Project 2

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1 Lab 3: Question 1

Q: Explain the difference between internal and external fragmentation.

A: Internal fragmentation is when a process allocates more memory then required. This is done by dividing up memory using fixed partitioning by the system administrator. The space left over is "user space". External fragmentation on the other hand uses dynamic partitioning. This is when memory is divided based on the space required by the process. When a process is complete, another process takes it's place and if there is left over space in the block, it is free space.

2 Lab 3: Question 2

Q: Given five (5) memory partitions of 100KB, 500KB, 200KB, 300KB, and 600KB (in that order), how would optimal, Uirst-Uit, best-Uit, and worst-Uit algorithms place processes of 212KB, 417KB, 112KB, and 426KB (in that order)?

A:
First Fit: 212KB - 417KB - 112KB - 426KB
Best Fit: 212KB - 417KB - 112KB - 426KB
Worst-Fit: 212KB - 417KB - 112KB - 426KB

3 Lab 4: Question 1

Q: What is the relationship between a guest operating system and a host operating system in a system like VMware? What factors need to be considered in choosing the host operating system?

A: Host operating system directly communicates with the hardware of the system while a guest operating system has a virtual OS and can not interact

with the physical hardware. However, a guest is presented with what seems to be a copy of the physical system however, the changes made do not affect the hardware. Factors such as size and complexity of the host OS need to be considered. This is because if the OS is too complex or too large, creating a virtual guest OS is not restricted.