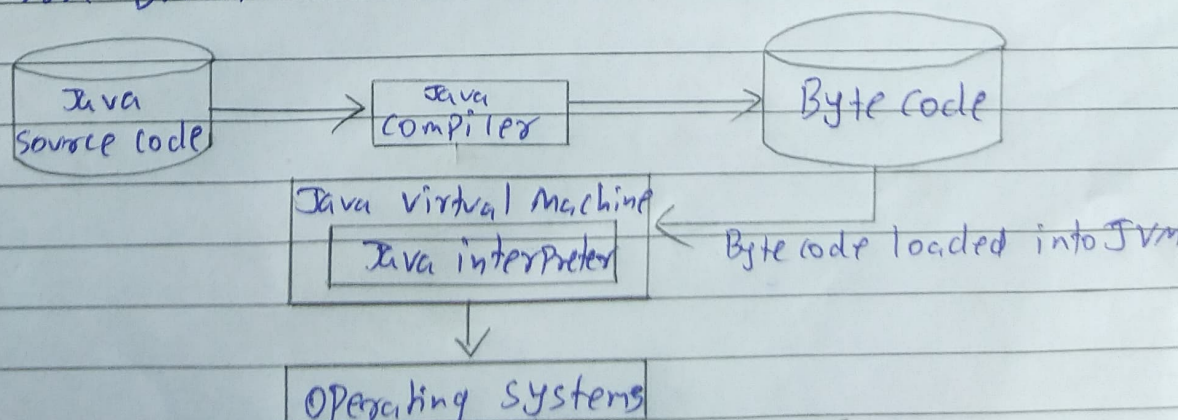


Q1 Explain Bytecode.

Ans The key that allows Java to solve both the security and portability problems just described is that the output of a Java compiler is not executable code. Rather, it is bytecode.

→ Bytecode is highly optimized set of instructions designed to be executed by the Java runtime system which is called the Java virtual Machine (JVM). In essence, the original JVM was designed as an interpreter for bytecode.

→ Translating a Java program into bytecode makes it much easier to run a program in a wide variety of environments because only the JVM needs to be implemented for each platform. Once the runtime package exists for a given system any Java program can run on it.



Q2 Discuss features of Java.

Ans Following are the features of Java:

* simple

Java has a concise, cohesive set of features that makes it easy to learn and use.

* secure

Java provides a secure means of creating Internet applications

* Portable

Java programs can execute in any environment for which there is a Java runtime system.

* Object-oriented

Java embodies the modern, object oriented programming philosophy.

* Robust

Java encourage error free programming by being strictly typed and performing run time checks.

* Multithreaded

Java provides integrated support for multithreaded programming

* Architecture neutral

Java is not tied to a specific machine or OS Architecture.

* Interpreted

Java supports cross platform code through the use of Java byte code.

* High performance

The Java Bytecode is highly optimised for speed of execution.

* Distributed

Java was designed with the distributed environment of the Internet in mind.

* Dynamic

Java programs carry with them substantial amounts of run time information that is used to verify and resolve accesses to objects at runtime.

Q3 How applets in Java has a profound effect on internet?

Ans The internet helped catapult Java to the forefront of programming and Java, in turn, had a profound effect on the internet. In addition to simplifying web programming in general, Java innovated a new type of networked program called "applet" that changed the way the online world thought about content.

An applet is a special kind of Java program that is designed to be transmitted over the internet and automatically executed by a Java-compatible web browser. They are typically used to display data provided by the server, handle user input or provide simple functions that execute locally, rather than on server.

The creation of the applet changed internet programming because it expanded the universe of object that can move freely in cyberspace. An applet is dynamic self executing program, such a program is an active agent on the client computer yet it is initiated by the server.