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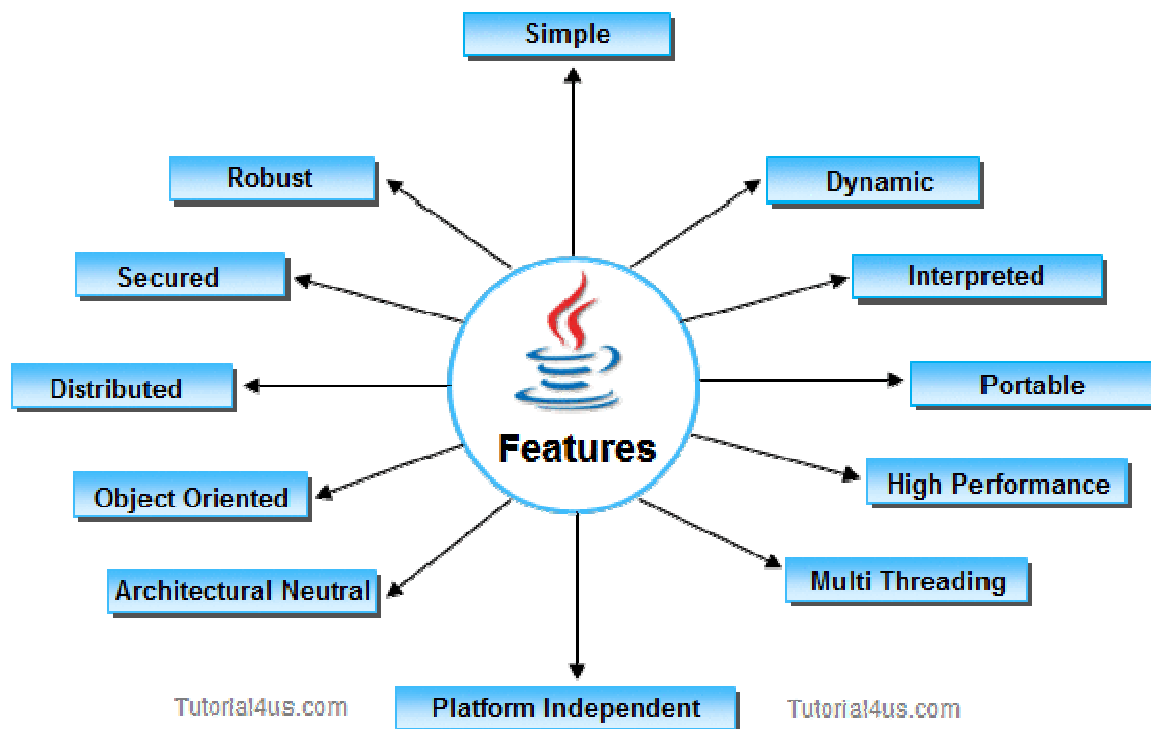
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# Java

## Interview Question



## **What is API ?**

An API is a collection of packages, classes, interfaces and sub-packages. And sub-package is also a collection of classes interfaces and sub sub packages etc.

## **Why Java take 2 byte of memory for store character ?**

Java support more than 18 international languages so java take 2 byte for characters, because for 18 international language 1 byte of memory is not sufficient for storing all characters and symbols present in 18 languages. Java supports Unicode but c support ascii code. In ascii code only English language are present, so for storing all English latter and symbols 1 byte is sufficient.

## **What is java and javac ?**

Java and javac are tools or application programs or exe files developed by sun micro system and supply as a part of jdk 1.5/1.6/1.7/1.8 in bin folder. Java tool are used for run the java program and javac tool are used for compile the java program.

## **Why Using naming Conversion ?**

Different Java programmers can have different styles and approaches to write program. By using standard Java naming conventions they make their code easier to read for themselves and for other programmers. Readability of Java code is important because it means less time is spent trying to figure out what the code does, and leaving more time to fix or modify it.

## **Which syntax follow by java for naming conversion ?**

Java follows camelcase syntax for naming the class, interface, method and variable.

## **What is JVM ?**

JVM (Java Virtual Machine) is a software. It is a specification that provides runtime environment in which java bytecode can be executed.



### **What is operation of JVM ?**

JVM mainly performs following operations.

