



Introduction to Java Programming Language

By

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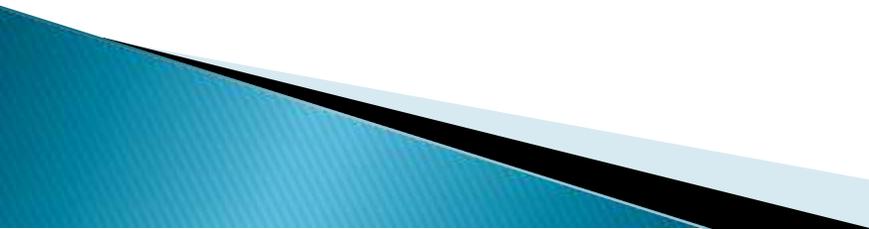
Faculty Name :K.Geetha

Topic : Introduction to Java & New
Technology

Subject :Programming in Java

Semester :5th

Course :BSc(Computer Science)





Java Basics

"On the other hand, Java has already been a big **win** in academic circles, where it has taken the place of **Pascal** as the preferred tool for teaching the basics of good programming..."

– *The New Hacker's Dictionary* version 4.3.1

www.tuxedo.org/~esr/jargon/html/The-Jargon-Lexicon-framed.html



A brief history of Java

"Java, whose original name was Oak, was developed as a part of the Green project at Sun. It was started in December '90 by Patrick Naughton, Mike Sheridan and James Gosling and was chartered to spend time trying to figure out what would be the "next wave" of computing and how we might catch it. They came to the conclusion that at least one of the waves was going to be the convergence of digitally controlled consumer devices and computers. "

Applets and Applications

"The team returned to work up a Java technology-based clone of Mosaic they named "WebRunner" (after the movie *Blade Runner*), later to become officially known as the HotJava™ browser. It was 1994. WebRunner was just a demo, but an impressive one: It brought to life, for the first time, animated, moving objects and dynamic executable content inside a Web browser. That had never been done. [At the TED conference.]"

Java - An Introduction

The new programming language from Sun
Microsystems

Java - Allows anyone to publish a web page with Java
code in it

Java - CPU Independent language
Created for consumer electronics

Java - James , Arthur Van , and others

Java - The name that survived a patent search

Oak - The predecessor of Java

Java is “C++ -- ++ “

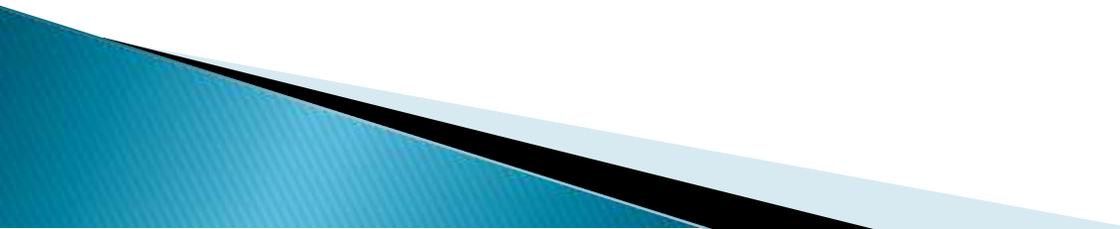
Why **Java** is Important

- **Two reasons** :
 - Trouble with **C/C++** language is that they are not portable and are not platform independent languages.
 - Emergence of World Wide Web, which demanded portable programs
- **Portability** and **security** necessitated the invention of Java

History

- **James Gosling** - Sun Microsystems
- **Co founder** – Vinod Khosla
- Oak - Java, May 20, 1995, Sun World
- JDK Evolutions
 - JDK 1.0 (January 23, 1996)
 - JDK 1.1 (February 19, 1997)
 - J2SE 1.2 (December 8, 1998)
 - J2SE 1.3 (May 8, 2000)
 - J2SE 1.4 (February 6, 2002)
 - J2SE 5.0 (September 30, 2004)
 - Java SE 6 (December 11, 2006)
 - Java SE 7 (July 28, 2011)

