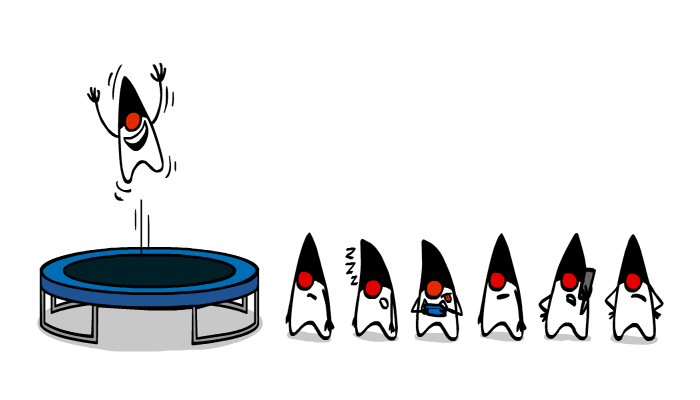
**Synchronized Keyword in Java**

**Synchronized Keyword** is used for when we want to allow only one thread at a time then use Synchronized modifier. If a method or block declared as a Synchronized then at a time only one thread is allowed to operate on the given object.



Synchronized is a Modifier which is applicable for the method or block, we cannot declare class or variable with this modifier.

**Advantage of Synchronized**

The main advantage of Synchronized keyword is we can resolve data inconsistency problem.

**Dis-Advantage of Synchronized**

The main dis-advantage of Synchronized keyword is it increased the waiting time of thread and effect performance of the system, Hence if there is no specific requirement it is never recommended to use synchronized keyword.

## Volatile Keyword in Java

If the variable keep on changing such type of variables we have to declare with volatile modifier. Volatile is a modifier applicable only for variables but not for method and class.

If a variable declared as volatile then for every thread a separate local copy will be created. Every intermediate modification performed by that thread will takes place in local copy instead of master copy. Once the value got finalized just before terminating the thread the master copy value will be updated with local stable value.

## Advantage of Volatile

The main advantage of Volatile keyword is we can resolve data inconsistency problems.

## Dis-Advantage of Volatile

The main dis-advantage of Volatile keyword is, crating and maintaining a separate copy for every thread, increases complexity of the programming and effects performance of the system. Hence if there is no specific requirement it is never recommended to use volatile keyword, and it is almost outdated keyword.

**Note:**Volatile variable means its value keep on changing where as final variable means its value never changes. Hence final-Volatile combination is illegal combination for variables.