Lab Three

Brendon Kupsch

Brendon.Kupsch1@Marist.edu

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1 Problem One

1.1 1. Explain the difference between internal and external fragmentation.

Memory can split itself into blocks, and allocate the block of memory to a particular process. Internal Fragmentation occurs when the memory alloted to the process is larger than the memory being requested. This creates fragments of empty space in between allocated blocks in the memory. Memory can also be assigned to processes based on the processes size instead of allocating a specific amount. External fragmentation occurs when these processes change in size, or are replace by different processes. Fragments or gaps of unallocated memory end up in between and around these processes.

2 Problem Two

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

Optimal:

212KB	–>	300KB	partition
417KB	–>	500KB	partition
112KB	–>	200KB	partition
426KB	–>	600KB	partition

First-fit:

212KB			–>			500KB		partition
417KB			–>			600KB		partition
112KB			–>			200KB		partition
426KB	–>	No	parition	with	enough	space	for	this process.

Best-fit:

212KB			–>			300KB		partition
417KB			–>			500KB		partition
112KB			–>			200KB		partition
426KB			–>			600KB		partition

Worst-fit:

212KB			–>			600KB		partition
417KB			–>			500KB		partition
112KB			–>			300KB		partition
426KB	–>	No	partition	with	enough	space	for	this process.