

1. Why do we need static keyword in java explain with example?

Static Keyword is mainly used for memory management in java. We can apply static keyword 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 executes?

Class Loading in java is the process of loading class files into the JVM at runtime. It is responsible for loading classes from different sources, such as the file system etc and making them available to the JVM for execution.

3. Can we mark a local variable as static.

No we can't mark a local variable as static

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

It is because static block gets executed the moment when the class loads.

5. Why is a 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?

Static block in java is used for changing the default value of static variables, initializing static variables of the class.

7. Difference between Static and Instance Variables?

Static Variables:

-The static variable can be used to refer to the common property of all objects (which is not unique for each object)

-There would only be one copy of each class variable per class, regardless of how many objects are created from it.

#### Instance Variables:

-It will be created at the time of object creation and destroyed at the time of object destruction

-It will be stored on the heap as the part of the object.

-The scope of Instance variables is exactly the same as scope of the objects.

-It should be declared within the class directly but outside of any method.

#### 8. Difference between static and non static members.

##### Static

-Static variables are shared among all instances of a class.

-Memory for static variable is created only one in the program at the time of loading of class

-Static variable is like a global variable and is available to all methods.

##### Non Static

- Non static variables are specific to that instance of a class.

- Memory for non-static variable is created at the time of create an object of class.

-Non static variable is like a local variable and they can be accessed through only instance of a class.