**Introduction To Java**

Java is a **general-purpose programming language** that **is class-based, object-oriented,** and designed to have as few implementation **dependencies** as possible. It is intended to let application developers write once, run anywhere (WORA), meaning that compiled Java code can run on all platforms that support Java without the need for recompilation.

JAVA was developed by Sun Microsystems Inc and first released in 1991, later acquired by Oracle Corporation. It is a simple programming language. It is popular in creating modular programs and reusable code. Over **3 billion** **devices** run Java according to Oracle.

* **Java Code(.java)** – this is the java code you have written, and its saved in the .java file(s)
* **Javac compiler** – it compiles the java source code files (.java file) into bytecode so that it can be executed by JVM. The bytecode is saved in a class file by compiler.
* **Bytecode** - this is what is produced by the javac complier after compiling java code.

**Java Virtual Machine (JVM)**

Generally referred as **JVM**, it’s the primary function is to **execute** the **bytecode** produced by compiler.

Each operating system has different **JVM**, however the output they produce after execution of bytecode is same across all operating systems – hence Java is referred regarded as platform independent.

Program execution phases follows this general sequence **write the program**, then **compile the program** and **run the program.**

**Java Development Kit (JDK)**

This is a complete java development kit that includes JRE (Java Runtime Environment), compilers and various tools like JavaDoc, Java debugger etc.

You would need JDK installed on your computer in order create, compile and run Java program(s)

**Java Runtime Environment (JRE)**

JRE allows you to run java programs, it includes JVM, browser plugins and applets support. When you only need to run a java program on your computer, you would only need JRE.

public class HelloWorld {-: Every java application must have at least one class definition that consists of class keyword followed by classname. In this case classname is HelloWorld

public static void main (String[]args) {  this line is the main method. lets break the second line of code in our program to 

public : This makes the main method public that means that we can call the method from outside the class.

static : We do not need to create object for static methods to run. They can run itself.

void : It does not return anything.

main: It is the method name. This is the entry point method from which the JVM can run your program.

String [] args: Used for command line arguments that are passed as strings.

System.out println("Hello World"); -: This method prints the contents inside the double quotes into the console and inserts a newline after