

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. Dynamic

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 task.

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.

Dynamic

- >Java is capable of linking in new class libraries, methods, and objects.
- >It can also link native methods (the functions written in other languages such as C and C++).