Assignment :- 2

Question → What is difference between JDK, JRE and JVM

JDK	JRE	JVM
• It stand for Java Development kit.	• It stands for Java Runtime Environment	• JVM stands for Java Virtual machine
• It is the foundational component that enables Java Application and Java Applet development	• It use heap space for dynamic memory allocation for Java object.	It is Responsible for converting byte code to machine code and is necessary in both JDK and JRE.
• JDK contains all the tool required to compile debug and Run a program developed using the Java platform	• JRE is the composed of variety of other supporting software tools and features to get the most out of Java application	It is also known as platform dependent and JVM this Interpret is also pres

What is JIT compiler ?

Answer → JIT is the Integral part of JVM

It is strong along running computer intensive program it provide the best environment performance . It optimize the performance of the Java application

Advantage →

(1) It requires less memory usage
(2) The code optimization is done on Run time .
(3) It uses different level of optimization
(4) It reduces the page faults

Disadvantage

(1) It increases the complexity of program
(2) It uses lots of catche memory

What is class loader ?

Answer → • It belongs to Java.lang package

• It is used to load the class at the Run time

• Java class loader is based on 3 principle

Delegation →

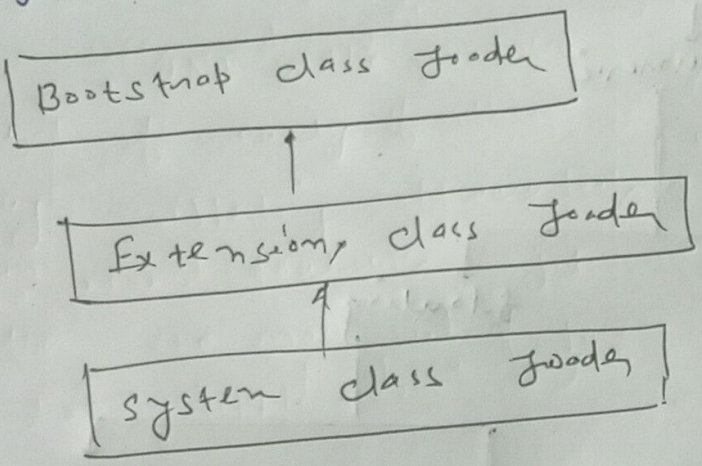
It forward the request for class loading to parent class loader

Visibility →

It allows child class loader to see all the class loaded by parent class loader but the parent class loader can't see classes loaded by child class.

Uniqueness →

It allows to load a class once it is Achieved by delegation principle it ensure that already loaded by the parent.



Question What was the original name of Java? Why it was renamed?

Answer → The original name of Java was "Oak" which was developed by a small team of engineers working for Sun "microsystem".

features of Java

(1) Simple :- Java is very easy to learn and its syntax is simple, clean and easy to understand. According to Sun microsystem Java is simple because it have based on C++ (Also for C++ then you can easily learn Java)

(II) Java has removed many complicated and Rearly used features for example Java have no features of pointer and operator overloading.

(2) object in object oriented →

Every thing in Java is an object. object-oriented mean we organize our software as a combination of different type of object and both data and behaviour.

Object oriented is a methodology that simplify software development and maintenance by providing some rules.

(3)

Platform Independent →

It means if we convert source code to bytecode then we can use bytecode at any when so it is called as platform Independent.

(4)

Robust →

Java is Robust means strong language.

Java is Robust Because

→ It uses strong memory management.
→ there is a lack of pointer that avoids security problem.
→ Java has automated garbage collector which runs on the Java virtual machine to get rid of object when object is exited and there are no use of this so garbage collector automatically Remove them.

(5)

Secure →

Java program are secure because In this we user access modifia which we data member or member function get secured.

and Java program are most secure because it have no ~~Java~~ free language

~~virus~~
virus

so it is called secure language.

(6) Portable →

Java can used anywhere and anytime after compile code. It means when source code convert into byte code then we can easily use any other so it is called portable.

(7) Compiled and Interpreted →

It means Java is passed two stage in the compilation and Interpreted. In the first source code to byte code then by Interpetator we ~~use~~ convert byte code to human understanble code.

(8) ~~distributed~~ distributed → Java is distributed because we can run any Java program in browser and due to browser different-2 task you perform after that we connet with server and get output. this feature is called as distributed.

(9) Multithreading → multithreading means there are different-2 thread which Run continuosly.

Dynamic →

Java is a dynamic language it support the dynamic loading of class it means class are loaded on demand.

(12) High performance →

Java is faster than other traditional interpreted programing language because Java bytecode is close to native code, it is still a little bit slower than compiled language (C++). Java is slower than other language because of other language is only compiled then executed.