

Java interview questions

What is Runtime Polymorphism?

Runtime polymorphism or dynamic method dispatch is a process in which a call to an overridden method is resolved at runtime rather than at compile-time.

In this process, an overridden method is called through the reference variable of a super class. The

What is the difference between abstraction and encapsulation?

Abstraction hides the implementation details whereas encapsulation wraps code and data into a single unit.

What is abstract class?

A class that is declared as abstract is known as abstract class. It needs to be extended and its method implemented. It cannot be instantiated.

Can there be any abstract method without abstract class?

No, if there is any abstract method in a class, that class must be abstract.

Can you use abstract and final both with a method?

No, because abstract method needs to be overridden whereas you can't override final method.

Is it possible to **instantiate** the abstract class?

No, abstract class can never be instantiated.

What is interface?

Interface is a blueprint of a class that have static constants and abstract methods. It can be used to achieve full abstraction and multiple inheritance.

Can you declare an interface method static?

No, because methods of an interface are abstract by default, and static and abstract keywords can't be used together.

Can an interface be final?

No, because its implementation is provided by another class.

What is marker interface?

An interface that have no data member and method is known as a marker interface. For example Serializable, Cloneable etc.

What is difference between abstract class and interface?

Abstract class

- 1) An abstract class can have method body (non-abstract methods).
- 2) An abstract class can have instance variables.
- 3) An abstract class can have constructor.
- 4) An abstract class can have static methods.
- 5) You can extend one abstract class.

Interface

Interface have only abstract methods.
An interface cannot have instance variables.
Interface cannot have constructor.
Interface cannot have static methods.
You can implement multiple interfaces.

Can we define private and protected modifiers for variables in interfaces?

No, they are implicitly public.

When can an object reference be cast to an interface reference?

An object reference can be cast to an interface reference when the object implements the referenced interface.