### VARIABLES AND BLOCKS IN JAVA

**1. What are the types of variable in java?**

Ans: - There are three types of variables in Java:

1. Local Variables
2. Instance Variables
3. Static Variables

**2. What is local variable and its rule in java?**

Ans: - Local Variables: A variable defined within a block or method or constructor is called local variable.

1. These variable are created when the block in entered or the function is called and destroyed after exiting from the block or when the call returns from the function.
2. Initialization of Local Variable is Mandatory.
3. The scope of these variables exists only within the block in which the variable is declared. i.e. we can access these variable only within that block.

**3. Why access specifier is not allowed for local variable?**

Ans: - Local variables cannot use any of the access level since its scope is only inside the method.

**4. Is it possible to declare a local variable as static?**

Ans:- Static local variables are not allowed in Java.

**5. Is it mandatory to initialize the local variable at the time of declaration?**

Ans: - It is not mandatory to initialize local variable at the time of declaration.

**6. What is static variable & when are static variables loaded in memory?**

Ans: - It is not mandatory to initialize local variable at the time of declaration.

**7. What is instance variable & how it allocates memory?**

Ans: - Variables which are defined without the STATIC keyword and are declared in a class outside any method, constructor or block is called instance variable.

It allocates memory by creating objects.

**8. What are the procedures to call a static, non – static variable?**

Ans: - Static variable can be called by class name, object name and directly. Non-static variable can be called by object name only.

**9. Why static is known as class level and non-static is known as object level variable.**

Ans:- As static variable allocates memory at the time of class loading, so it is known as class level variable. As non-static variable allocates memory at the time of object creation then it is known as object level variable.

**10. How to declare a constant in java?**

Ans: - A constant declared when a variable declared as static and final.

**11. What are the restrictions for a constant?**

Ans: - The restrictions are:

1. Basically the constant are declared in capital latter.
2. It will not change after ones initializing.

**12. It is better to declare a final variable as static but why?**

Ans: - To avoid memory wastage, it is better to declare a final variable as static because when you declared it as static final then only one copy of variable is created.

**13. Different types of block in java?**

Ans: - There are two type of block in java:

1. Static block
2. Non-static block

**14. When & how many times static block can execute?**

Ans: - Static block in java initializes when class load into memory , it means when JVM read the byte code. Static block is executed only once.

**15. When non-static block will execute?**

Ans: - A non-static block executes when the object is created, before the constructor.

**16. What is the role of static block in case of static final variable?**

Ans: - Generally, if the variable is static and final, it should be initialized at the time of declaration. To initialize the static final variable at the time of execution, we can use static block.

**17. What is the role of non-static block in case of non-static final variable?**

Ans: - To initialize the non-static final variable at the time of execution, we can use non-static block.

**18. If more than one static or non-static blocks are defined in a Java program, then in which order they execute?**

Ans: - It will execute in the same sequence in which they have been written into the program.

**19. To execute a method i.e. show () before main () method will execute, what we have to do?**

Ans: - To execute show () method before main () method called by JVM, we have to call show () method from static block.

**20. Which block will execute before anything executed in Java and which block will execute just before program is destroyed?**

Ans: - Static block always execute before anything is executed in java and finalize method will execute before program is destroyed.