- Allocating sufficient memory space for the class properties.
- Provides runtime environment in which java bytecode can be executed
- Converting byte code instruction into machine level instruction.

### **What is classloader ?**

Class loader subsystem will load the .class file into java stack and later sufficient memory will be allocated for all the properties of the java program into following five memory locations.

- Heap area
- Method area
- Java stack
- PC register
- Native stack

### **What is Main aim of JIT Compiler ?**

The main aim of JIT compiler is to speed up the execution of java program.

### **Why Boolean data types take zero byte memory ?**

Boolean data type takes zero bytes of main memory space because Boolean data type of java implemented by Sun Micro System with a concept of flip - flop. A flip - flop is a general purpose register which stores one bit of information (one true and zero false).

### **Why Java is Simple and easy**

Java is simple because of the following factors:



- Java is free from pointer due to this execution time of application is improve.  
[whenever we write a Java program we write without pointers and internally it is converted into the equivalent pointer program].
- Java have Rich set of API (application protocol interface).
- Java have garbage collector which is always used to collect un-Referenced (unused) Memory location for improving performance of a Java program.
- Java contains user friendly syntax for developing Java applications.

### **How Java have high performance ?**

Java have high performance because;

- Java is use Bytecode which is more faster than ordinary pointer code so Performance of java is high.
- Garbage collector, collect the unused memory space and improve the performance of java application.
- Java have no pointers so that using java program we can develop an application very easily.
- It support multithreading, because of this time consuming process can be reduced to execute the program.

### **How Java is Platform Independent**

A programming language or technology is said to be platform independent if and only if which can run on all available operating systems with respect to its development and compilation. (Platform represents Operating System).

Java is a platform independent programming language, Because when you install jdk software on your system then automatically jvm are install on your system. For every operating system separate jvm is available which is capable to read .class file or byte code. When we compile your java code then .class file is generated by javac compiler



these code are readable by jvm and every operating system have its own jvm so jvm is platform dependent but due to jvm java language is become platform independent.

### **Difference between conditional and looping statement**

Conditional statement executes only once in the program where as looping statements executes repeatedly several number of time.

### **Why a static block executes before the main method ?**

A class has to be loaded in main memory before we start using it. Static block is executed during class loading. This is the reason why a static block executes before the main method.

### **Can we override static method ?**

No, static method cannot be overridden.

### **Why we cannot override static method ?**

because static method is bound with class whereas instance method is bound with object. Static belongs to class area and instance belongs to heap area.

### **Which Java operator is right associative ?**

The = operator is right associative.

### **What is dot operator ?**

The dot operator(.) is used to access the instance variables and methods of class objects. It is also used to access classes and sub-packages from a package.

### **Why use this keyword**

The main purpose of using this keyword is to differentiate the formal parameter and data members of class, whenever the formal parameter and data members of the class are similar then jvm get ambiguity (no clarity between formal parameter and member of the class)



To differentiate between formal parameter and data member of the class, the data member of the class must be preceded by "this".

### **When Need of super keyword ?**

Whenever the derived class inherits the base class features, there is a possibility that base class features are similar to derived class features and JVM gets an ambiguity. In order to differentiate between base class features and derived class features must be preceded by super keyword.

### **What is the difference between this. (this dot) and this() (this off).**

this. can be used to differentiate variable of class and formal parameters of method or constructor.

this() can be used to call one constructor within the another constructor without creation of objects multiple time for the same class.

### **Difference between static and final keyword**

static keyword always fixed the memory that means that will be located only once in the program where as final keyword always fixed the value that means it makes variable values constant.

### **why main method is static ?**

Because object is not required to call static method if main() is non-static method, then jvm create object first then call main() method due to that face the problem of extra memory allocation.

### **We can overload main() method ?**

Yes, We can overload main() method. A Java class can have any number of main() methods. But run the java program, which class should have main() method with signature as "public static void main(String[] args)". If you do any modification to this signature, compilation will be successful. But, not run the java program. we will get the run time error as main method not found.



### **Can we override java main method ?**

No, because main is a static method.

### **Difference between Path and ClassPath**

Path variable is set for use all the tools like java, javac, javap, javah, jar, appletviewer etc.

