

# JAVA INTERVIEW QUESTIONS AND ANSWERS



## What is Java

Java is a high-level object-oriented programming language that is platform-independent and can be used to create software applications that can run on any system with the Java Virtual Machine (JVM)



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## What are the features of Java

Java is an object-oriented language with features such as platform independence, automatic memory management, multithreading, exception handling and robust security.



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## What is the difference between JDK JRE and JVM

JDK stands for Java Development Kit JRE stands for Java Runtime Environment and JVM stands for Java Virtual Machine. JDK is used for developing Java applications JRE is used for running Java applications and JVM is used for executing Java bytecode.

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## What is the difference between abstract class and interface

An abstract class can have both abstract and non-abstract methods while an interface can only have abstract methods. An abstract class can have instance variables while an interface can only have constant variables.



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## What is a constructor in Java

A constructor is a special method in Java that is used to initialize the object of a class. It has the same name as the class and does not have a return type.



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## What is the difference between method overloading and method overriding

Method overloading is when a class has multiple methods with the same name but different parameters while method overriding is when a subclass provides a specific implementation of a method that is already defined in its superclass.

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## What is the final keyword in Java

The final keyword is used to declare a constant variable a method that cannot be overridden or a class that cannot be extended.



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## What is the difference between static and non-static methods

Static methods can be called without creating an instance of the class while non-static methods can only be called on an object of the class.



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## What is a package in Java

A package is a collection of related classes and interfaces that provide a namespace for the classes and interfaces.



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## What is a thread in Java

A thread is a lightweight process that can execute independently of the main program flow.



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## What is the synchronized keyword in Java

The synchronized keyword is used to provide thread safety by ensuring that only one thread can access a block of code at a time.



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## What is the difference between ArrayList and LinkedList

ArrayList is implemented as an array while LinkedList is implemented as a doubly-linked list. ArrayList provides faster access to elements while LinkedList provides faster insertion and deletion.



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## What is the difference between HashMap and Hashtable

HashMap is not synchronized and allows null values while Hashtable is synchronized and does not allow null values.



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## What is the difference between the equals() method and the == operator

The equals() method is used to compare the values of two objects while the == operator is used to compare the memory addresses of two objects.



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## What is a garbage collector in Java

A garbage collector is a feature in Java that automatically frees up memory by removing objects that are no longer needed by the program.



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## What is the difference between public private and protected access modifiers

Public access modifier allows access to a method or variable from anywhere private access modifier restricts access to only within the class and protected access modifier allows access within the class and its subclasses.

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## What is the difference between the StringBuilder and StringBuffer classes

The StringBuilder class is not synchronized while the StringBuffer class is synchronized.



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## What is a try-catch block in Java

A try-catch block is used for exception handling in Java. The try block contains the code that might throw an exception and the catch block handles the exception.



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## What is polymorphism in Java

Polymorphism is the ability of an object to take on many forms. In Java this is achieved through method overloading and method overriding.



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## What is inheritance in Java

Inheritance is a mechanism in Java where a subclass inherits the properties and methods of its superclass. This allows for code reuse and the creation of more specialized classes.



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## What is an abstract method in Java

An abstract method is a method that does not have an implementation. It is defined in an abstract class or interface and must be implemented by any subclass or class that implements the interface.



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## What is a static block in Java

A static block is a block of code that is executed when a class is loaded into memory. It is used for initialization and cannot be called directly.



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## What is the difference between checked and unchecked exceptions in Java

Checked exceptions are checked at compile time and must be handled by the programmer while unchecked exceptions are not checked at compile time and do not need to be handled.



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## What is the difference between a stack and a queue in Java

A stack is a last-in first-out (LIFO) data structure while a queue is a first-in first-out (FIFO) data structure.



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## What is the difference between a constructor and a method in Java

A constructor is a special method that is used to create an object of a class while a method is a block of code that performs a specific task.



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## What is a Lambda expression in Java

A Lambda expression is a new feature in Java that allows for the creation of anonymous functions. It simplifies the syntax of functional programming in Java.

