

# Java for beginners

## History and Features of Java



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# Agenda

- ① History
- ② Java platforms
- ③ Version History
- ④ Features of Java

## History



VINOD  
KHOHLA

Bill Joy

Andy  
Bechtolsheim

Scott  
G.  
McNealy

SUN MICROSYSTEMS  
24 February 1982

SUN → Stanford University Network

Company sold computers, computer components, software and information technology services.

Company is known for the creation of Java, SOLARIS operating system, NFS (Network File System) and SPARC microprocessors.

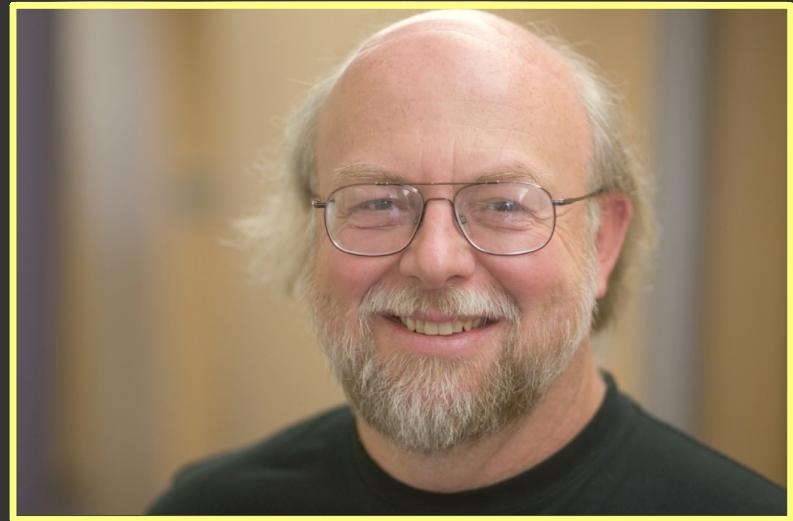
## Problem in 1980s

Multiple incompatible hardware architectures, each supporting multiple incompatible operating systems, with each platform operating with one or more incompatible graphical user interfaces.

In such a scenario it was frustrating to develop applications in C or C++, which were platform dependent programming languages.

- The Stealth project started to solve this problem.
- Soon it was renamed to the Green Project
- The team originally considered using C++, but rejected due to many reasons like lack of garbage collection. Programmer had to manually manage system memory,
  - Lack of security
  - lack of distributed programming
  - lack of threading
  - lack of portability

Bill Joy proposed to SUN that they should produce an object oriented environment based on C++.



Initially, James Gosling attempted to modify and extend C++, but soon abandoned that in favour of creating a new language, he called Oak, after the tree that stood just outside his office

The goal was to develop a small, reliable, portable, distributed, real time operating platform.

The result is a language platform that has proven ideal for developing secure, distributed, network based end user applications in environments ranging from network embedded devices to the World Wide Web and desktop.



Finally, the project was renamed to JAVA from Java Coffee

Java was originally designed for interactive television but it was too advanced for the digital cable television industry at the time.

Java was originated in 1991

In 1994, the team retargeted the platform for the world wide web.

They felt that with the advent of graphical web browsers like MOSAIC, the internet could evolve into the same highly interactive medium that they had envisioned for cable TV.

Although Java 1.0a became available for download in 1994, the first public release of Java, Java 1.0a2 with the HotJava browser, came on 23 May 1995

