

25 FREQUENTLY ASKED JAVA INTERVIEW QUESTIONS AND ANSWERS

With over ten million Java developers around the world and the constant increase in number as we speak of it, Java is an all-time favourite programming language in the world today. It has always believed in giving back to people and continues to create opportunities and employment for many. It is omnipresent- right from the basic regular applications that we use on our smartphones in our daily lives to the complex desktop applications. It continues to evolve even after twenty-two years of its invention. Let's look at some questions that you might be asked when you go for an interview for any opportunities that need Java.

Top questions and answers:

1.) What is Java?

Java is a high-level programming language used to build and develop many software applications ranging from small to large scale. It is an object-oriented programming language and has constantly evolved since its inception.

Java is easy to learn and is available for free to download, and developers can access all the related tools with no additional charges. It has become essential for most websites and applications in today's digital age.

2.) State some common features of Java?

Following are some uses of Java:

- It is simple and comfortable to use.
- It comes compiled and interpreted.
- It is platform-independent.
- It is object-oriented.
- It is robust in nature and eliminates errors at the time of runtime.
- It is secure.
- It is dynamic.
- It is extensible.

To gain complete knowledge about Java features [Java Training](#) helps to a great extent .

3.) Why is Java called an independent language?

Java programming language is developed in a manner where it is independent of any external hardware or software. This is because the compiled code in Java is a byte code that can run on any

and every operating system. The program is written in a language- a source code that can be read by humans, and the compiler translates it into the executable code that the machine understands.

4.) Is Java purely an object-oriented language?

No, Java is not a pure object-oriented language.

A pure object-oriented language is a language that treats everything within the program as objects. This is not the case with Java because it supports all primitive data types such as float, char(characters), long, bool(booleans), and int(integers) and considers them as non-objects. Another reason why Java is not purely an object-oriented language is that a declared static class can be usable without taking the support of an object. We can also communicate with the objects without calling their actual methods.

5.) How is Java different from C++?

Following are the main differences between Java and C++

- C++ is a platform-dependent language, and Java is not.
- C++ requires the compilation of code, and Java doesn't.
- C++ codes are not portable as they need to be compiled on each platform, while Java doesn't.
- The management of memory in Java is in control of the system, but C++ allows the user to allocate or deallocate memory manually.
- C++ is compatible with most of the other programming languages, but Java isn't.

6.) What is a Java virtual machine?

The run time engine which allows the source code into an executable machine language is called Java Virtual Machine. It is termed "virtual" because of its abstract implementation in software on top of a "real" operating system. It allows the program compiled to be portable and used on any platform, and it consists of both the compiler and the interpreter.

7.) What is a Java development kit?

Java development kit is an environment for software development that is essential for developing Java applications as well as running them. It includes tools for testing programs. Many Java development kits are available for usage, such as Oracle, Open, IBM J9 JDK, etc. The process of installing and setting up the Java Development Kit is easy and quick.

8.) What is the Java runtime environment?

The set of components required for developing and running a program is called Java Runtime Environment. It acts as a translator or a facilitator between the operating system and the Java program. It also provides a platform for creating and deploying Java applications.

9.) What is an array list in Java?

A resizable array in Java that provides us with dynamic options of arrays is called an array list. It doesn't need any specifications of size while creating. It also allows the user to access the list randomly. It is helpful in programs where a lot of manipulation is needed.

10.) What is vector in Java?

Vector is a kind of dynamic array (two-dimensional) that can grow or shrink on its own. This means when elements are added to it, they will grow, and when elements are removed, they will reduce or shrink. A vector element can be accessed with the help of an integer index. Vectors are synchronized in nature. This means that a code can be accessed one thread at a time.

11.) What is hashmap in Java?

A hashmap is a structure or a class, i.e., responsible for storing key and value pairs. It provides a ground-level implementation of the Java interface. It also allows storing null keys. It cannot contain duplicate keys. There is no specific order of elements in Hashmap.

12.) What is a hashtable in Java?

Hashtable in Java consists of a list of arrays called a bucket. The position of the bucket is determined by calling the hashtable method, and it consists of unique elements. Unlike Hashmap, Hashtable is a synchronized class and doesn't allow null keys and values.

13.) What is a constructor in Java?

Java consists of constructors used for constructing something in programs. It is a special method for the initialization of objects. The calling of the constructor is done after the creation of the class object. There are a few points to take care of regarding constructors.

It does not have any return type.

It can only be called once.

It has to have the same name as the class in which it is defined.

14.) What is an access modifier in Java?

Access modifiers are keywords in [Java](#) that are used to access or restrict the scope of a class, variable, method, or constructor. Following are the types of access modifiers available in Java:

- When no modifier is specified for any class, method, or data member, the mode is called default mode.
- When the modifier is specified privately and is accessible only within a class, the mode is called private mode.

