**Core Java Interview Questions and Answers**

1. **What are the important features of Java 8 release?**

Java 8 has been released in March 2014, so it’s one of the hot topic in java interview questions. If you answer this question clearly, it will show that you like to keep yourself up-to-date with the latest technologies.

Java 8 has been one of the biggest release after Java 5 annotations and generics. Some of the important features of Java 8 are:

* Interface changes with default and static methods
* Functional interfaces and Lambda Expressions
* Java Stream API for collection classes
* Java Date Time API

1. **What do you mean by platform independence of Java?**

Platform independence means that you can run the same Java Program in any Operating System. For example, you can write java program in Windows and run it in Mac OS.

1. **What is JVM and is it platform independent?**

Java Virtual Machine (JVM) is the heart of java programming language. JVM is responsible for converting byte code into machine readable code. JVM is not platform independent, that’s why you have different JVM for different operating systems. We can customize JVM with Java Options, such as allocating minimum and maximum memory to JVM. It’s called virtual because it provides an interface that doesn’t depend on the underlying OS.

1. **What is the difference between JDK and JVM?**

Java Development Kit (JDK) is for development purpose and JVM is a part of it to execute the java programs.

JDK provides all the tools, executables and binaries required to compile, debug and execute a Java Program. The execution part is handled by JVM to provide machine independence.

1. **What is the difference between JVM and JRE?**

Java Runtime Environment (JRE) is the implementation of JVM. JRE consists of JVM and java binaries and other classes to execute any program successfully. JRE doesn’t contain any development tools like java compiler, debugger etc. If you want to execute any java program, you should have JRE installed.

1. **Which class is the superclass of all classes?**

**java.lang.Object** is the root class for all the java classes and we don’t need to extend it.

1. **Why Java doesn’t support multiple inheritance?**

Java doesn’t support multiple inheritance in classes because of “Diamond Problem”. To know more about diamond problem with example, read Multiple Inheritance in Java.

However multiple inheritance is supported in interfaces. An interface can extend multiple interfaces because they just declare the methods and implementation will be present in the implementing class. So, there is no issue of diamond problem with interfaces.

1. **Why Java is not pure Object-Oriented language?**

Java is not said to be pure object oriented because it supports primitive types such as int, byte, short, long etc. I believe it brings simplicity to the language while writing our code. Obviously, java could have wrapper objects for the primitive types but just for the representation, they would not have provided any benefit.

As we know, for all the primitive types we have wrapper classes such as Integer, Long etc that provides some additional methods.

1. **What is difference between path and classpath variables?**

PATH is an environment variable used by operating system to locate the executables. That’s why when we install Java or want any executable to be found by OS, we need to add the directory location in the PATH variable. If you work on Windows OS, read this post to learn how to setup PATH variable on Windows.

Classpath is specific to java and used by java executables to locate class files. We can provide the classpath location while running java application and it can be a directory, ZIP files, JAR files etc.

1. **What is the importance of main method in Java?**

**main()** method is the entry point of any standalone java application. The syntax of main method is public static void main(String args[]).

main method is public and static so that java can access it without initializing the class. The input parameter is an array of String through which we can pass runtime arguments to the java program. Check this post to learn how to compile and run java program.