

# Static Keyword

## Assignment Questions

1->Why do we need static keyword in java? Explain with an example ?

The static keyword in Java is mainly used for memory management.

Static keyword in Java is used to share the same variable or method of a given class. The user can apply static keyword with variable method block and nested class.

Example

```
class Test
{
    static void m1()
    {
        System.out.println("from m1");
    }
    public static void main(String[] args)
    {
        m1();
    }
}
```

2->What is class loading and how does the java program actually executes ?

Java class loader is a part of the Java runtime environment that dynamically loads Java classes into the Java Virtual Machine.

In Java, programs are not compiled into executable files; they are compiled into bytecode, which the JVM (Java Virtual Machine) then executes at runtime. Java source code is compiled into bytecode when we use the Java compiler; the byte code gets saved on the disk with the files execution.

3->Can we mark a local variable as static ?

In Java, static variable is a class variable. so if we have static local variable, it violates the purpose of static. Hence the compiler does not allow static local variables.

4->Why is the static block executed before the main method in java ?

The static blocks always execute the first before main method() in java because the compiler stores them in memory at the time of class loading and before the object creation.

5->Why is a static method also called a class method ?

Static method is a method that belongs to a class rather than an instance of a class.

This means you can call a static method without creating an object of the class. static methods are sometimes called class methods.

6->What is the use of static and instance variables ?

Instance variables are created when an object is created with the use of the keyword 'new' and destroyed when the object is destroyed. static variables are created when the program starts and destroyed when the program stops. instance variable can access directly by calling the variable name inside the class.

7->Difference between static and instance variables ?

<b>Instance variable</b>	<b>Static(class)variable</b>
1->Instance variables are declared in a class . 2->Instance variables are created when an object is created with the use of the keyword 'new'. 3->Instance variables can be accessed directly by calling the variable name inside the class.	1->Class variables are known as static variables are declared with the static keyword in a class. 2->Static variables are created when the program starts and destroyed when the program stops. 3->Static variables can be accessed by Kaling with the class name.

8->Difference between static and non static members ?

Static members are one per class but non-static members are one per instance.

Static members are accessed by their class name which encapsulates them, but non static members are accessed by object reference.

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