

## **Java Programming**

Archer Infotech , PUNE



## **Java Programming**



What is Java?

**Features of Java** 

JDK, JRE, JVM

**First Java Program** 

#### What is Java?

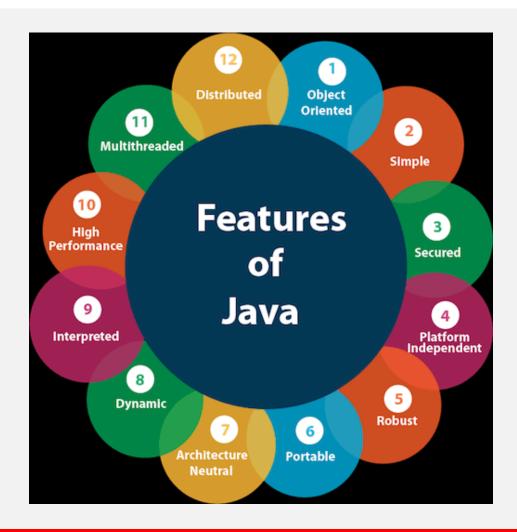


- Java is a high level, robust, object-oriented and secure programming language.
- JAVA was developed by Sun Microsystems Inc in 1991, later acquired by Oracle Corporation. It was developed by James Gosling and Patrick Naughton



#### **Features of Java**

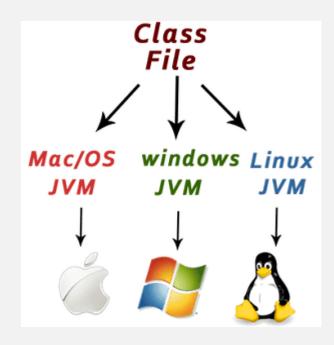






## **Java is Platform Independent**



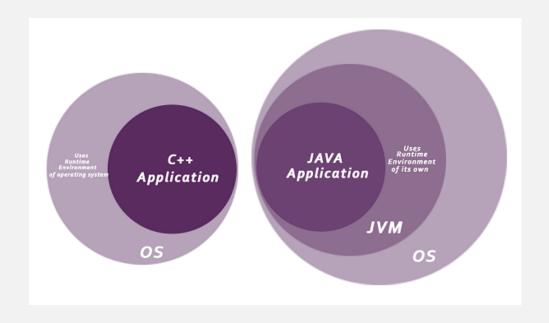




#### **Java is Secured**



No explicit pointer
Java Programs run inside a virtual machine sandbox





#### Java is Robust



- 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.



## **First Java Program**

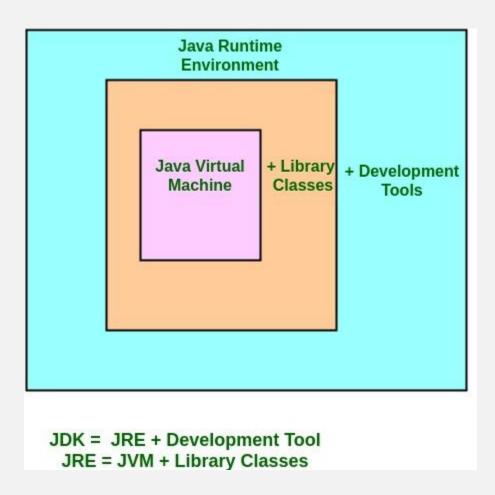


```
class Simple{
   public static void main(String args[]){
     System.out.println("Hello Java");
   }
}
```



#### JDK vs. JVM vs. JRE







#### JDK vs. JVM vs. JRE



JDK – Java Development Kit (in short JDK) is Kit which provides the environment to develop and execute(run) the Java program. JDK is a kit(or package) which includes two things

Development Tools(to provide an environment to develop your java programs) JRE (to execute your java program).

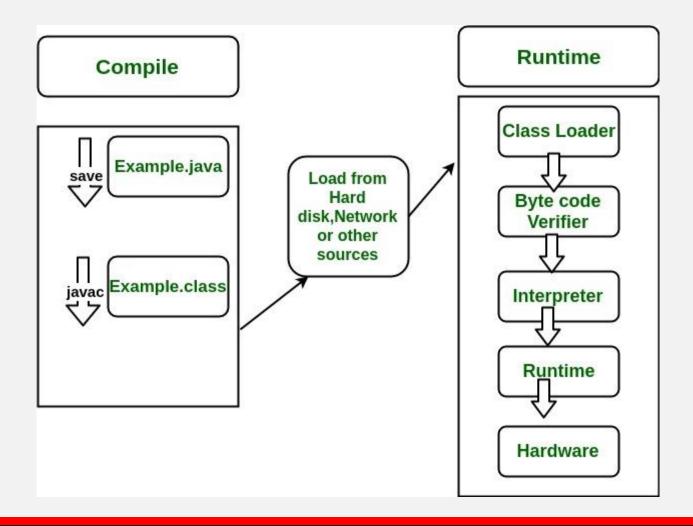
JRE – Java Runtime Environment (to say JRE) is an installation package which provides environment to only run(not develop) the java program(or application)onto your machine. JRE is only used by them who only wants to run the Java Programs i.e. end users of your system.

JVM – Java Virtual machine(JVM) is a very important part of both JDK and JRE because it is contained or inbuilt in both. Whatever Java program you run using JRE or JDK goes into JVM and JVM is responsible for executing the java program line by line hence it is also known as interpreter.



## **Compilation Process**

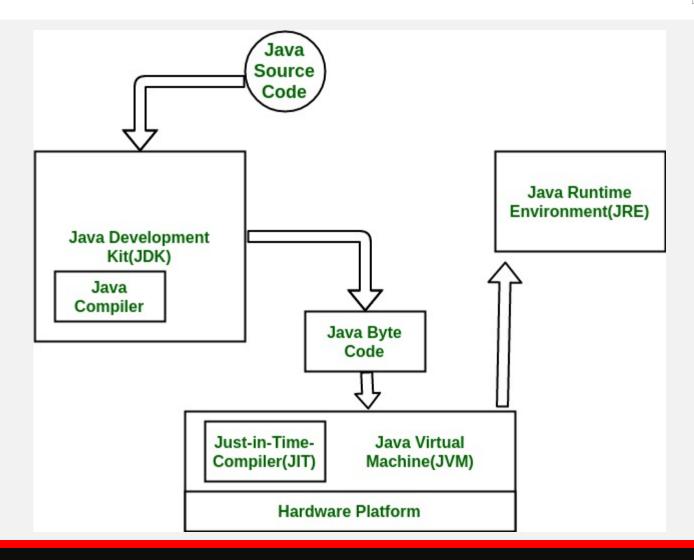






## **Compilation Process**







## **Data Types in Java**



Data Type	Default Value	Default size
boolean	false	1 bit
char	'\u0000'	2 byte
byte	0	1 byte
short	0	2 byte
int	0	4 byte
long	OL	8 byte
float	0.0f	4 byte
double	0.0d	8 byte





# **THANK YOU!!!**

