Java Programming

1. Introductrion

- 1.1 What is Java
- 1.2 Where it is Used
- 1.3 History of Java
- 1.4 Features of Java
- 1.5 Diff. betn JDK,JRE,JVM
- 1.6 Access Modifiers

2. Understanding Java Setup

- 2.1 Installation of JDK
- 2.2 Configuration of JDK with System
- 2.2 How to Set a Path

3. Basic Concept of Java Programming

- 3.1 Reserved Words
- 3.2 Keywords
- 3.3 Literals
- 3.4 Identifiers
- 3.5 Variables

4. Basic Programming

- 4.1 Understanding First Java Program
- 4.2 Scanner Class

5. Data Type

- 5.1 Introduction of Data Types
- 5.2 Differentiate Data Types
- 5.3 Use of Data Types

6. Conditional Statement

- 6.1 if-else statement
- 6.2 else-if ladder statement
- 6.3 Nested if-else statement
- 6.4 Conditional Operator
- 6.5 Switch case statement

7. Loops

- 7.1 while loop
- 7.2 do while loop
- 7.3 for loop
- 7.4 nested for loop

8. Array Class in Java

- 8.1 What is an Array
- 8.2 Types of Array
- 8.3 Use of Array
- 8.4 for each loop

9. String

- 9.1 What is String class
- 9.2 Methods of String class
- 9.3 Why String is immutable
- 9.4 String Buffer and String Builder class

10. OOPs (Object Oriented Programming) Concepts

10.1 Introduction of Oops

- What is Object Oriented Programming?
- Basics of Oops Concept

10.2 Class and Objects

- What is Class?
- What is Objects?
- Ways to initialize objects
- Types of Variables

10.3 Method in Java

- What is Method in Java?
- Types of Method in Java?

10.4 Constructor

- What is Constructor?
- Rules of Constructor
- Types of Constructor
- Constructor Overloading
- Difference between Constructor and Method

10.5 Inheritance

- What is Inheritance?
- Use of Inheritance
- Types of Inheritance
- Why Multiple Inheritance is not Supported in Java

10.6 Polymorphism

- What is Polymorphism?
- Types of Polymorphism
- What is Method Overloading?
- What is Method Overriding?
- Difference between Method Overloading and Method Overriding

10.7 Abstraction

- What is Abstraction?
- Ways to Achieve Abstraction
- What is Abstract Class?
- What is Abstract Method?
- Data Hiding

10.8 Interface

- What is Interface?
- Why Java use Interface?
- Advantages of Interface
- Understanding Relation Between Classes and Interface
- Multiple Inheritance in Java by Interface
- Difference between Abstract Class and Interface

10.8 Packages

- What is Packages in Java?
- Advantages of Java Packages
- Types of Packages
- How to Compile and Run Java Packages
- How to Access Packages from another Package
- Subpackages in Java

10.9 Encapsulation

- What is Encapsulation?
- What is POJO Class in Java?
- Data Binding
- Advantages of Encapsulation

11. Keywords

- 11.1 break keyword
- 11.2 continue keyword
- 11.3 this keyword
- 11.4 super keyword
- 11.5 static keyword
- 11.6 final keyword

12. Wrapper Classes

- 12.1 What is Wrapper Class
- 12.2 Use of Wrapper Class
- 12.3 Types of Wrapper Class
- 12.3 Command Line Arguments using Wrapper Classes

13. Exception Handling

- 13.1 What is Exception?
- 13.2 Difference Between Error and Exception
- 13.3 What is Exception Handling?
- 13.4 Component to Handle Exception
- 13.5 Custom Exception

14. Multi-Threading

- 14.1 What is Thread?
- 14.2 What is Multi Threading?
- 14.3 Use of Multi Threading

- 14.5 Life Cycle of Thread
- 14.5 Ways to Create a Thread
- 14.6 Naming a Thread
- 14.7 Thread Scheduler
- 14.7 Thread Priority
- 14.8 Methods of Thread Class

15. Collection Framework

- 15.1 What is Collection Framework
- 15.2 Collection Interface and Their Types
- 15.3 List Interface
 - ArrayList
 - LinkedList
 - Vector
 - Stack
- 15.4 Queue Interface
 - Priority Queue
- 15.5 Set Interface
 - HashSet
 - LinkedHashSet
- 15.6 Map Interface
 - HashMap
 - LinkedHashMap
 - Hashtable
- 15.7 Iteration and Their Ways
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 - List Iterator

- Enumeration
- For each loop Iterator

15.8 Collections Class

- What is Collections Class?
- Difference between Collection and Collections
- Methods of Collections Class
- Arrays Class

16. File Handling

- 16.1 What is File Handling
- 16.2 File Class
- 16.3 Creating and Accessing File using File Class
- 16.4 What is Stream?
- 16.5 FileInputStream and FileOutputStream Class
- 16.6 Inserting and Retrieving Data using Stream Class
- 16.7 What is Bufferring?
- 16.8 BufferredReader and BufferredWriter Class
- 16.9 Inserting and Retrieving Data using Bufferred Class

17. Executable Jar Files(Java Archive Files)

- 17.1 What is Jar File?
- 17.2 Creating a Jar File
- 17.3 Accessing or Bulding Jar Files