Classpath variable is used for set the path for all classes which is used in our program so we set classpath upto rt.jar. in rt.jar file all the .class files are present. When we decompressed rt.jar file we get all .class files.

### **What do you mean by portable ?**

If any language supports platform independent and architectural neutral feature known as portable. The languages like C, CPP, Pascal are treated as non-portable language. JAVA is a portable language.

### **Why use Import keyword in java ?**

Import is a keyword in java language used to import the predefined properties of java API into current working java program.

### **What is Wrapper Classes ?**

For each and every fundamental data type there exist a pre-defined class, Such predefined class is known as wrapper class.

### **Why use Wrapper Classes ?**

The main purpose of wrapper class is to convert numeric string data into numerical or fundamental data. We know that in java whenever we get input from user, it is in the form of string value so here we need to convert these string values in different different datatype (numerical or fundamental data), for this conversion we use wrapper classes.





## Access Specifier

**Which access specifier are called universal access specifier ?**

Public

**Which access specifier is not a keyword ?**

Default

**Which access specifier is package level access specifier ?**

Default

**Scope of protected specifier ?**

protected members of class is accessible within the same class and other class of same package and also accessible in inherited class of other package.

**Scope of private access specifier ?**

private members of class in not accessible any where in program these are only accessible within the class. private are also called class level access specifier.



## Constructor

### **Why use constructor ?**

The main purpose of create a constructor is, for placing user defined values in place of default values.

### **Why constructor not return any value ?**

Constructor will never return any value even void, because the basic aim constructor is to place value in the object

### **Why constructor definition should not be static ?**

Constructor definition should not be static because constructor will be called each and every time when object is created. If you made constructor is static then the constructor before object creation same like main method.

### **Why constructor is not inherited ?**

Constructor will not be inherited from one class to another class because every class constructor is created for initialize its own data members.

### **What is purpose of default constructor ?**

The purpose of default constructor is to create multiple object with respect to same class for placing same value.

### **What is purpose of parameterized constructor ?**

The purpose of parametrized constructor is to create multiple object with respect to same class for placing different value of same type or different type or both.

### **Is constructor inherited?**

No, constructor is not inherited.



### Can you make a constructor final?

No, constructor can't be final.

### What is the purpose of default constructor?

The default constructor provides the default values to the objects. The java compiler creates a default constructor only if there is no constructor in the class.

### Does constructor return any value?

yes, that is current instance (You cannot use return type yet it returns a value).

### What is flow of constructor in Java ?

Constructor are calling from bottom to top and executing from top to bottom.

### Why overriding is not possible at constructor level. ?

The scope of constructor is within the class so that it is not possible to achieved overriding at constructor level.

### Difference between Method and Constructor

	Method	Constructor
1	Method can be any user defined name	Constructor must be class name
2	Method should have return type	It should not have any return type (even void)
3	Method should be called explicitly either with object reference or class reference	It will be called automatically whenever object is created
1	Method is not provided by compiler in any case.	The java compiler provides a default constructor if we do not have any constructor.



## String Handling

### Why use string handling in Java

The basic aim of String Handling concept is storing the string data in the main memory (RAM), manipulating the data of the String, retrieving the part of the String etc. String Handling provides a lot of concepts that can be performed on a string such as concatenation of string, comparison of string, find sub string etc.

### Difference between String and StringBuffer

#### What is difference between equal() and == ?

equals() method always used to comparing contents of both source and destination String. It return true if both string are same in meaning and case otherwise it returns false.

== Operator is always used for comparing references of both source and destination objects but not their contents.

	String	StringBuffer
1	The data which enclosed within double quote (" ") is by default treated as String class.	The data which enclosed within double quote (" ") is not by default treated as StringBuffer class
2	String class object is immutable	StringBuffer class object is mutable
3	When we create an object of String class by default no additional character memory space is created.	When we create an object of StringBuffer class by default we get 16 additional character memory space.

### When we use String, StringBuffer and StringBuilder

- If the content is fixed and would not change frequently then we use String.
- If content is not fixed and keep on changing but thread safety is required then we use StringBuffer
- If content is not fixed and keep on changing and thread safety is not required then we use StringBuilder



### What is Similarities between String and StringBuffer

- Both of them are belongs to public final. so that they never participates in inheritance that is is-A relationship is not possible but they can always participates in As-A and Uses-A relationship.
- We can not override the method of String and StringBuffer.

