Static Keyword

1.Why do we need static keywords in java? Explain with an example?

The static keyword in Java is mainly used for memory management. The static keyword in Java is used to share the same variable or method of a given class. The users can apply static keywords with variables, methods, blocks, and nested classes. The static keyword belongs to the class than an instance of the class.

2.What is class loading and how does the java program actually execute?

Class loaders are responsible for loading Java classes dynamically to the JVM (Java Virtual Machine) during runtime. They're also part of the JRE (Java Runtime Environment). Therefore, the JVM doesn't need to know about the underlying files or file systems in order to run Java programs thanks to class loaders.

3.Can we mark a local variable as static?

Local Variables are variables inside a method. Only method gets to access these variables. you cannot have a static local variable , but you can use instance variables or class variables.

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

The static blocks always execute first before the main() method in Java because the compiler stores them in memory at the time of class loading and before the object creation. Here, the compiler executes all the static blocks first, and after finishing the static block execution, it invokes the main() method.

5.What is the static method also called a class method?

A 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 blocks in java?

In a Java class, a static block is a set of instructions that is run only once when a class is loaded into memory. A static block is also called a static initialization block. This is because it is an option for initializing or setting up the class at run-time

7.Difference between static and instance variables?

A static variable is a property of a class. An instance variable is a property of an instance. A static variable is created only once when the classloader loads the class. An instance variable is created every time an instance is created.

8.Difference between static and non instance members?

Static variables are shared among all instances of a class. Non static variables are specific to that instance of a class. Static variable is like a global variable and is available to all methods. Non static variable is like a local variable and they can be accessed through only instance of a class.