1. Why do we need static variable in java

Static variable is needed to make these variables constant for every instance(object) of the class.

class Trial {

private static int a;

public void setA(int setVar) {

a = setVar;

}

public int getA() {

return a;

}

}

class Launch {

public static void main(String[] args) {  
Trial obj = new Trial();

Trial obj1 = new Trial();

obj.setA(8);

System.out.println(obj1.getA());

}

} //I set the value of a for object first but it got automatically changed for object two clearly showing the concept of static

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

Firstly we compile our files and then the .class file is generated after that when we run the program the class files are loaded in the system(in which all the static blocks are called) then the execution goes to the runtime data areas -> ie the JVM after that the execution goes to the execution engine where the interpreter and jit compiler is there which is dependent on the operating system.

The three processes are involved in the class loading:-

The Loading

The Linking

Initialization

1. Can we mark a local variable as a static?

No we cannot make local variable as static. As static variable are common for class not for the method.

1. Why is the static blocks executed before the execution of main method?

In static blocks the values of static variables are initialized which are required for the execution of the main block and also the connection of databases are generally initialized in static blocks as we have to execute them at the first before the execution of the whole program.

1. Why is the static method also called the class method?

Static methods are those methods which are same for every object of the class.

1. What is the use of static blocks in java?

In the static blocks the static variables are defined in which the values of static variables are initialized and also the databases are connected to the system.

1. Difference between the static and instance variables?

The static variables are the variables that have the same value for every object, and the instance variables may have different values as of the object.

1. Difference between static and not static members?

The static members are the class members and will have the same value for every instance of the class. In not static members they may have different value for every instance of the class.