JAVA PROGRAMMING COURSE – 2 MONTHS

MODULE 1: JAVA BASICS

- ✓ Variables and data types
- ✓ Constants (final keyword)
- ✓ Type casting
- ✓ Input and output (System.out.print, System.out.println, Scanner class)
- ✓ Comments and documentation (javadoc)
- ✓ Reserved keywords

MODULE 2: OPERATORS IN JAVA

- ✓ Arithmetic operators
- ✓ Relational operators
- ✓ Logical operators
- ✓ Assignment operators
- ✓ Increment C decrement operators
- ✓ Conditional (ternary) operator
- ✓ Bitwise operators
- ✓ Operator precedence

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MODULE 4: ARRAYS AND STRINGS

- ✓ Single-dimensional arrays
- ✓ Multi-dimensional arrays
- ✓ Array manipulation and traversal
- ✓ String class and common methods
- ✓ StringBuffer and StringBuilder
- ✓ String immutability concept

MODULE 5: METHODS IN JAVA

- ✓ Declaring and calling methods
- ✓ Method parameters and return types
- ✓ Method overloading
- ✓ Variable scope and lifetime
- ✓ Recursion

MODULE 6: OBJECT-ORIENTED PROGRAMMING (OOP) IN JAVA

- ✓ Classes and objects
- ✓ Data members and member functions
- ✓ Constructors and this keyword
- ✓ Access modifiers (public, private, protected)
- ✓ Static members and methods

MODULE 7: ADVANCED OOP CONCEPTS

- ✓ Inheritance (single, multilevel, hierarchical)
- ✓ Method overriding
- ✓ Polymorphism (compile-time C run-time)
- ✓ Abstraction:
- ✓ Abstract classes
- ✓ Interfaces
- ✓ Encapsulation
- ✓ Final keyword in variables, methods, and classes

Module 8: Packages and Access Control

- ✓ Using packages
- ✓ Built-in Java packages (java.util, java.io, etc.)
- ✓ Access control levels

Module 9: Exception Handling

- ✓ Types of exceptions
- ✓ Try-catch blocks
- ✓ Multiple catch blocks