

Java:

A programming language was originally developed by James Gosling

-> released in 1995 as core component of Sun Microsystems

Features of Java:

-> Object-oriented

-> Platform Independent

-> Simple

-> Secure

-> Portable

-> Architecture Neutral

-> Robust

-> Multithreaded

-> Interpreted

-> High Performance

-> Distributed

-> Dynamic

Life cycle of Java Program:

Phase 1: Edit the Source code (.java file).

Phase2: Compile the code (.class file).

Phase 3: Load the Class (class loader).

Phase 4: Execute the byte code.

Java OOP Concepts:

1. Encapsulation:

->Hiding implementation details of a class.

->Code is more maintainable.

->Ex: Java class=Methods + Data.

2. Abstraction:

->Showing only necessary details.

->Using respective access modifiers.

3. Inheritance:

-> Obtaining properties from other class.

-> 4 types

a. Single Inheritance.

b. Hierarchical inheritance.

c. Multilevel inheritance.

d. Multilevel inheritance (NOT supported by Java).

4. Polymorphism:

-> Existence in multiple forms.

-> 2 Types

a. Compile time Polymorphism (Overloading).

b. Run time Polymorphism (Overriding).