



## CORE JAVA COURSE CONTENT

### 1. FUNDAMENTALS OF JAVA

- ABSTRACTION
- PRINCIPLES & CONCEPTS OF JAVA
- OBJECT & CLASS
- VARIOUS COMPONENTS OF THE JAVA ENVIRONMENT
- JAVA PROGRAMS
- IDENTIFIERS, LITERALS, SEPARATORS AND KEYWORDS
- NAMING CONVENTIONS

### 2. DATA TYPES OF JAVA

- DATA & DATA TYPES
- FUNCTION
- CASTING
- ATTRIBUTES OF A VARIABLE.
- DYNAMIC INITIALIZATION/ DECLARATION OF VARIABLES
- SCOPE AND ITS IMPORTANT
- ESCAPE SEQUENCES
- RESTRICTION ON STRING LITERALS
- ASSIGNING OF CHARACTERS AND INTEGERS
- BOOLEAN VARIABLE AND ITS USAGE
- PRIMITIVE DATA TYPES
- TYPE CASTING AND PROMOTION RULES
- OPERATORS AND EXPRESSION

### 3. CONTROL STATEMENTS

- INTRODUCTION
- SELECTION, ITERATION, JUMP

### 4. CLASSES, METHODS & CONSTRUCTORS

- INTRODUCTION TO CLASSES
- MEMBERS OF A CLASS
- CREATION OF OBJECTS FROM CLASS
- METHODS
- ARGUMENTS & PARAMETERS
- OVERLOADING OF METHODS
- RETURN METHOD
- RECURSION
- INTRODUCTION TO CONSTRUCTORS
- PARAMETERIZED CONSTRUCTORS
- INSTANCE VARIABLE HIDING
- GARBAGE COLLECTION

## 5. ARRAYS

- ARRAY & INDEXES
- 'OUT OF BOUND
- INITIALIZING AN ARRAY
- WHAT IS A SUBSCRIPT?
- TYPES OF ARRAY
- ALIASING
- COPYING AN ARRAY

## 6. STRINGS

- WHAT ARE STRINGS OBJECTS
- STRING MANIPULATION
- METHODS OF STRINGS

## 7. INHERITANCE

- PRINCIPLE OF INHERITANCE.
- SUBCLASSES AND SUPER-CLASSES
- BASE AND THE DERIVED CLASSES
- IMPLEMENTATION OF INHERITANCE
- INVOKING CONSTRUCTORS IN A MULTILEVEL HIERARCHY

## 8. ENCAPSULATION

- JAVA ENCAPSULATION
- ACCESS SPECIFIERS
- STATIC & ABSTRACT CLASS

## 9. JAVA LIBRARY CLASSES

- LIBRARY CLASSES
- JAVA PACKAGES
- JAVA API
- INTERFACE

## 10. EXCEPTION HANDLING

- INTRODUCTION
- CHECKED & UN CHECKED EXCEPTIONS
- MULTIPLE CATCH BLOCKS
- THROWING PRE-DEFINED EXCEPTION CLASS OBJECT EXPLICITLY
- USER DEFINED EXCEPTIONS
- BLOCK USAGE.

## 11. INTERFACE, POLYMORPHISM

## 12. COLLECTION FRAMEWORK