

# Core Java

## Topics covered in Core JAVA Course

- Java Fundamentals
- Functions
- Object oriented Programming
- Exception Handling
- Thread handling

## Course Syllabus in details

### Introduction To Java

- Java History
- Why Java
- Features of Java
- Environment Setup
- Hello World Application
- Java Program Internal
- JDK, JRE, JVM
- JVM- Java Virtual Machine
- Class, Objects, Data Types
- Variables
- Type Casting
- Operators
- Java Comments

### Object Oriented Programming Concepts

- Abstraction
- Encapsulation
- Polymorphism
- Inheritance

### Java Coding Standards

- Package – Creating package, naming package
- Java Keywords
- Access Specifiers – Public, Private, Protected, Default
- Static Concept – Block, Variable, Method, Class
- Scanner Class
- Control Statement – If, If...else, Nested if...else and Switch Case
- Java Break Statement
- Java Continue Statement
- Flow Statement- for, while, do..while
- Constructor- Default, Parameterized

### Inheritance

- Extends, super and this keyword
- Method Overloading, Method Overriding
- Interface
- Abstract Class

- Abstract Class vs Interface

### **Garbage Collection**

- Serialisation
- Java instanceof
- Instance initializer block
- Volatile Keyword in Java

### **Exception Handling**

- Exception Handling- try, catch, throw, throws, finally

### **String Concept**

- String Basics
- String Methods
- String Buffer
- String Builder

### **Custom Immutable Class**

#### **Java - Arrays**

#### **Collection**

- Framework Collection
- Basics Iterator Interface
- Methods of Collection Interface

#### **List**

- Array List
- Linked List
- Vector

#### **Set**

- Hash Set
- Tree Set

#### **Map**

- Hash Map
- Tree Map
- Hashable

### **Collection Framework Advance Concepts**

#### **Comparable Interface**

#### **Comparator Interface**

#### **Collections class**

#### **Differentiate Comparable and Comparator**

#### **Java Enum**

#### **Date Concept**

#### **File Handling Concept**

- File Handling Basics
- Create Folder
- Create File- .txt, .pdf, .xlsx, .docs, etc
- Write File
- Read File
- Delete File

## Thread

- Concept, Lifecycle
- Extends Thread
- Implement Runnable Interface
- Thread Priorities
- Thread Methods
- Multithreading
- Thread Synchronisation

- Networking Programming
- Python GUI Programming

The Python syllabus followed by Vidya is from Cisco Networking Academy Partnership so there will be added benefits such as

- Course Completion Certificate from Cisco NetAcad.
- If they are opting for Python + PCAP Exam Bundle in a Cisco Network Academy , then there will be 50% off on the cost of PCAP exam