

## Core Java Programming

**Course Duration: 60 Hours**

### Module 1: OOP's Concept

- Object
- Class
- Inheritance
- Polymorphism
- Abstraction
- Encapsulation

### Module 3: Classes and Methods

- Creating classes and methods in java
- Method Overloading
- Constructor
- Constructor Overloading
- This keyword
- Static keyword

### Module 5: Packages and Interfaces

- Packages Introduction
- Using Builtin packages of Java
- Creating Custom Packages in Java
- Access Specifiers
  - Public
  - Private
  - Default
  - Protected
- Interfaces
- Multiple Inheritance using Interfaces

### Module 7: Multithread Programming

- Introduction to Thread
- Lifecycle of Thread
- How to create threads in Java
- Thread Class
- Runnable
- Waiting
- Joining the thread
- Synchronization of thread

### Module 9: Collection API's

- Java Collection API
- Types of Collection API
- Array List, Linked list
- Tree Set, Hash Set
- Vectors
- Hash map, Stack, queues.
- Various operations on collections
- Custom class collections

### Module 2: Overview of Java

- History of Java
- Feature of Java
- Operator in Java
- Conditional Construct
- Looping Construct

### Module 4: Inheritance

- Single
- Multilevel
- Hierarchical
- Multiple
- Hybrid
- Overriding the methods
- Abstract classes

### Module 6: Exception Handling

- Checked Exception
- Unchecked Exception
- Error
- Try, Catch
- Throw, throws
- Finally

### Module 8: Input, Output, File Handling

- Using Input Stream Reader
- Using scanner class
- Methods of Scanner Class
  - nextBoolean()
  - nextByte()
  - nextDouble()
  - nextFloat()
  - nextInt()
- Reading and Writing the files

