

ASSIGNMENT-14(7-8FEB)

Q. Why do we need Static keyword in java Explain with an example.

Ans- The static keyword is mainly used for memory management in java. A static keyword can be applied with variables, blocks, functions and class. The Static keyword is a property of a class rather than an instance of a class. The static keyword is used for a constant variable or a method that is the same for every instance of a class.

e.g->

```
public class static1 {  
    public static void main(String[] args) {  
        System.out.println("Main method");  
    }  
    static{  
        System.out.println("static method");  
    }  
}
```

Q. What is class loading and how does the java program actually executes?

Ans- In java, class loading is the process of loading class files into the JVM(Java virtual machine) at runtime. It is responsible for loading classes from various sources , such as the file system, network and databases and making them available to the Jvm for execution.

Q. can we mark a local variable as static?

Ans- Yes we can mark a local variable as static.

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

Ans- static block is executed before the main method in java because during class loading static variable and block is being executed that time only and the memory is being allocated in the heap memory , then the main method will execute.

Q. Why is static method also called a class method?

Ans- Methods which are available at the class level are referred to as “static method”. These methods are referred to as utility methods. Inside the static method we can access only static variable. If we try to access the instance variable directly then it would result in “Compilation Error”.

Q. What is the use of static block in java?

Ans- These are the blocks which gets executed automatically at the loading the “class files”. If we want to perform any activity at the time of loading .class file we have to define that activity inside the static block. We can write any no. of static blocks , those static blocks will

be executed from top to bottom. Normally a static block is used to perform initialization of the static variables.

Q. Difference between static and instance variable?

Ans- Static Variables:- These variables are called class variables. These variables will get memory in the method area. If the value does not change from object to object then we need to use static variables. Inside a static area we can access static variables only. Static variables are created using static keywords.

Instance variables:-Instance variable will be created at the time of object creation and destroyed at the time of object destruction hence the scope of instance variables is exactly the same as scope of objects.

Q. Difference between static and non-static members?

Ans- Static Members:- These variables are called class variables. These variables will get memory in the method area. If the value does not change from object to object then we need to use static variables. Inside a static area we can access static variables only. Static variables are created using static keywords.

Non-static member:- These variables are called "Instance variables". These variables will get memory in the heap area. If the value changes from object to object then we need to use non-static variables.