

## Java Features/Buzz words:

The Java programming language is a high-level language that can be characterized by all of the following buzzwords:

1. Simple
2. Object oriented
3. Distributed
4. Interpreted
5. Robust
6. Secure
7. Architecture neutral
8. Portable
9. High performance
10. Multithreaded
11. Scalability

### \*Simple:

Java was designed to be easy for professional programmer to learn and use effectively. Its simple and easy to learn if you already know the basic concepts of Object Oriented Programming.

C++ programmer can move to JAVA with very little effort to learn.

In Java, there is small number of clearly defined ways to accomplish a given task002E

### \*Object Oriented:

Java is true object oriented language.

Almost Everything is an Object paradigm. All program code and data reside within objects and classes.

The object model in Java is simple and easy to extend.

Java comes with an extensive set of classes, arranged in packages that can be used in our programs through inheritance.

### \*Distributed:

Java is designed for distributed environment of the Internet. Its used for creating applications on networks.

Java applications can access remote objects on Internet as easily as they can do in local system.

Java enables multiple programmers at multiple remote locations to collaborate and work

together on a single project.

**\*Compiled and Interpreted:**

Usually a computer language is either compiled or Interpreted. Java combines both this approach and makes it a two-stage system.

Compiled : Java enables creation of a cross platform programs by compiling into an intermediate representation called Java Bytecode.

Interpreted : Bytecode is then interpreted, which generates machine code that can be directly executed by the machine that provides a Java Virtual machine.

**\*Robust:**

It provides many features that make the program execute reliably in variety of environments.

Java is a strictly typed language. It checks code both at compile time and runtime.

Java takes care of all memory management problems with garbage-collection.

Java, with the help of exception handling captures all types of serious errors and eliminates any risk of crashing the system.

**\*Secure:**

Java provides a firewall between a networked application and your computer.

When a Java Compatible Web browser is used, downloading can be done safely without fear of viral infection or malicious intent.

Java achieves this protection by confining a Java program to the java execution environment and not allowing it to access other parts of the computer.

**\*Architecture Neutral:**

Java language and Java Virtual Machine helped in achieving the goal of write once; run anywhere, any time, forever.

Changes and upgrades in operating systems, processors and system resources will not force any changes in Java Programs.

**\*Portable:**

Java Provides a way to download programs dynamically to all the various types of platforms connected to the Internet.

It helps in generating Portable executable code.

**\*High Performance:**

Java performance is high because of the use of bytecode.

The bytecode was used, so that it was easily translated into native machine code.

\*Multithreaded:

Multithreaded Programs handled multiple tasks simultaneously, which was helpful in creating interactive, networked programs.

Java run-time system comes with tools that support multiprocess synchronization used to construct smoothly interactive systems.