### Difference between StringBuffer and StringBuilder

All the things between StringBuffer and StringBuilder are same only difference is StringBuffer is synchronized and StringBuilder is not synchronized. synchronized means one thread is allow at a time so it thread safe. Not synchronized means multiple threads are allow at a time so it not thread safe.

	StringBuffer	StringBuilder
1	It is thread safe.	It is not thread safe.
2	Its methods are synchronized and provide thread safety.	Its methods are not synchronized and unable to provide thread safety.
3	Relatively performance is low because thread need to wait until previous process is complete.	Relatively performance is high because no need to wait any thread it allows multiple thread at a time.
1	Introduced in 1.0 version.	Introduced in 1.5 version.

### What is StringTokenizer ?

It is a pre defined class in java.util package can be used to split the given string into tokens (parts) based on delimiters (any special symbols or spaces).



## Exception Handling

### **What is Exception Handling ?**

The process of converting system error messages into user friendly error message is known as Exception handling.

### **What is Exception ?**

An exception is an event, which occurs during the execution of a program, that disrupts the normal flow of the program's Instructions.

### **Which is super class for any Exception class ?**

Object class is super class for any Exception class.

### **Can any statement is possible between try and catch block ?**

Each and every try block must be immediately followed by catch block that is no intermediate statements are allowed between try and catch block.

### **Can any try block contain another try block ?**

Yes, One try block can contains another try block that is nested or inner try block can be possible.

### **When IOException is thrown ?**

IOException is thrown in following conditions which is given below;

- Try to transfer more data but less data are present.
- Try to read data which is corrupted
- Try to write but file is read only.

### **When ArithmeticException is thrown ?**

The ArithmeticException is thrown when integer is divided by zero or taking the remainder of a number by zero. It is never thrown in floating-point operations.



### Difference between throw and throws ?

	throw	throws
1	throw is a keyword used for hitting and generating the exception which are occurring as a part of method body	throws is a keyword which gives an indication to the specific method to place the common exception methods as a part of try and catch block for generating user friendly error messages
2	The place of using throw keyword is always as a part of method body.	The place of using throws keyword is always as a part of method heading
3	When we use throw keyword as a part of method body, it is mandatory to the java programmer to write throws keyword as a part of method heading	When we write throws keyword as a part of method heading, it is optional to the java programmer to write throw keyword as a part of method body.

### Difference between checked Exception and un-checked Exception ?

	Checked Exception	Un-Checked Exception
1	checked Exception are checked at compile time	un-checked Exception are checked at run time
2	for checked Exception Extend Throwable class except RuntimeException.	for un-checked Exception extend RuntimeException.
3	e.g. IOException, SQLException, FileNotFoundException etc.	e.g. ArithmeticException, NullPointerException, ArrayIndexOutOfBoundsException, NumberNotFoundException etc.

### Difference between Error and Exception

	Error	Exception
1	Can be handle.	Can not be handle.
2	Example: NoSuchMethodError OutOfMemoryError	Example: ClassNotFoundException NumberFormatException



## Multithreading

### What is thread ?

Thread is a lightweight components and it is a flow of control. In other words a flow of control is known as thread.

### What is multithreading ?

Multithreading in java is a process of executing multiple threads simultaneously.

### Explaining State or Life cycle of thread.

State of a thread are classified into five types they are

- New State
- Ready State
- Running State
- Waiting State
- Halted or dead State

### How to achieve multithreading in java ?

In java language multithreading can be achieve in two different ways.

- Using thread class
- Using Runnable interface

### In which state no memory is available for thread ?

If the thread is in new or dead state no memory is available but sufficient memory is available if that is in ready or running or waiting state.

### Difference between sleep() and suspend() ?





Sleep() can be used to convert running state to waiting state and automatically thread convert from waiting state to running state once the given time period is completed. Where as suspend() can be used to convert running state thread to waiting state but it will never return back to running state automatically.

### **What is Thread Synchronization ?**

Allowing only one thread at a time to utilized the same resource out of multiple threads is known as thread synchronization or thread safe.

