Non-Contiguous memory

Non-Contiguous memory allocation allocates separate blocks of memory to a file/process

TLB:

A translation lookaside buffer (TLB) is a memory cache that stores recent translations of virtual memory to physical addresses for faster retrieval

Segmentation:

https://www.javatpoint.com/os-segmentation#:~:text=In%20Operating%20Systems%2C%20Segmentation%20is,table%20called%20a%20segment%20table.

Segmentation:

In Operating Systems, Segmentation is a memory management technique in which the memory is divided into the variable size parts. Each part is known as a segment which can be allocated to a process.

The details about each segment are stored in a table called a segment table.

Advantages of Segmentation

1. No internal fragmentation
2. Average Segment Size is larger than the actual page size.
3. Less overhead
4. It is easier to relocate segments than entire address space.
5. The segment table is of lesser size as compared to the page table in paging.

Disadvantages

1. It can have external fragmentation.
2. it is difficult to allocate contiguous memory to variable sized partition.

3. Costly memory management algorithms.

Interrupt is the mechanism by which modules like I/O or memory may interrupt the normal processing by CPU.
...
Advantages:

Advantage of Interrupt:

1. It increases the efficiency of CPU.
2. It decreases the waiting time of CPU.
3. Stops the wastage of instruction cycle.

What is System Call in Operating System?

A **system call** is a mechanism that provides the interface between a process and the operating system. It is a programmatic method in which a computer program requests a service from the kernel of the OS.

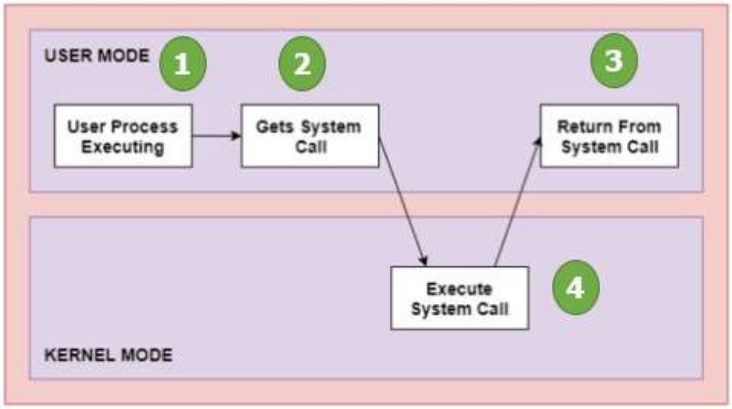
System call offers the services of the operating system to the user programs via API (Application Programming Interface). System calls are the only entry points for the kernel system.

Short Definition:

A **system call** is a mechanism that provides the interface between a process and the operating system. It is a programmatic method in which a computer program requests a service from the kernel of the OS. System calls are the only entry points for the kernel system.

How System Call Works?

Here are the steps for System Call in OS:



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What are similarities between process and thread?

1. Like processes threads share CPU and only one thread active (running) at a time.
2. Like processes, threads within a processes, threads within a processes execute sequentially.
3. Like processes, thread can create children.
4. And like process, if one thread is blocked, another thread can run.

Difference between preemptive and non-preemptive?

- In preemptive scheduling, the CPU is allocated to the processes for a limited time whereas, in Non-preemptive scheduling, the CPU is allocated to the process till it terminates or switches to the waiting state.
- Preemptive Scheduling has to maintain the integrity of shared data that's why it is cost associative which is not the case with Non-preemptive Scheduling.