

Wave Techtronics

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Course Content: Core Java

Introduction to Java:

- History and features of Java.
- Setting up Java Development Environment.

Basic Syntax and Data Types:

- Variables and Constants.
- Primitive data types.
- Type casting.

Operators and Expressions:

- Arithmetic, relational, logical operators.
- Bitwise operators.
- Conditional (ternary) operator.

Control Flow:

- Conditional statements: if, else-if, switch-case.
- Looping: for, while, do-while.
- Break and Continue statements.

Arrays and Strings:

- Declaration and initialization.
- Array operations.
- String handling: methods, concatenation, comparison.

Classes and Objects:

- Class declaration and definition.
- Constructors and methods.
- Access modifiers.

Inheritance and Polymorphism:

- Inheritance in Java.
- Method overriding.
- Dynamic method dispatch.

Abstract Classes and Interfaces:

- Abstract classes.
- Interface declaration.
- Implementing interfaces.

Exception Handling:

- try-catch-finally blocks.
- Multiple catch blocks.
- Custom exceptions

File Handling:

- Reading and writing to files.
- File streams: FileInputStream, FileOutputStream.
- Error handling in file operations