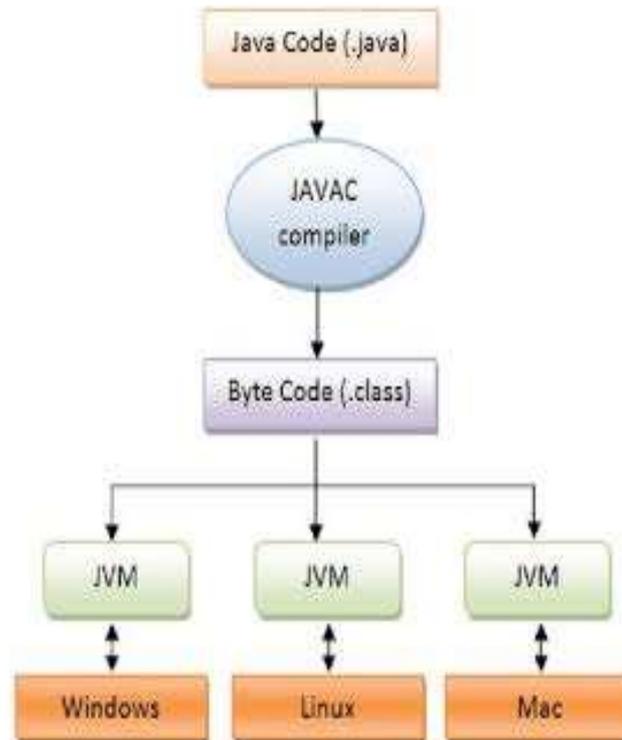
What is java?

- A general-purpose **object-oriented language**.
 - **Write Once Run Anywhere** (WORA).
 - Designed for easy **Web/Internet** applications.
 - **Widespread** acceptance.
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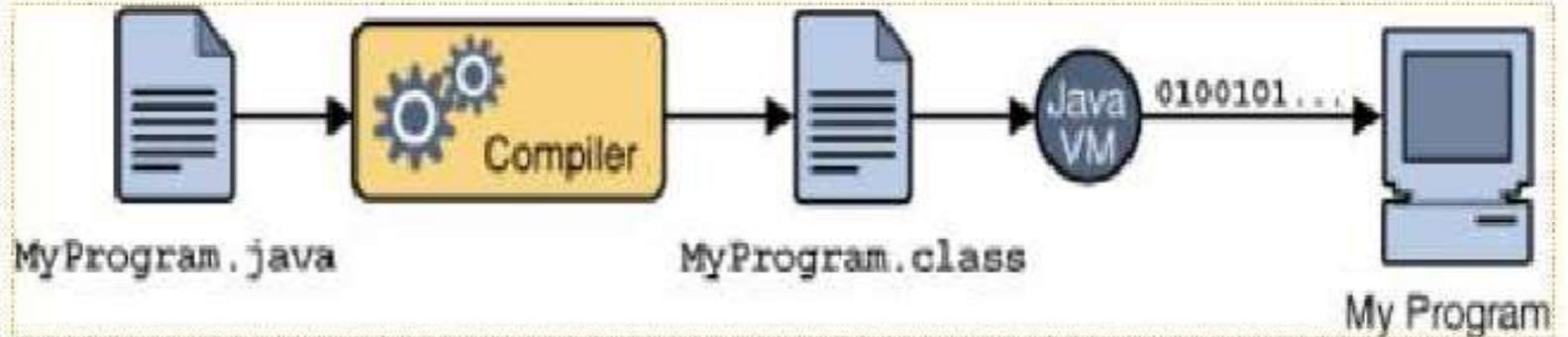
Java Environment

- Java includes many development tools, classes and methods
 - Development tools are part of Java Development Kit (JDK) and
 - The classes and methods are part of **Java Standard Library** (JSL), also known as **Application Programming Interface** (API).
- JDK constitutes of tools like **java compiler**, **java interpreter** and many.
- **API** includes hundreds of **classes** and **methods** grouped into several **packages** according to their functionality.