### **Why use Thread Synchronization ?**

Whenever multiple threads are trying to use same resource than they may be chance to of getting wrong output, to overcome this problem thread synchronization can be used.

### **How to achieve Thread Synchronization in java ?**

In java language thread synchronization can be achieve in two different ways.

- Synchronized block
- Synchronized method



## Final, Static, This

### **Why a static block executes before the main method ?**

A class has to be loaded in main memory before we start using it. Static block is executed during class loading. This is the reason why a static block executes before the main method.

### **Can we override static method ?**

No, static method cannot be overridden.

### **Why we cannot override static method ?**

because static method is bound with class whereas instance method is bound with object. Static belongs to class area and instance belongs to heap area.

### **Why use this keyword**

The main purpose of using this keyword is to differentiate the formal parameter and data members of class, whenever the formal parameter and data members of the class are similar then jvm get ambiguity (no clarity between formal parameter and member of the class)

To differentiate between formal parameter and data member of the class, the data member of the class must be preceded by "this".

### **When Need of super keyword ?**

Whenever the derived class inherits the base class features, there is a possibility that base class features are similar to derived class features and JVM gets an ambiguity. In order to differentiate between base class features and derived class features must be preceded by super keyword.

### **What is the difference between this. (this dot) and this() (this off).**



this. can be used to differentiate variable of class and formal parameters of method or constructor.

this() can be used to call one constructor within the another constructor without creation of objects multiple time for the same class.

### Difference between static and final keyword

static keyword always fixed the memory that means that will be located only once in the program where as final keyword always fixed the value that means it makes variable values constant.

### why main method is static ?

Because object is not required to call static method if main() is non-static method, then jvm create object first then call main() method due to that face the problem of extra memory allocation.

### Difference between non-static and static variable ?

	Non-Static method	Static method
1	<p>These method never be preceded by static keyword Example:</p> <pre>void fun1() { ..... ..... }</pre>	<p>These method always preceded by static keyword Example:</p> <pre>static void fun2() { ..... ..... }</pre>
2	Memory is allocated multiple time whenever method is calling.	Memory is allocated only once at the time of loading.
3	It is specific to an object so that these are also known as instance method.	These are common to every object so that it is also known as member method or class method.
4	These methods always access with object reference	These property always access with class reference



	Syntax: Objref.methodname();	Syntax: className.methodname();
5	If any method wants to be execute multiple time that can be declare as non static.	If any method wants to be execute only once in the program that can be declare as static .

### What is difference between super and this keyword

Super class is always pointing to base class features and this keyword is always pointing to current class features.

### What is difference between super(), super(..), this() and this(..).

super() and super(..) are used for establishing the communication between base class and derived class constructor.

this() and this(...) are used for establishing the communication between current class constructor.

### Which access specifiers is known as package access specifiers.

default access specifiers is known as package access specifiers.

### Why abstract class not made as final ?

Abstract classes definitions should not be made as final because abstract classes always participate in inheritance classes.

### Difference between non-static and static variable ?

	Non-Static method	Static method
	These method never be preceded by static keyword Example:	These method always preceded by static keyword Example:
1	<pre>void fun1() { ..... .....</pre>	<pre>static void fun2() { ..... .....</pre>



	}	}
2	Memory is allocated multiple time whenever method is calling.	Memory is allocated only once at the time of loading.
3	It is specific to an object so that these are also known as instance method.	These are common to every object so that it is also known as member method or class method.
4	These methods always access with object reference Syntax: Objref.methodname();	These property always access with class reference Syntax: className.methodname();
5	If any method wants to be execute multiple time that can be declare as non static.	If any method wants to be execute only once in the program that can be declare as static .

### What is new keyword ?

A new keyword is used to allocate memory at runtime, new keyword is used for create an object of class

### When use volatile keyword ?

If the variable keep on changing such type of variables we have to declare with volatile modifier.

### Main advantage of volatile keyword ?

The main advantage of Volatile keyword is we can resolve data inconsistency problems.

### Main dis-advantage of Volatile ?

The main dis-advantage of Volatile keyword is, crating and maintaining a separate copy for every thread, increases complexity of the programming and effects performance of the system.

### Why use synchronized keyword ?



Synchronized Keyword is used for when we want to allow only one thread at a time then use Synchronized modifier. If a method or block declared as a Synchronized then at a time only one thread is allowed to operate on the given object.

