OS 4/14

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Dynamic Partitioning

- The dynamic partitioning example from the last class period was the first fit algorithm
- For next fit, the pointer for the next place to allocate memory is at the bottom of the last allocated block/top of first available opening
  - It's the first space starting at that pointer
  - For next fit, if there's no space at the bottom, you go to the top
  - If memory is full after insertion, the pointer should reset to the top of the memory allocation

External Fragmentation

- Sum of the free spaces outside of the allocated blocks
- Compaction:
  - Push all allocations to the top of memory so that all of the used space is at the top of memory and all of the unused space is at the bottom
  - Cluster to increase the size of openings, you want to compact the things that are close to each other
    - If there are two pieces of used memory that are close together, you can push those two pieces of memory together to increase the blocks of unused memory

Addressing

- Logical Addressing: reference to a memory location that is independent of the current assignment of data to memory
- Relative Addressing: when an address is expressed relative to some known location
- Physical Addressing: also called absolute addressing. it is the actual location in memory

Simple Paging

- Main memory is divided into a number of equal sized frames (pages). Each process is divided into equal sized pages too. A process is loaded by loading all of its available pages