Types, Packages, Java Annotations.

Polymorphism, Event Handling, Internationalization

Learning Objectives - In this module you will learn about Polymorphism in Java, User Defined Event Handling, Handling Internationalization.

Topics - Polymorphism in Java, Designing call-back methods for event handling, Handling Internationalization, Handling Internationalization with Resource Bundles.

Exceptions, Apache Log4j, Regular Expressions

Learning Objectives - In this module you will learn about Exception Handling, Logging in Java, Regular Expressions.

Topics - Exception handling with try-catch-finally constructs, Implementation of custom Exception class, Using Apache Log4j for logging services, Regular expressions using javax.util.regex.

Collections & Generics

Learning Objectives - In this module you will learn about Classic Data Structures, Sequential Collections, Associative Collections, Sort & Search Algorithms, Generics.

Topics - Classic Data Structures, Sequential Collections, Associative Collections, Sort & Search Algorithms, Generic Classes, Generic Methods, Bounded Type Method Parameters, Wildcards, How generics behave?

Working with Files

Learning Objectives - In this module you will learn about File Handling in Java (Text, Binary & XML files), Serialization.

Topics - The structure of the I/O Package, Handling text files, Handling binary files, Object persistence with serialization, Introduction to XML, DOM and SAX models: When to use what, Parsing XML with DOM & SAX.

Concurrency

Learning Objectives - In this module you will learn about Concurrency and the constructs of concurrent programmes, Implementing a Multithreaded Java program, Synchronizing threads, Critical Section and its protection with locks.

Topics - Introduction to Concurrency and the constructs of concurrent programs, Implementing a Multithreaded Java program, Synchronizing threads, Critical Section and its protection with locks.

Working with Databases

Learning Objectives - In this module you will learn how to use JDBC for DDL, DML and TCL and write your own stored procedures.

Topics - How to connect to databases from Java code? CRUD operations, How to run parameterized stored procedures?, Transaction Management, Batch Processing.

Network Programming

Learning Objectives - In this module you will learn basics of networking, Writing own TCP/IP server and client, Writing own UDP server and client, URL handling (Download example).

Topics - How It All Started – BSD Sockets, Networking Basics, Understanding java.net, Network Interfaces, Reliable Communication through TCP Sockets, Unicast through Datagram Sockets, Multicast through Multicast Sockets, URL Processing.

Making Code Robust

Learning Objectives - In this module you will learn how to handle memory leak, through Design Pattern we teach loose coupling and high cohesion in designing.

Topics - Managing Java Programme Memory, Unit Testing with JUNIT4, Basic “Gang of Four” Design Patterns – Abstract Factory, Factory Method, Observer, Strategy, Singleton, Adapter & State, Project Discussion.

Projects

How will I execute the Practicals?

For your practical work, we will help you setup Edureka's Virtual Machine in your System. This will be a local access for you. The required installation guide is present in LMS.