### **Main advantage of Synchronized keyword ?**

The main advantage of Synchronized keyword is we can resolve data inconsistency problem.

### **The main dis-advantage of Synchronized keyword ?**

The main dis-advantage of Synchronized keyword is it increased the waiting time of thread and effect performance of the system, Hence if there is no specific requirement it is never recommended to use synchronized keyword.



## Inheritance

### What is Inheritance ?

The process of obtaining the data members and methods from one class to another class is known as inheritance. It is one of the fundamental features of object-oriented programming.

### What are advantage of Inheritance ?

If we develop any application using concept of Inheritance than that application have following advantages,

- Application development time is less.
- Application take less memory.
- Application execution time is less.
- Application performance is enhance (improved).
- Redundancy (repetition) of the code is reduced or minimized so that we get consistence results and less storage cost.

### Why use Inheritance ?

- For Method Overriding (used for Runtime Polymorphism).
- It's main uses are to enable polymorphism and to be able to reuse code for different classes by putting it in a common super class
- For code Re-usability

### You can decrease scope of access modifier in inheritance ?

No, In Inheritance the scope of access modifier increasing is allow but decreasing is not allow. Suppose in parent class method access modifier is default then it's present in child class with default or public or protected access modifier but not private(it decreased scope).



### How many type of inheritance are allow in java ?

In Java following inheritance are allow;

- Single inheritance
- Multilevel inheritance
- Hierarchical inheritance
- Hybrid inheritance

### Which inheritance is not supported by Java ?

Multiple Inheritance, are not supported by java.

### Why multiple inheritance is not supported in java?

Due to ambiguity problem java does not support mutiple inheritance at class level.

### How to achieve multiple inheritance in java ?

Java can not support multiple inheritance at class level but you can achieve multiple inheritance in java by using Interface concept.

### Difference between Inheritance and package ?

- Package keyword is always used for creating the undefined package and placing common classes and interfaces.
- import is a keyword which is used for referring or using the classes and interfaces of a specific package.

### What is Difference between Class and Object ?

	Class	Object
1	Class is a container which collection of variables and methods.	object is a instance of class
2	No memory is allocated at the time of declaration	Sufficient memory space will be allocated for all the variables of class at the time of declaration.





3	One class definition should exist only once in the program.	For one class multiple objects can be created.
---	---	--

**Give real life example of class and object.**

In real world many examples of object and class like dog, cat, and cow are belong to animal's class. Each object has state and behaviors. For example a dog has state:- color, name, height, age as well as behaviors:- barking, eating, and sleeping.



## Interface

### **What is interface ?**

Interface is similar to class which is collection of public static final variables (constants) and abstract methods.

### **Why use interface in java ?**

In java interface are used for achieve multiple inheritance.

### **Can an Interface extend another Interface?**

Yes an Interface can inherit another Interface.

### **How interface is similar to class ?**

Whenever we compile any Interface program it generate .class file. That means the bytecode of an interface appears in a .class file.

### **How interface is different from class ?**

- we cannot instantiate an interface.
- An interface does not contain any constructors.
- All methods in an interface are abstract.
- An interface cannot contain instance fields. Interface only contains public static final variables.
- An interface is can not extended by a class; it is implemented by a class.
- An interface can extend multiple interfaces. That means interface support multiple inheritance

### **Why interface have no constructor ?**

Because, constructor are used for eliminate the default values by user defined values, but in case of interface all the data members are public static final that means all are constant so no need to eliminate these values.



Other reason because constructor is like a method and it is concrete method and interface does not have concrete method it have only abstract methods that's why interface have no constructor.

### **What is Marker or tagged interface ?**

An interface that have no member is known as marker or tagged interface. For example: Serializable, Cloneable, Remote etc. They are used to provide some essential information to the JVM so that JVM may perform some useful operation.

### **Why Method Overloading is not possible by changing the return type of method?**

In java, method overloading is not possible by changing the return type of the method because there may occur ambiguity.

### **Why Interface have no Constructor ?**

Because, constructor are used for eliminate the default values by user defined values, but in case of interface all the data members are public static final that means all are constant so no need to eliminate these values.

