Java Features/Buzz words

Buzz Words Of Java

The features of JAVA are:
1)Simple
2)Object-Oriented
3)Portable
4)Platform independent
5)Secured
6)Robust
7)Architecture neutral
8)Dynamic
9)Interpreted
10)High Performance
11)Multithreaded
12)Distributed

Simple:As the syntax is based on C++ (so easier for programmers to learn it after C++) Java is considered to be simple. Also removed
many confusing and/or rarely-used features e.g., explicit pointers, operator overloading etc. There is Automatic Garbage Collection
in Java to remove unreferenced objects.

Object-Oriented:Object-oriented means we organize our software as a combination of different types of objects that incorporates
both data and behaviour. Object-oriented programming(OOPs) is a methodology that simplify software development and maintenance by
providing some rules. Basic concepts of OOPs are:
1)Object
2)Class
3)Inheritance
4)Polymorphism
5)Abstraction and Encapsulation
6)Binding
7)Message Passing

Platform Independent:A platform is the hardware or software environment in which a program runs.There are two types of platforms
software-based and hardware-based. Java provides software-based platform.The Java platform

differs from most other platforms in the
sense that it is a software-based platform that runs on the top of other hardware-based platforms. It has two components:
1)Runtime Environment
2)API(Application Programming Interface)
Java code can be run on multiple platforms e.g. Windows, Linux, Sun Solaris, Mac/OS etc. Java code is compiled by the compiler and
converted into bytecode. This bytecode is a platform-independent code because it can be run on multiple platforms i.e. Write Once
and Run Anywhere(WORA).

Architectural neutral:There is no implementation dependent features e.g. size of primitive types is fixed.In C programming, int data
type occupies 2 bytes of memory for 32-bit architecture and 4 bytes of memory for 64-bit architecture. But in java, it occupies 4
bytes of memory for both 32 and 64 bit architectures.

Portable: If any language supports platform independent and architectural neutral feature known as portable. The languages like C,
CPP, Pascal are treated as non-portable language. It is a portable language.

Secured:It is a more secure language compared to other language; In this language, all code is covered in byte code after compilation
which is not readable by human. Java has no explicit pointer and all Java programs run inside virtual machine sandbox.

Robust:Robust simply means strong. Java uses strong memory management. There are lack of pointers that avoids security problem. There
is automatic garbage collection in java. There is exception handling and type checking mechanism in java. All these points makes java
robust.

Dynamic:It supports Dynamic memory allocation due to this memory wastage is reduce and improve performance of the application. The
process of allocating the memory space to the input of the program at a run-time is known as dynamic memory allocation. To
programming to allocate memory space by dynamically we use an operator called 'new'. 'new' operator is known as dynamic memory
allocation operator.

Interpreted:It is one of the highly interpreted programming languages.

High Performance:It have high performance because of following reasons:
--This language uses Bytecode which is faster than ordinary pointer code so Performance of this language is high.
--Garbage collector, collect the unused memory space and improve the performance of the application.
--It has no pointers so that using this language we can develop an application very easily.
--It support multithreading, because of this time consuming process can be reduced to executing the program.

Multithreaded:A thread is like a separate program, executing concurrently. We can write Java programs that deal with many tasks at
once by defining multiple threads. The main advantage of multi-threading is that it doesn't occupy memory for each thread. It
shares a common memory area. Threads are important for multi-media, Web applications etc.

Distributed:Using this language we can create distributed applications. RMI and EJB are used for creating distributed applications.
In distributed application multiple client system depends on multiple server systems so that even problem occurred in one server
will never be reflected on any client system.