Architecture Neutral and Portable



WORA(Write Once Run Anywhere)

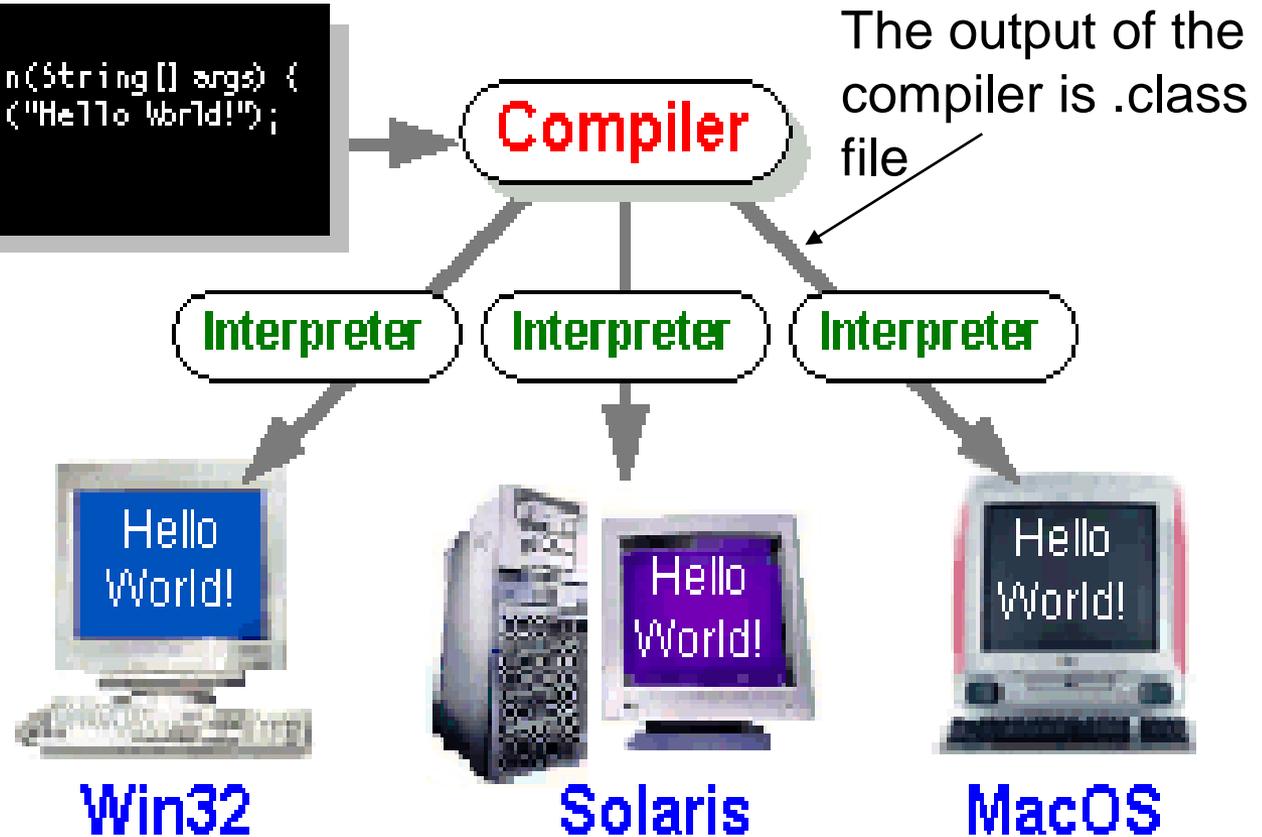


A Picture is Worth...