Other reason because constructor is like a method and it is concrete method and interface does not have concrete method it have only abstract methods that's why interface have no constructor.

### **Why not use abstract and final modifier together ?**

In java, abstract and final both modifiers are not allowed for a class at a time the reason is abstract and final are opposite keywords. If a class is an abstract, then that class must be extended (inherited). If a class is final then that class can not be extended. So both keyword can not be use at a time

### **Why use Abstract class ?**

Abstract class are used for fulfill common requirement. If we use concrete classes for fulfill common requirements than such application will get the following limitations.

- Application will take more amount of memory space (main memory).



- Application execution time is more.
- Application performance is decreased.

To overcome above limitation you can use abstract class.

### Difference between abstract class and concrete class ?

Concrete class	Abstract class
Concrete class are used for specific requirement	Abstract class are used for fulfill common requirement.
Object of concrete class can be create directly.	Object of abstract class can not be create directly (can create indirectly).
Concrete class containing fully defined methods or implemented method.	Abstract class have both undefined method and defined method.

### Difference between Abstraction and Encapsulation ?

Encapsulation is not provides fully security because we can access private member of the class using reflection API, but in case of Abstraction we can't access static, abstract data member of class.

### Difference between Abstract and Interface ?

	Abstract	Interface
1	It is collection of abstract method and concrete methods.	It is collection of abstract method.
2	There properties can be reused commonly in a specific application.	There properties commonly usable in any application of java environment.
3	It does not support multiple inheritance.	It support multiple inheritance.
4	Abstract class is preceded by abstract keyword.	It is preceded by Interface keyword.
5	Which may contain either variable or constants.	Which should contains only constants.
6	The default access specifier of abstract class methods are default.	There default access specifier of interface method are public.
7	These class properties can be reused in other class using extend keyword.	These properties can be reused in any other class using implements keyword.



8	Inside abstract class we can take constructor.	Inside interface we can not take any constructor.
9	For the abstract class there is no restriction like initialization of variable at the time of variable declaration.	For the interface it should be compulsory to initialization of variable at the time of variable declaration.
10	Inside interface we can take instance and static block.	Inside interface we can not take instance and static block.
11	There are no any restriction for abstract class variable.	For the interface variable can not declare variable as private, protected, transient, volatile.
12	There are no any restriction for abstract class method modifier that means we can use any modifiers.	For the interface method can not declare method as strictfp, protected, static, native, private, final, synchronized.

### Give Real life example of Abstraction

Abstraction shows only important things to the user and hides the internal details for example when we ride a bike, we only know about how to ride bike but can not know about how it work ? and also we do not know internal functionality of bike.

### Difference between Encapsulation and Abstraction

Encapsulation is not provides fully security because we can access private member of the class using reflection API, but in case of Abstraction we can't access static, abstract data member of class.

### How to achieve Encapsulation in java

In java you can achieve Encapsulation by using class concept.



## polymorphism

### Give Real life example of polymorphism

Suppose if you are in class room that time you behave like a student, when you are in market at that time you behave like a customer, when you at your home at that time you behave like a son or daughter, Here one person present in different-different behaviors.

### Difference between Overloading and Overriding ?

	Overloading	Overriding
1	Whenever same method or Constructor is existing multiple times within a class either with different number of parameter or with different type of parameter or with different order of parameter is known as Overloading.	Whenever same method name is existing multiple time in both base and derived class with same number of parameter or same type of parameter or same order of parameters is known as Overriding.
2	Arguments of method must be different at least arguments.	Argument of method must be same including order.
3	Method signature must be different.	Method signature must be same.
4	Private, static and final methods can be overloaded.	Private, static and final methods can not be overridden.
5	Access modifiers point of view no restriction.	Access modifiers point of view not reduced scope of Access modifiers but increased.
6	Also known as compile time polymorphism or static polymorphism or early binding.	Also known as run time polymorphism or dynamic polymorphism or late binding.
7	Overloading can be exhibited both are method and constructor level.	Overriding can be exhibited only at method leve.
8	The scope of overloading is within the class.	The scope of Overriding is base class and derived class.
9	Overloading can be done at both static and non-static methods.	Overriding can be done only at non-static method.
10	For overloading methods return type may or may not be same.	For overriding method return type should be same.





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