Keyword used- private

- When the modifier is specified publically and is accessible from anywhere, the mode is called public mode. It has the widest scope among all the modifiers. There is no restriction on its usage.

15.) What is a package in Java?

A Java package is an organizer or a mechanism that encapsulates a group of sub-packages, classes, and interfaces. On a conceptual level, a package in Java can be considered similar to folders in the computer. It keeps Java classes by providing unique namespaces for each of its types. In this way, it helps in the prevention of name conflicts. It groups according to the categories that can be accessed if put in the same package.

16.) What is an infinite loop in Java?

An infinite loop is a statement or an instruction in coding that repeats itself endlessly because of the lack of a functional exit. This is an error that keeps popping because of a certain condition that keeps coming true, and it comes under the category of logical errors that need to be fixed for further functioning.

17.) What is Java string pool?

A string pool is basically a storage area in a Java heap. It stores string literals. It works as a special memory area and also saves space from unnecessary memory usage. It copies each string for remembering so that there is no loss in case of an error.

18.) What is constructor chaining in Java?

The process of calling constructors in a sequence is called constructor chaining. This is done by calling a constructor of a particular class with the help of another constructor in the other class

using the current object. The advantage of this is that it allows the parameters to pass through different constructors in a single initialization, which can be done in different ways.

19.) What is classloader in Java?

Classloaders are a part of Java Virtual Machine and Java Runtime Environment. It is responsible for dynamically loading Java classes. It is an abstract class that tries to locate or generate data on the basis of the binary name given.

20.) What is a map in Java?

The Map Interface in Java is an object that is used to map keys and values. Duplicate keys are not allowed here. Each key can only map a maximum of one value at a time. It works just like a dictionary. The specific order depends on the implementation. Users can find and update elements using maps.

21.) What are heap and memory stacks in Java?

Heap stacks in Java are used to contain all the objects created, while Memory stacks are only used for methods. Objects stored in the heap stack can be accessed through the application of the program, whereas memory stacks can be accessed only when their methods are invoked.

22.) What is a variable in Java?

A container responsible for holding the value when the Java program is being executed is termed a variable. We can also say that a variable is a memory location name for the data. Each variable is assigned a specific type of data that designates the value it will hold. There are broadly two types of data Static and Instance.

23.) What is data encapsulation in Java?

The process of bundling/binding/putting together data that belongs to work in a single unit is called data encapsulation. This is similar to a class in Java. Elements with similar properties and functions are treated as a single unit here. The major advantage of data encapsulation is that the users can decide whether the access to the data should be private or public. This process is called data hiding.

24.) What is a comparator in Java?

An interface that is responsible for sorting the various objects in Java is called a comparator. It has the capability of comparing two objects of the same class. It takes two instructions and sends back the order in which they should be sorted as an output. This makes programming in Java easy and quick.

25.) Why is Java preferred over other programming languages?

There are many reasons why Java is an extremely popular programming language and why it is preferred over others. Some of them are:

- It comes with a library that contains a variety of classes.
- Its functions are the most utilized, without which the language cannot function.
- It has been around so long, and it keeps updating its features and functions with respect to the trends and demands of the developers.
- Longevity is in its nature, and it is even capable of compiling codes written years ago.
- It is the first programming language for most developers and is relevant for any type of application.
- It is consistently faster and more efficient.
- It has a strong, loyal, and thriving base community that contributes majorly to its success.
- It has a legacy when it comes to developing applications, especially for big names in enterprises and companies.
- There is an automatic garbage collection in Java.

Conclusion:

If you wish to make a career as a developer with Java or wish to learn it to upscale yourself, enroll in the Java courses that offer beginner to expert guides. These days, online certification courses are also a good option for working professionals or regular college students. For a better understanding prefer opting for training programs to get practical applications of Java, as programming languages are more like math that do need practice.

Checklists for the best Java Course to crack your next interview:

- Check the course details properly before enrolling.
- Check the course duration as you can not learn it in a week or month, for a minimum of 3 months, you will need to learn all the aspects from scratch.
- Check the review and testimonies of the program and source you are opting for the course from.

- Always work on the theory and practical sessions to understand and remember things better.
- Some organizations have assessment tests before the one-on-one interview, or the interviewer may not always ask a theoretical question. Try to practice common interview questions in coding with Java. Check out for advanced [Java Interview Questions](#) to crack the interview easily.

Since most enterprises are heading towards a digital mode of business, the development of applications and websites have increased extensively. Java, the most versatile and reliable language, is most commonly used, which is great news for you as it opens up huge demand for Java developers.