# 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 fully abstraction and multiple inheritance.

**Can you declare an interface method static?**

No, because methods of an interface is 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?**

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| **Abstract class** | **Interface** |
| 1)An abstract class can have method body (non-abstract methods). | Interface have only abstract methods. |
| 2)An abstract class can have instance variables. | An interface cannot have instance variables. |
| 3)An abstract class can have constructor. | Interface cannot have constructor. |
| 4)An abstract class can have static methods. | Interface cannot have static methods. |
| 5)You can extends one abstract class. | 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.