### On Record

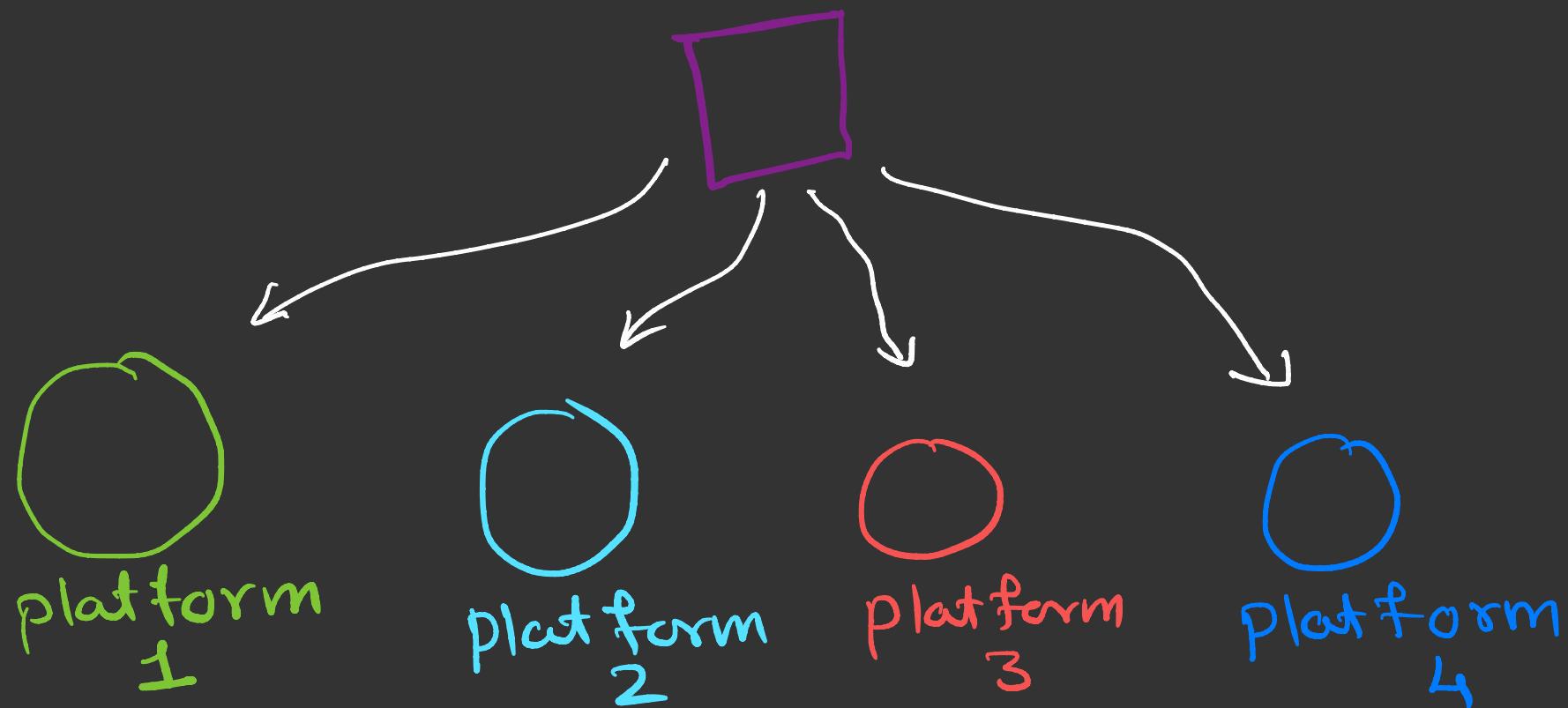
First version of Java released in Jan 1996

Java 1.0 - Jan 1996

# WORA

Principle of Java:

Write Once Run Anywhere



- Sun purchased MySQL AB in 2008 for US \$1 billion.
- On 27 January 2010, Oracle acquired SUN for US \$7.4 billion

# Java Platforms

1. Java Platform, standard Edition  
(Java SE)
2. Java Platform, Enterprise Edition  
(Java EE)
3. Java Platform, Micro Edition (Java ME)
4. Java Cards for smart cards

## Version History of Java

- Java Alpha & Beta 1995
- Java 1.0 Jan - 1996
- Java 1.1 Feb - 1997
- Java 1.2 [J2SE] Dec - 1998
- Java 1.3 [J2SE] May - 2000
- Java 1.4 [J2SE] Feb - 2002
- Java 5.0 [J2SE] Sep - 2004
- Java SE 6 Dec - 2006
- Java SE 7 Jul - 2011

All discontinued

- Java SE 8 LTS Mar-2014 lambda expression
- Java SE 9 SEP-2017
- Java SE 10 Mar - 2018
- Java SE 11 LTS Sep - 2018
- Java SE 12 Mar - 2019
- Java SE 13 Sep - 2019
- Java SE 14 Mar - 2020
- Java SE 15 SEP - 2020
- Java SE 16 Mar - 2021
- Java SE 17 LTS SEP - 2021

- Java SE 18 Mar - 2022
- Java SE 19 Sep - 2022
- Java SE 20 Mar 2023
- Java SE 21 LTS Sep 2023
- Java SE 22 Mar 2024

## Features of Java

- Simple
- Object Oriented
- Distributed
- Interpreted
- Robust
- Secure
- Portable
- Multi threaded
- Automatic memory management

H.W.

① C++ classes and Objects

② static members

↗ v. imp

③ public, private

④ void

⑤ function arguments