**100+ Java Interview Questions and Answers (2023)**

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Here are Java interview questions and answers for fresher as well as experienced candidates to get their dream job.

**1) What is the difference between an Inner Class and a Sub-Class?**

Inner class can access all the properties including private of the outer class.

Child class cannot access private properties of Parent class

**2) What are the various access specifiers for Java classes? private, default, protected, public (default is allowed only in interface) properties and methods of a class are default by default.**

**3) What’s the purpose of Static methods and static variables?**

**Static methods and variables can be accessed without creating object of the class**

**4) What is data encapsulation and what’s its significance?**

**Declaring data members as private to prevent its access outside of the class**

**5) What is a singleton class? Give a practical example of its usage.**

**A class that can have only one instance is a singleton class.**

* **Create a private constructor**
* **Create a static object**
* **Create a static method to return that object**

**6) What are Loops in Java? What are three types of loops?**

**Loops are used to perform repeated action. For Loop, While Loop, Do While Loop and for each Loop**

**for(Type variableName : List)**

**7) What is an infinite Loop? How infinite loop is declared?**

Infinite loop is a never ending loop

For(;;) and while(true)

**8) What is the difference between continue and break statement?**

Break is to break the complete iteration

Continue is to break the current iteration only

**9) What is the difference between double and float variables in Java?**

Double takes 8 bytes, float takes 4 bytes only

**10) What is Final Keyword in Java? Give an example.**

Final class cannot be inherited, final method cannot be overridden, final variable is read only and final reference cannot be re-assigned

**11) What is ternary operator? Give an example.**

Ternary operator is used in place of if-else

Int maximum = a>b? a:b

**12) How can you generate random numbers in Java?**

Using Random class object

**13) What is default switch case? Give example.**

**Switch-case is used to select one from many options. Default is used to execute when there is no match.**

**14) What’s the base class in Java from which all classes are derived?**

**15) Can main() method in Java return any data?**

**16) What are Java Packages? What’s the significance of packages?**

**Folder containing related classes and interfaces**

**17) Can we declare a class as Abstract without having any abstract method?**

**18) What’s the difference between an Abstract Class and Interface in Java?**

**19) What are the performance implications of Interfaces over abstract classes? interface is slower that abstract class**

**20) Does Importing a package imports its sub-packages as well in Java? No**

**21) Can we declare the main method of our class as private? No**

**22) How can we pass argument to a function by reference instead of pass by value?**

**Arguments in java are always passed-by-value**

**Pass by reference is a pointer concept**

**23) How an object is serialized in java?**

By implementing the Serializable interface.

Serialization is converting java object into byte stream (memory to disk/network)

Deserialization is converting byte stream into java object (from disk to memory)

**24) When we should use serialization?**

**25) Is it compulsory for a Try Block to be followed by a Catch Block in Java for Exception handling?**

**Catch or finally is a must after Try block.**

**26) Is there any way to skip Finally block of exception even if some exception occurs in the exception block?**

**27) When does the constructor of a class get invoked?**

**28) Can a class have multiple constructors?**

**29) Can we override static methods of a class?**

**31) Is String a data type in java?**

**33) Why Strings in Java are Immutable?**

**34) What’s the difference between an array and Vector?**

**Array has fixed size whereas Vector is growable array**

**Vector is a class whereas array is an object created dynamically**

**35) What is multi-threading?**

Multiple threads performing concurrently in a an application is multithreading.

**36) Why Runnable Interface is used in Java?**

**We get a chance to extend a class since java does not allow extending more than one class.**

**37) What are the two ways of implementing multi-threading in Java?**

Implementing Runnable interface or Extending the Thread class

**38) When a lot of changes are required in data, which one should be a preference to be used? String or StringBuffer?**

**39) What’s the purpose of using Break in each case of Switch Statement?**

If break is not there in each case, all the cases after the matched case will be executed

**40) How garbage collection is done in Java?**

**Freeing the memory by removing the objects having no reference is Garbage Collection.**

**Garbage Collection can be achieved by calling Runtime.getRuntime().gc() method.**

**Programmer has to nullify the object. ‘finalize()’ method will be called just before garbage collection.**

**41) How we can execute any code even before main method?**

**Using a static block**

**42) Can a class be a super class and a sub-class at the same time? Give example. Yes**

**B extends A**

**C extends B**

**B is the subclass of A and super class of C**

**43) How objects of a class are created if no constructor is defined in the class?**

Java compiler will provide a default constructor

**44) In multi-threading how can we ensure that a resource isn’t used by multiple threads simultaneously? Using the synchronized key word**

**45) Can we call the constructor of a class more than once for an object? No**

**46) There are two classes named classA and classB. Both classes are in the same package. Can a private member of classA can be accessed by an object of classB? No**

