

Java for Beginners

Java History

- Why Java?
- Flavors of Java
- Java Designing Goal
- Role of Java Programming in industry
- Features of java Language
- JVM- The heart of Java
- Java's Magic Byte code

Language Fundamentals

- Java Environment
 - Installing JDK and Eclipse IDE
 - Java Program Development
 - Java Source File Structure
 - Compilation
 - Executions
- Java Fundamentals
 - Data Types – Integer, Float, Double, String, Boolean
 - Variables, keywords, Literals
 - Comments
 - Assignments & Initialization
 - Conditional Statements
 - If-Else statement
 - Switch Case statements
 - Loops – For & While loops

Eclipse Development Environment

- What is Eclipse
- Using Eclipse
- Creating Hello World program in Eclipse
- Navigating through Eclipse
 - Editors
 - Views
 - Comments
 - Javadoc
 - Debugger
- Eclipse Tips & Tricks

Introduction to OOP Concepts

- Inheritance
- Polymorphism

- Abstraction
- Encapsulation
- Class Fundamentals
 - Class, Object
 - Global variable and member variables
 - Static and final
 - Inner and Anonymous Class
 - Access Control Modifiers
 - Constructors
 - Getter/Setter methods

IO Streams

- Character IO Streams
- Buffered IO Streams
- Byte IO Streams
- File IO Streams – reading writing from files
- Network Streams – Calling Web Services

Exception Handling

- What is Exception
- Difference between Compile & Runtime Exceptions
- Handling Exceptions
- Why should we handle Exception

Multithreading - Threads & Background tasks

- What is Multithreading
- Threading concepts – Lifecycle, priorities, deadlock
- Creating multithreaded programs
- Synchronizing Threads
- Executors

Java Collection Framework

- Arrays
- Lists
- Queues
- Maps
- Sets
- Tree
- Sorting
- Iterators