Algorithm : It is sequence of instructions that perform a specific task when followed.

Program : A computer program is implementation of an algorithm.

Main advantage of multitasking : To increase the performance by reducing ideal time of CPU.

Process Based Multitasking: Executing several tasks simultaneously where each task is separate independent program (process) is called process based multi-tasking. For an instance, while typing java program in editor, we can listen audio songs from the same system. At a same time, we can also download from internet. All these tasks will be executed simultaneously and independent to each other. Hence, it is process based multi-tasking.

In addition, process-based multitasking is best suitable at OS level.

Thread Based Multitasking: Executing several task simultaneously where each task is separate independent part of the same program is called thread based multitasking. Each independent part is called a thread.

Thread based multitasking is best suitable at programmatic level.

DeadLock : When two threads are waiting for each other for forever, such type of infine waiting is called deadlock.

Synchrozed keyword is the only reason for deadlock .Hence, while using synchronized keyword we have to take special care.

There are no resolution technique for deadlock but several prevention technique are avilables.