

## Java Overview

- Java is a general-purpose class-based Object-Oriented Computer Programming Language
- It's a write once, run anywhere language which means the code doesn't need to recompile to run on another platform (Bytecode)
- Platform = OS + Processor (Windows + Intel = Wintel)

### Key Points

- Introduced in 1995 - Consumer Electronics
- Java is Platform Independent
- Original name : OAK
- James Gosling – Father of Java
- Recent Version – 18
- LTS (Long Term Support) versions – 8, 11, 15 (Standard edition)

### Edition

- Java Card - Smart Card Edition
- Java ME - Micro Edition
- Java SE - Standard Edition (Base edition)
- Java EE - Enterprise Edition (Weblogic)

### Advantages of Java

- Used to develop WebApp, Mobile apps, APIs
- Object Oriented (Not completely due to primitive data types)
- Secured – No pointers in Java, results in no memory leaks. Hence more securable than C++
- Call by value only possible, call by reference is not possible in java.
- Portable – Platform Independent
- Robust (Strong) – Handles the Run-time errors as it checks the code during compile & runtime
- Speed – JIT plays a role here. It improves the performance by converting bytecode to machine code just in time.
- Both Compiled & Interpreted
  - Compiled - > Source code to Bytecode
  - Interpreted -> Bytecode to Machine code.