**47) Can we have two methods in a class with the same name? Yes. Overloaded methods**

**48) How can we make copy of a java object?**

**Implementing the cloneable interface**

**Using copy constructor**

**49) What’s the benefit of using inheritance?**

**Code reusability**

**Achieve run-time polymorphism (Overriding)**

**50) What’s the default access specifier for variables and methods of a class? default**

**51) Give an example of use of Pointers in Java class.**

**Pointers are not used in java**

**52) How can we restrict inheritance for a class?**

**final**

**53) What’s the access scope of Protected Access specifier?**

**54) What’s difference between Stack and Queue?**

**Stack is LIFO; Queue is FIFO**

**55) In java, how we can disallow serialization of variables? Using transient modifier**

**56) How can we use primitive data types as objects?**

Using the valueOf() method in the wrapper class

**57) Which types of exceptions are caught at compile time?**

Checked exception

**58) Describe different states of a thread.**

New – when a thread is created but not started

Runnable – when start() method is called on a thread

Running – when thread scheduler allocate processor

Blocked – when a thread is waiting for an object/class level lock

Waiting – when yield/sleep/join method is called

Terminated – when a thread completes its task

**59) Can we use a default constructor of a class even if an explicit constructor is defined?Yes**

**60) Can we override a method by using same method name and arguments but different return types? No**

**61) A person says that he compiled a java class successfully without even having a main method in it? Is it possible? No**

**62) Can we call a non-static method from inside a static method? No**

**63) What are the two environment variables that must be set in order to run any Java programs?**

**System path and class path**

**64) Can variables be used in Java without initialization?**

**A local variable must be initialized.**

**Instance and class variable will have its default value if not initialized**

**65) Can a class in Java be inherited from more than one class?**

**Multiple inheritance is not allowed in java**

**66) Can a constructor have different name than a Class name in Java?**

**67) What will be the output of Round(3.7) 4 and Ceil(3.7)? 4.0**

**68) Can we use goto in Java to go to a particular line?**

No, goto is not available in java

**69) Can a dead thread be started again?**

**Code will be compiled fine, but IllegalThreadStateException will be thrown during run time**

**71) Is JDK required on each machine to run a Java program?**

**No. JRE is sufficient to run a java program**

**72) What’s the difference between comparison done by equals method and == operator?**

**== will compare the value only**

**equals will compare both value and address**

**73) Is it possible to define a method in Java class but provide it’s implementation in the code of another language like C/C++?**

Yes

**74) How are destructors defined in Java?**

**Garbage collection feature is used to destroy objects having do reference.**

**(first nullify the object and then call Runtime.getRuntime().gc() method)**

**75) Can a variable be local and static at the same time?No**

**The scope of a local variable is limited to the method or block in which it is declared.**

**Scope of static variable is class level**

**76) Can we have static methods in an Interface?**

Yes, since java 8

**77) In a class implementing an interface, can we change the value of any variable defined in the interface? No**

**78) Is it correct to say that due to garbage collection feature in Java, a java program never goes out of memory? No**

**Garbage collection feature is to clear from memory the objects having no reference**

**79) Can we have any other return type than void for main method?**

**80) I want to re-reach and use an object once it has been garbage collected. How it’s possible?**

**81) In Java thread programming, which method is a must implementation for all threads? Run method**

**82) I want to control database connections in my program and want that only one thread should be able to make database connection at a time. How can I implement this logic?**

This can be implemented by the use of the concept of synchronization.  
Database related code can be placed in a method which has synchronized keyword so that only one thread can access it at a time.

**83) How can an exception be thrown manually by a programmer?**

**Using throw keyword**

**84) I want my class to be developed in such a way that no other class (even derived class) can create its objects. How can I do so?**

**85) How objects are stored in Java?**

**86) How can we find the actual size of an object on the heap? There is no sizeOf operator in java**

**87) Which of the following classes will have more memory allocated?**

**Class A: Three methods, four variables, no object**

**Class B: Five methods, three variables, no object**

Memory isn’t allocated before creation of objects. Since for both classes, there are no objects created so no memory is allocated on heap for any class.

**88) What happens if an exception is not handled in a program?**

* **A user friendly message cannot be given when the program is terminated**

**89) I have multiple constructors defined in a class. Is it possible to call a constructor from another constructor’s body?**

If a class has multiple constructors, it’s possible to call one constructor from the body of another one using **this()**.

**90) What’s meant by anonymous class?**

* **Anonymous class is an inner class without name.**
* **It is created using the new key word.**
* **It is used to override methods for one time use**

**91) Is there a way to increase the size of an array after its declaration?**

**92) If an application has multiple classes in it, is it okay to have a main method in more than one class?**

Ok, the main method in the particular class we are running will be executed.

**93) I want to persist data of objects for later use. What’s the best approach to do so?**

**Save data into file using the concept of Serialization**

**94) What is a Local class in Java?**

**Method local inner class is a class inside a method**

**95) String and StringBuffer both represent String objects. Can we compare String and StringBuffer in Java? No**

**96) Which API is provided by Java for operations on set of objects?**

**97) Can we cast any other type to Boolean Type with type casting?**

**98) Can we use different return types for methods when overridden?**

**Not in method overriding**

**Yes in method overloading**

**99) What’s the base class of all exception classes?**

**100) What’s the order of call of constructors in inheritance?**

**101 Why is Java write once and run anywhere?**

**An application written in Java can be run on any hardware which has Java Virtual Machine (JVM), and JVM is now licensed to hundreds of operating systems**