Java Program

```
class HelloWorldApp {  
    public static void main(String[] args) {  
        System.out.println("Hello World!");  
    }  
}
```

HelloWorldApp.java



The Interpreter's are sometimes referred to as the Java Virtual Machines

Total Platform Independence

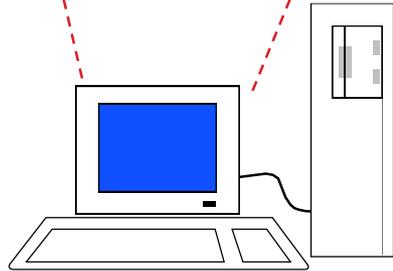
JAVA COMPILER
(translator)

JAVA BYTE CODE
(same for all platforms)

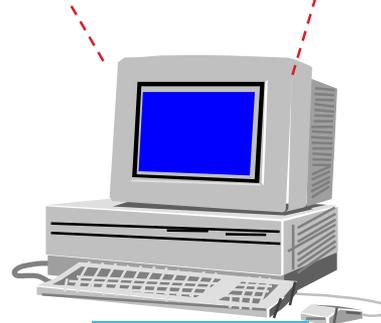
JAVA INTERPRETER
(one for each different system)



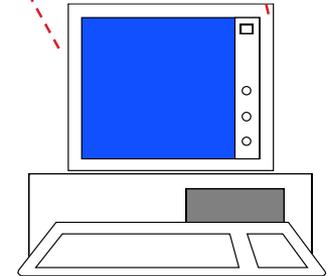
Windows 95



Macintosh

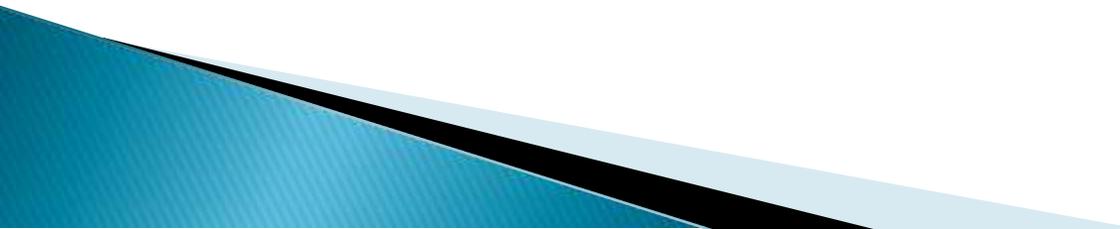


Solaris

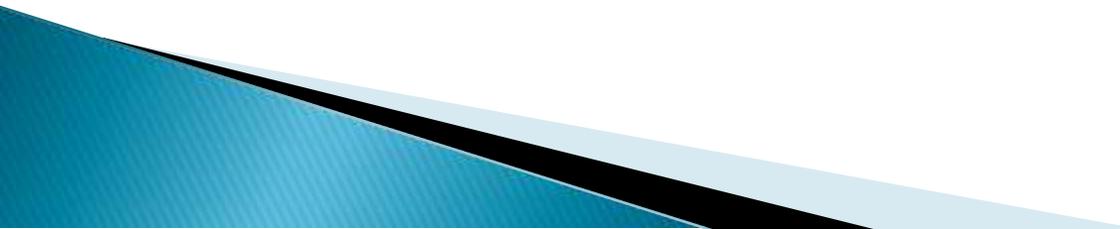


Windows NT

Where it is Implemented ?

- ▶ Desktop Applications such as media player, antivirus etc.
 - ▶ Web Applications.
 - ▶ Enterprise Applications such as banking applications.
 - ▶ Mobile, embedded System, Smart Card, Robotics, Games etc.
- 

Types of java application

- ▶ Standalone Applications
 - ▶ Web Applications
 - ▶ Enterprise Applications
 - ▶ Mobile Applications
- 

New technology



What is Javafx ?

- ▶ JavaFX is designed to provide Java developers with a new lightweight, high performance graphics platform. The intension is for new applications to use JavaFX rather than Swing to build the application's graphical user interface(GUI)

Struts

- ▶ **What is Struts ?**
- ▶ An open source Web Application framework based on J2EE & Java which implements the MVC design pattern is called struts.
- ▶ **Struts Framework Components**
- ▶ Controller Components: Direct the Action
- ▶ Model Components: Access Data & System
- ▶ View Components: What the user see

THANK YOU

