

# SCHEDULE

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## Day1-6 hrs.

### Module 1

- What is Java
- History and Features of Java
- C++ vs. Java
- Hello Java Program
- Internal How to set the path
- JDK, JRE, and JVM (Java Virtual Machine)
- JVM Memory Management
- Internal Details of JVM
- Unicode System, Operators, Keywords, and Control Statements like if-else, switch, for loop, and while loop

### Module 2

- Data types in Java
- Primitive data types
- Non-primitive data types
- Memory allocation of primitive and non-primitive data types
- Variable declaration and initialization
- Naming convention
- Types of variables such as local variables, instance variables, and static variables
- Scope and memory allocation of variables

## Day2-6 hrs.

### Module 3

- Methods in Java
- Use of method in Java
- Method declaration, the method signature
- Types of methods in Java: predefined method, user-defined methods: instance method, static method
- Calling of method
- Java main method
- Return type in Java

### Module 4

- What is Constructor in Java
- Types of Constructors: Default and parameterized constructors
- Java constructor overloading
- Constructor chaining in Java
- Copy constructor in Java

**Day3-6 hrs.**

Module 5

- What are an Access modifier and a non-access modifier in Java?
- Types of access modifiers like private, default, protected, and public
- Types of non-access modifiers like abstract, final, native, static, synchronized modifier, transient, and volatile.

Module 6

- What is Static Keyword
- Static variable
- Static method
- Static block, instance block
- Static Nested Class in Java
- Difference between static variable and instance variable, static method, an instance method, static block, and instance block

Module 7

- Final keyword
- Final variable
- Final method
- Final class

**Day4-6 hrs.**

Module 8

- What is Inner Class in Java
- Types of Inner Class in Java

Module 9

- Super Keyword
- Calling of superclass instance variable
- Superclass constructor
- Superclass method
- Encapsulation in Java
- How to achieve encapsulation
- Data Hiding
- Tightly encapsulated class
- Getter and setter method in Java
- Naming convention of getter and setter method

**Day 5-6 hrs.**

Module 10



- Inheritance in Java
- Is-A-Relationship
- Aggregation and Composition
- Types of Inheritance
- Polymorphism in Java
- Types of Polymorphism
- Static and Dynamic Binding
- Method overloading
- Method Overriding

#### Module 11

- Abstraction in Java
- Abstract Class
- Abstract method
- Interface in Java
- Nested interface, rules, and example programs

  
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