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Question: What are the main differences between page and segment----explain?

Answer:

**Paging** is basically a technique of memory management in the operating system. In this technique, the operating system retrieves the processes from the secondary memory into the main memory and this memory is in the form of pages. Paging is a logical concept.

Whereas, **Segmentation** is another technique of memory management. This technique is similar to Paging except for the fact that in segmentation the segments of a process are of variable length but in Paging the pages are of fixed size.

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| **Paging** | **Segmentation** |
| 1. Paging is a memory management technique where memory is partitioned into fixed-sized blocks that are commonly known as **pages.** | 1. Segmentation is also a memory management technique where memory is partitioned into variable-sized blocks that are commonly known as **segments**. |
| 1. This technique may lead to **Internal Fragmentation**. | 2. Segmentation may lead to **External Fragmentation**. |
| 1. With the help of Paging, the logical address is divided into a**page number** and **page offset**. | 3. With the help of Segmentation, the logical address is divided into **section number** and **section offset.** |
| 1. In Paging, the page size is decided by the hardware. | 1. While in Segmentation, the size of the segment is decided by the user. |