Virtual memory is a computer system memory management technique that enables a computer to use more memory than is physically available by temporarily transferring data from the computer's RAM (Random Access Memory) to a hard disk or other storage device. It is a memory management technique that allows a computer to compensate for shortages of physical memory by temporarily transferring pages of data from RAM to disk storage.

The primary advantage of virtual memory is that it allows programs to execute even if there is insufficient physical memory available. This is because virtual memory enables the system to temporarily store inactive data on a hard drive, freeing up more RAM to be used by active processes. Virtual memory also makes it possible for large programs or multiple programs to run simultaneously, which can improve overall system performance.

Other advantages of virtual memory include:

1. Increased efficiency: Virtual memory reduces the need for frequent disk access, which can be slower than RAM access. By using virtual memory, a computer can access the data it needs more quickly and efficiently.

2. Improved system stability: Virtual memory can help prevent crashes and system freezes by allowing the system to continue operating even when it runs out of physical memory.

3. Simplified programming: With virtual memory, programmers can write programs that require more memory than is available, without having to manage the details of swapping data in and out of memory.

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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?
76. Write a Semaphore solution for dining Philosopher’s problem?
77. Consider the following page reference string:1,2,3,4,5,3,4,1,2,7,8,7,8,9,7,8,9,5,4,5. How many page faults would occur for the following replacement algorithm, assuming four frames:a) FIFOb) LRU
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