

# Core JAVA

Duration: 2 months

Fee: Rs. 4500/-

## Fundamental Concept

- JAVA Installation
  - JDK Vs. JRE
  - Path Setup
- JAVA Program Development
  - Skeleton of Programs
  - Compilation
  - Execution
- Java Features
- Data types & Variables
- Keywords & Operators

## Programming Practices

- Sequential Programs
- Type Casting
- Conditions Programs
- Ternary Operator Programs
- Switch case Programs
- Loops & Nested Loops

## Editor

- Environment Setup
- Running Programs
- Package based Programming

## Object Oriented Programming

- Classes & Object
- Constructor
  - Default Constructor
  - Parameterized Constructor
- Abstraction & Encapsulation
- Inheritance
- Polymorphism
  - Method Overloading

- Method Overriding
- Scope of Variables

## Arrays in JAVA

- Single dimensional array
- Double dimensional array

## Modifiers in JAVA

- Access Specifiers
- Static
- Final
- Abstract class
- Interface

## Exception Handling

- Exception Hierarchy
- Checked & Unchecked Exceptions
- Errors in java
- Exception handling using try, catch & finally

## AWT

- What is Abstract Windowing Toolkit?
- AWT Components
- AWT Containers
  - Panel
  - Frame
- Event handling
- Layout Manager
  - Flow Layout
  - Grid Layout
  - Border Layout
- AWT Menu Classes
- Graphics Control

## Swing

- Hierarchy Classes
- Difference between AWT & Swing
- Design Components
- Developing Containers
- Event Handling

## String Handling

- String concatenation

- String reverse
- Find a String
- Split String
- Various Programming Practices

## File Input / Output

- File Handling
- Read & Write into file
- Append data into file
- Delete a file
- Copy file

## Database Handling (JDBC)

- Database Installation & Environment Setup
- Steps to Create Database Connection
- Read data into database
- Insert data into database
- Update data into database
- Delete data into database

## Multithreading / Concurrency

- Multiprocessing & Multitasking
- What is JAVA thread?
- What is Multithreading & Why required?
- Life Cycle of Thread
- **Creating Java Thread**
  - Thread class
  - Runnable Interface
- Thread Synchronization

## Project

- Design Chess Board
- Many more