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CS1201

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Multi-Threading in Operating Systems

**Abstract**

Analysis of multi threading in operating systems.

**Introduction**

In this report I am going to do an analysis of the characteristics,advantages and disadvantages of the multi threading in

Operating systems.

**Methodology**

The information was gathered on platforms online and in the lectures of the computer information system class, with the goal to provide a detailed report of this topic.

**Meaning**

Inside the operating system the Multithreading is a really important function. It allows Operating system to prosecute simultaneously.this approach has been used a lot by some softwares in the past years.

**Advantages of threads:**

1. Threads share common data and do not need to use interprocess communication.
2. Threads can take advantage of lightweight.
3. There is a higher throughput when multiple threads cooperate in a single job.
4. Responsiveness
5. Resource sharing
6. Economy

## **Types of Multithreading**

### **Kernel Level threads**

Kernel-level [threads](https://t4tutorials.com/threads-in-operating-systems/) are supported within the kernel of the operating system. Allin system modern operating system support kernel-level threading. They allow the kernel to perform multiple tasks and to service multiple kernel system calls simultaneously (Shamil, 2020).

**User Level threads:**

User level threads are implemented in the user library instead of [system calls](https://t4tutorials.com/system-call-and-advantages-of-system-calls/). The thread switching does not need to call the operating system. It does not cause an interrupt to the kernel. The kernel knows nothing about the user-level thread. The user level threads are very fast (Shamil, 2020).

**Conclusion**

The multithreading approach is used a lot in the computer system environment, it is the most seemed on the web these days where we are utilizing exchange preparing of each sort.Threading could be a portion which separates the code into small parts that are of little weight and has done less stress on CPU memory so that it can be effectively utilized and can accomplish a objective in any wanted field. The meaning of threading is outlined due to the issue of quick and standard changes in innovation .

**References**

Shamil , Fazal Rehman. “Threads, Multithreading, Types Models in Operating Systems (OS).” *T4Tutorialscom*,t4tutorials.com/threads-multitreading-types-of-thread-multithreading-models-in-operating-systems-os/.