

Core Java Training

Chapter 1: Java Introduction

Introduction to Java, its history, and why it is widely used. Overview of Java Virtual Machine (JVM), JRE, and JDK.

Chapter 2: Setup and First Program

Setting up Java Development Kit (JDK) and Integrated Development Environment (IDE). Writing and running the first Java program.

Chapter 3: Data Types & Variables

Understanding primitive and non-primitive data types, variables, constants, and type conversion.

Chapter 4: Operators & Control Statements

Arithmetic, relational, logical, and bitwise operators. Conditional and looping statements like if-else, for, while, and switch.

Chapter 5: Logical Programming

Solving common logical problems using Java, such as palindrome, factorial, and number patterns.

Chapter 6: Arrays & Control Statements

Defining, initializing, and accessing arrays. Multi-dimensional arrays and control flow statements.

Chapter 7: OOPS (Object-Oriented Programming)

Concepts of classes, objects, inheritance, polymorphism, abstraction, and encapsulation.

Chapter 8: Mini Project On OOPS

Implementing OOPS concepts in a real-world scenario through a mini project.

Chapter 9: Exception Handling

Handling runtime errors using try-catch, throw, throws, and finally blocks.

Chapter 10: File I/O

Reading from and writing to files using Java IO and NIO packages.

Chapter 11: Collections

Introduction to Java Collection Framework, List, Set, Map, and their implementations.

Chapter 12: Multi-Threading

Creating and managing threads, synchronization, and concurrency utilities.

Chapter 13: Generics

Using generics for type safety and reusability in Java applications.

Chapter 14: Annotations

Introduction to Java annotations and their usage in frameworks like Spring and Hibernate.

Chapter 15: Java New Features

Overview of the latest Java features from Java 8 to the latest version.