

- **What do you know about Java?**

Java is a high-level programming language which was originally developed by Sun Microsystems and was released in 1995. Java runs on a variety of platforms, such as Windows, Mac OS and various versions of UNIX.

- **Which platforms are supported by Java Programming Language?**

Java runs on a variety of platforms, such as Windows, Mac OS and various versions of UNIX/Linux like HP-Unix, Sun Solaris, Redhat Linux, Ubuntu, CentOS, etc.

- **Why is Java Architectural Neutral?**

The Java compiler generates an architecture-neutral object file format, which makes the compiled code to be executable on many processors, with the presence of Java runtime system.

- **List any five features of Java.**

Some features of Java include Object Oriented, Platform Independent, Robust, Interpreted and Multi-threaded programming language.

- **How does Java enables High Performance?**

Java uses Just-In-Time(JIT) compiler to enable high performance. Just-In-Time(JIT) compiler is a program that turns Java bytecode, which is a program containing instructions that can be sent directly to the processor.

- **Why is Java considered dynamic?**

Java is designed to adapt to an evolving environment. Java programs can carry out extensive amount of run-time information that can be used to verify and resolve accesses to objects on run-time.

- **What is Java Virtual Machine(JVM) and how is it considered in context of Java's platform independent feature?**

When Java is compiled, it is not compiled into platform specific machine, rather it is combined into platform independent byte code. This byte code is distributed over the web and interpreted by virtual Machine (JVM) on whichever platform it is being run.

- **List two Java IDEs.**

Netbeans and Eclipse are two Java IDEs.

- **List some Java keywords(like C, C++ keywords).**

Some Java keywords are import, super, finally, etc.

- **What do you mean by an Object?**

Object is a runtime entity whose state is stored in fields and behavior is shown via methods. Methods operate on an object's internal state and serve as the primary mechanism for object-to-object communication.

- **Define class.**

A class is a blue print from which individual objects are created. A class can contain fields and methods to describe the behavior of an object.

- **What kind of variables a class can consist of?**

A class consists of a Local variables, instance variables and class variables.

- **What is a Local Variable?**

Variables defined inside 'methods', 'constructors' or 'blocks' are called 'local variables'. The variable will be declared and initialized within the method and it will be destroyed when the method gets completed.

- **What is an Instance Variable?**

Instance variables are variables within a class but outside a method. These variables are instantiated when the class is loaded.

- **What is a Class Variable?**

Class variables are the variables that are declared within a class, outside any method and with the 'static' keyword.

- **List the three steps that are performed for creating an Object for a class?**

An Object is first declared, instantiated and then it is initialized.

- **What is the default value of 'byte' datatype in Java?**

Default value of 'byte' datatype is 0.

- **What is the default value of 'float' and 'double' datatype in Java?**

Default value of 'float' and 'double' datatype is different as compared to that in C/C++. For float its 0.0f and for double it is 0.0d

- **When is a 'byte' datatype used?**

Concept Selenium Classes

This datatype is used to save space in large arrays, mainly in place of integers, since a 'byte' is four times smaller than an 'int'.

- **According to Java Operator precedence, which operator is considered to be of highest precedence value?**

Postfix operators i.e () [] is considered to be of the highest precedence value.

- **Variables used in a switch statement can be used with which datatypes?**

Variables used in a switch statement can only be a byte, short, int or char.

- **When is parseInt() method used?**

The parseInt() method is used to get the primitive datatype of a certain string.

- **Explain the following line used in a Java Program:
public static void main (String args[])**

The following shows the explanation of each word of the line individually:

- public: it is an access specifier.
- static: it allows main() to be called without instantiating a particular instance of a class.
- void: it affirms the compiler that no value is returned by main().
- main(): this method is called at the beginning of a Java program.
- String args[]: args parameter is an instance array of class 'string'.

- **Define JRE (Java Runtime Environment).**

Java Runtime Environment(JRE) is an implementation of the Java Virtual Machine(JVM) which executes Java programs. It provides the minimum requirements for executing a Java application.

- **What is a JAR file?**

A JAR file is Java Archive file and it aggregates many files into one. It holds Java classes in a library. JAR files are built on ZIP file format and have .jar file extension.

- **What is a WAR file?**

WAR is a Web Archive File and is used to store XML, Java classes and JavaServer pages which is used to distribute a collection of JavaServer Pages, Java Servlets, Java classes, XML files, static Web pages etc.

- **Define JIT compiler.**

JIT compiler improves the runtime performance of computer programs based on bytecode.

- **What is the difference between object oriented programming(OOP) language and object based programming language?**

Object based programming languages follow all the features of OOPs except 'Inheritance'. JavaScript is an example of object based programming languages

- **How many bits are used to represent Unicode, ASCII, UTF-16 and UTF-8 characters?**
- Unicode requires 16 bits and ASCII requires 7 bits. Although the ASCII character set uses only 7 bits, it is usually represented as 8 bits. UTF-8 represents characters using 8, 16, and 18 bit patterns. UTF-16 uses 16-bit and larger bit patterns.