1. Can abstract class have constructors in Java?

Yes, abstract classes can have constructors but with a condition that they must be called bye the child class object.

1. Can abstract class implements interface in Java? do they require to implement all methods?

Yes , abstract class implements interface in Java as the interfaces are by default abstract classes and need to implement all methods present.

1. Can abstract class be final in Java?

No, abstract class cannot be final, because final classes do not have the inheritance property.

1. Can abstract class have static methods in Java?

Yes, abstract class can have static methods in java, but abstract static methods cannot be declared.

1. Can you create instance of abstract class?

No, instance is not created for abstract class as the methods in it are not completely implemented and invoked by the child class objects.

1. Is it necessary for abstract class to have abstract method?

No, It is not necessary for an abstract class to have abstract methods but it can also have non-abstract methods and constructor methods.

1. Difference between abstract class and interface in Java?

Abstract classes can have both non-abstract and abstract methods, but interfaces cannot have non-abstract methods. Interfaces must only contain abstract methods.

1. When do you favor abstract class over interface?

If we want to implement non-abstract methods then it is better to use abstract class.

1. What is abstract method in Java?

An abstract method is a method that is declared without an implementation.

1. Can abstract class contains main method in Java ?

No, abstract class cannot contain main method in java as objects cannot be created for abstract classes.

1. what is static block in java?

Static keyword can be used with class, variable, method and block. If you make a member static, you can access it without object. Static members are common for all the objects of the class but non-static members are separate for each instance of class.

Eg: class demo{

Static int num;

static {

num=100;

};

Public static void main(String[] Args)

{

Ststem.out.println(num);

}

}

1. What is the need of static block?

Static block is used for initializing the static variables. This block gets executed when the class is loaded in the memory as those static members are common for all the objects of the class.

1. Can we overload static methods in java?

Yes, we cannot overload static methods with using the same method name but with different parameters in the same methods.

1. Can we call super class static methods from sub class?

Yes, super class static methods can be called by the using the super class name but not with the sub-class name in the sub class main method.

1. What is the difference between final and static keywords?

Final keyword is used before the variables, classes, methods. If a variable is final then its value cannot be changed once after it is initialized at the time of declaration and the finale variable cannot be reinitialized, classes cannot be inherited and methods cannot be overridden.

Static is a keyword used before the variables, classes, methods, blocks. If a variable, class, method, blocks is static then they can be invoked in the sub class directly without using objects i.e, static classes do not create objects. It is not compulsory for the static variables to be initialized at the time of declaration and static variable can be reinitialized. Static methods can only access the static members of the class and can only be called by other static methods.

1. Write a note on covariant return type with example code.

The covariant return types are newly introduced since Java 5.0, and used during method overriding. Covariant return type allows us to change the return type of the overriding method in the subclass; however this return type in subclass method must be a subtype of super class method return type.

Eg. class A{

public A demo(String s)

{

return this;

}

}

class B extends A{

public B demo(String s)

{

return this;

}

public void C()

{

System.out.println(“Hello”);

}

}

class Creturntype{

public static void main(String[] Args)

{

New A().B().C();

}

}

Output:

Hello

1. Write a note on Enum with example code.

Enum in java is a data type that contains fixed set of constants. The java enum constants are static and final implicitly.

Eg: enum Color{

Black,Red,Blue;

}

public class Test{

     public static void main(String[] args)

     {

          Color c1 = Color.RED;

          System.out.println(c1);

     }

}

1. Write a note on use of super keyword and super() method.

Super keyword can be used to refer immediate parent class instance variable, invoke immediate parent class method. The super() can be used to invoke immediate parent class constructor.