LAB 3 Questions OS

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1.Explain the difference between internal and external fragmentation.

Internal fragmentation is the separation between the memory needed and the assigned memory. The excess amount of memory that is not used is considered the internal fragments.

External fragmentation is the empty spaces formed from pieces of memory that are too small for a new system to operate. When these spaces aren't adjacent, it is unable to allocate the total amount of memory.

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 with 88 KB left
417KB -> 500KB partition with 83 KB left
112KB -> 200KB partition with 88 KB left
426KB -> 600KB partition with 174 KB left

first fit:
212KB -> 500KB partition with 288 KB left
417KB -> 600KB partition with 183 KB left
112KB -> 288KB (in the 500KB partition) with 176 KB left
426KB won't fit in the remaining partitions.

Worst-fit:
212KB -> 600KB partition with 388KB left
417KB -> 500KB partition with 83 KB left
112KB -> 388KB (600KB partition) with 276 KB left
426KB won't fit in the partitions.