

Difference Between Spooling and Buffering in OS

Spooling and buffering are the two ways by which I/O subsystems improve the performance and efficiency of the computer by using a storage space in main memory or on the disk. The basic difference between Spooling and Buffering is that Spooling overlaps the I/O of one job with the execution of another job while the buffering overlaps I/O of one job with the execution of the same job. Let us find some more differences between spooling and buffering with the help of comparison chart shown below.

Definition of Spooling

Simultaneous peripheral operation online, acronym for this is **Spooling**. A spool is a kind of **buffer** that holds the **jobs** for a device till the device is ready to accept the job. Spooling considers **disk** as a huge **buffer** that can store as many jobs for the device till the output devices are ready to accept them.

Definition of Buffering

Before discussing buffering, let us discuss, what is the buffer? The **buffer** is an area in the **main memory** that is used to store or hold the data **temporarily** that is being transmitted either between two devices or between a device or an application. In simple words, buffer temporarily stores data that is being transmitted from one place to another. The act of storing data temporarily in the buffer is called buffering.

Comparison Chart

BASIS FOR COMPARISON	SPOOLING	BUFFERING
Basic	Spooling overlaps the I/O of one job with the computation of another job.	Buffer overlaps the I/O of one job with the computation of the same job.
Full form	Simultaneous peripheral operation online	No full form.
Efficient	Spooling is more efficient than buffering.	Buffering is less efficient than spooling.
Size	Spooling considers disk as a huge spool or buffer.	Buffer is a limited area in main memory.