Features of Java

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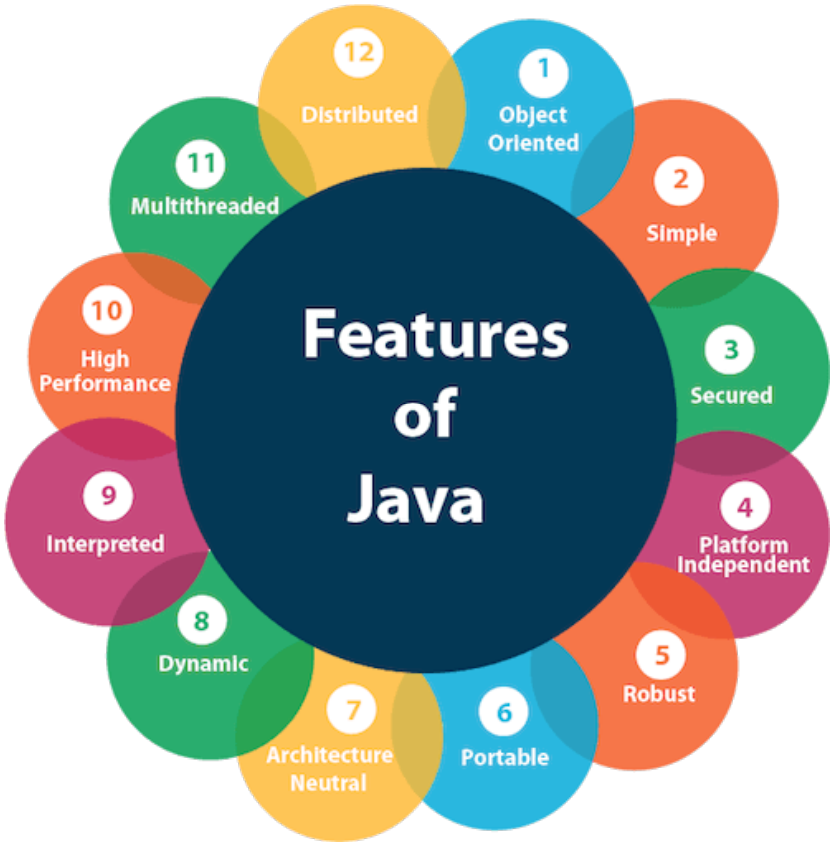
- Simple
- Object-Oriented
- Portable
- Platform independent
- Secured
- Robust
- Architecture neutral
- Interpreted
- High Performance
- Multithreaded
- Distributed
- Dynamic



Features of Java

- **Simple**
- Java is very easy to learn, and its syntax is simple, clean and easy to understand. According to Sun Microsystem, Java language is a simple programming language because:
  - Java syntax is based on C++ (so easier for programmers to learn it after C++).
  - Java has removed many complicated and rarely-used features, for example, explicit pointers, operator overloading, etc.
  - There is no need to remove unreferenced objects because there is an Automatic Garbage Collection in Java.

Features of Java

- **Object-oriented**
- Java is an object-oriented programming language. Everything in Java is an object. Object-oriented means we organize our software as a combination of different types of objects that incorporate both data and behavior.
- **Platform Independent**
- Java code can be executed on multiple platforms, for example, 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).

Features of Java

- **Secured**
- Java is best known for its security. Java is secured because:
  - **No explicit pointer**
  - **Java Programs run inside a virtual machine sandbox**
- **Robust**
- The English mining of Robust is strong. Java is robust because:
  - It uses strong memory management.
  - There is a lack of pointers that avoids security problems.
  - Java provides automatic garbage collection which runs on the Java Virtual Machine to get rid of objects which are not being used by a Java application anymore.
  - There are exception handling and the type checking mechanism in Java. All these points make Java robust.

Features of Java

- **Architecture-neutral**
- Java is architecture neutral because there are no implementation dependent features, for example, the size of primitive types is fixed.
- **Portable**
- Java is portable because it facilitates you to carry the Java bytecode to any platform. It doesn't require any implementation.
- **High-performance**
- Java is faster than other traditional interpreted programming languages because Java bytecode is "close" to native code.

Features of Java

- **Distributed**
- Java is distributed because it facilitates users to create distributed applications in Java. RMI and EJB are used for creating distributed applications. This feature of Java makes us able to access files by calling the methods from any machine on the internet.
- **Multi-threaded**
- 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.
- **Dynamic**
- Java is a dynamic language. It supports the dynamic loading of classes. It means classes are loaded on demand. It also supports functions from its native languages, i.e., C and C++.