| | Paging | Segmentation |
|---|---|---|
| Basic Idea | Divide memory into fixed-size chunks (pages) | Divide memory into variable-size logical units (segments) |
| Unit of Memory | Pages | Segments |
| Unit of Address | Page numbers | Segment numbers or offsets within segments |
| Hardware | Requires hardware support (page table, TLB) | Requires hardware support (segment table, segment registers) |
| Memory Mapping | Pages are mapped linearly to physical memory addresses | Segments are mapped non-linearly to physical memory addresses |
| Fragmentation | May result in internal fragmentation | May result in external fragmentation |
| Access Control | Can control access to individual pages | Can control access to entire segments or portions of segments |
| Memory Sharing | Allows for memory sharing at the page level | Allows for memory sharing at the segment level |

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65. Discuss advantages and disadvantages of the Buffer cache ?
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67. What is an Operating System? Write down its desirable characteristics ?
68. Define a deadlock ? Write down the conditions responsible for deadlock? How can we recover from deadlock ?
69. What are the various services provided by Operating system ?
70. What do you mean by PCB? Where is it used? What are its contents? Explain.
71. What is Binary and Counting semaphores ?
72. What is File? What are the different File attribute and operations?
73. What are System call? Explain briefly about various types of system call provided by an Operating System?
74. Describe necessary conditions for deadlocks situation to arise.
75. What are points to be consider in file system design? Explain linked list allocation in detail?
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