Features of JAVA

**Definition:**

**“Java is a high level object oriented programing language.”**

**History of JAVA**

* Java programing language was written by **James Gosling** at Sun Microsystems. Initially it was named **oak Programing language.**
* **Sun Microsystems** released the first public implementation as **JAVA 1.0 in 1995.**
* Now official implementer of java is **ORACLE CORPORATION.**

**Language classified into three types**

**High Level Language**

High level language can understandable by human very easily.

**Low Level Language**

Low level language is binary or close to binary which understood by machine.

**Assembly Language**

Assembly language converts to binary language or its close to binary.

**1.2 Features of Java:**

1. **Compiled and Interpreted**

‘**Compiler’** is a program that transforms source code written in programing language into binary format or executable form.

C, C++, JAVA

‘**Interpreter**’ executes the code line by line (one line at a time)

Purle, VBScript, JavaScript



The .class file is in byte code format which is only understandable by JVM. JVM converts that byte code into binary code which is understandable by processor.

1. **Platform Independent**

Compile .java file in one machine and run .class file on any machine which has JVM i.e. Write once, Run anywhere (WORA).

1. **Object oriented**

Java supports oop’s concepts

Class Definition

Object Creation

Abstraction

Polymorphism

Inheritance

Encapsulation

1. **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.

1. **Simple and easy to understand**
2. **Robust and secured**

**‘Robust’** simply means strong. Java uses strong memory management. There is automatic garbage collection in java. There is exception handling in java.

1. **Distributed**

We can create distributed application in java like Web Application, Desktop Application, ERP, Mobile Application, etc.