

Platform technology

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BSIT 301

Questions:

1. Which partitioning setup could possibly reduce internal fragmentation and how? The partitioning setup that could possibly reduce internal fragmentation is Unequal Size Partitioning. It helps lessen but not solve the problems. In the figure example, programs up to 16M can be accommodated without overlays and partitions smaller than 8M allow smaller programs to be accommodated with less internal fragmentation.
2. Based on the two partitioning setups above, would you recommend the implementation of the fixed partitioning technique in developing automated machines? Why or why not? My recommendation will be fixed partition because there are chances of data losses in the automated machines during power outages or when software fails. Equal size partitions enable faster data recovery in critical situations, which is very important for any organization. For example, it is recommended that the primary hard disk is partitioned into at least two major sections in order to enjoy this advantage. In operating systems, Memory management is the function responsible for allocating and managing computer's main memory. Memory management function keeps track of the status of each memory location, either allocated or free to ensure effective and efficient use of primary memory. The memory management function also informs the user regarding the total used space and warns the user in case the memory available is too low.
3. In your perspective, what are the possible downsides of utilizing an equally sized memory partitions? Rationalize your answer. In my perspective the possible downside of utilizing an equally sized memory partitions first a program maybe excessively long to fit the partition in such a circumstance the programmer must design the program with the use of overlays thus that only a portion of program needed in the main memory at any one time. When a module is needed that isn't present, the program should load that module into the programs partition, overlaying whether data or programs are there. Lastly, Main memory utilization is wasteful. There is wasted space internal to a partition because of the block of data loaded is smaller than partition called internal fragmentation. Both problems can be lessened by use of using un-equal partitions. This technique is most favorable for individual partition. The utilization of unequal-size partition provides a degree of flexibility to fixed partitioning. Part II: Dynamic Partitioning

Questions:

4. What do you think is the possible reason why Process 2 was pulled/swapped out of the memory? In this case, process 2 is most likely swapped since it is idle. A process might be shifted from main memory for one of two reasons: it could be idle, or it could be halted.

5. When Process 1 finishes the execution (g) and Process 2 is swapped back in the memory (h), what possible condition or phenomenon can occur within the memory? Rationalize your answer. Processes are not terminated until all their steps have been completed. This scheduling method has allotted the CPU to a specific process. To relieve the CPU, the process that is keeping it busy will either transfer context or terminate.

6. If you are to develop a file management system, would you suggest the implementation of the dynamic partitioning technique in memory management? Why or why not? Yes, I would implement the Dynamic partitioning technique because of the following reasons. First, there is no limit on the size of the process. Second, the degree of multiprogramming is dynamic. and lastly, No internal fragmentation.