**JAVA FEATURES**

To describe Java Programming Language nature, JAVA programming has provided a set of features.

1. Simple
2. Object Oriented
3. Platform Independent
4. Architectural Neutral
5. Portable
6. Robust
7. Dynamic
8. Secure
9. Multi Threaded
10. Distributed
11. Interpretive
12. High performance
13. **Simple:**

Java is a simple programming language, because

* 1. Java applications are able to take less memory and less execution time.
  2. Java has removed all the confusion oriented features like – pointers, multiple inheritance, operator over loading,……..
  3. Java is using all the simplified syntaxes from C and C++.

1. **Object Oriented:**

Java is an Object Oriented Programming Language, because, Java allows to represent data in the form of Objects only as per Object Oriented Features.

1. **Platform Independent:**

Java is platform Independent Programming Language, because, JAVA allows to perform compilation on one Operator System and execution in another Operating System.

1. **Architectural Neutral :**

Java is an architectural neutral language, because, java allows its applications to perform compilation on one hardware system and to perform execution on another system.

1. **Portable:**

Java is a portable programming language, because java is able to allow its applications under all the Operating Systems and under all the hardware systems.

Java is able to provide fixed memory allocations for the primitive data types irrespective of the Operating System and the processor which we used.

1. **Robust:**

Java is a robust programming language, because

1. Java is having very good memory management system in the form of Heap Memory Management System, it is dynamic memory management system, it is able to allocate and de allocate memory for the objects at runtime as per the application requirements.
2. Java has provided pre defined library to represent and handle all the exceptions which are generated frequently in Java Applications.
3. **Dynamic:**

Java is a dynamic programming language, because, JAVA allows memory allocation for primitive data types at runtime, not at compilation time.

1. **Secure:**

Java is a secure programming language, because, JAVA is very good at three levels of security.

1. **Implicit security:** Security Manager inside JVM
2. **Web security:** JAAS[**J**ava **A**uthentication and **A**uthorization **S**ervice]
3. **Network security:** Java has provided predefined implementations for all network security algorithms which we are using frequently in java applications.

1. **Multi Threaded:**

Java is following Multi Thread Model, Java is able to provide very good environment to create and execute more than one thread at a time.

1. **Distributed**:

Java is a distributed programming language, because, JAVA has provided a separate module to prepare distributed applications that is “J2EE/JAVA EE”.

1. **Interpretive** :

Java is both compilative and Interpretive Programming Language, because,

1. Java is compilative programming language, because, to translate program from high level representation to low level representation and to check developer’s mistakes in java applications before execution we need compilation.
2. To execute java applications, we need an interpreter inside JVM, so, JAVA is an interpretive programming language.
3. **High** **performance:**

Java is high performance programming language, because,

1. Its rich set of features like Portable, Robust, Dynamic, Distributed,…..
2. Due to its internal components like JIT Compiler