Idea

Virtual Memory

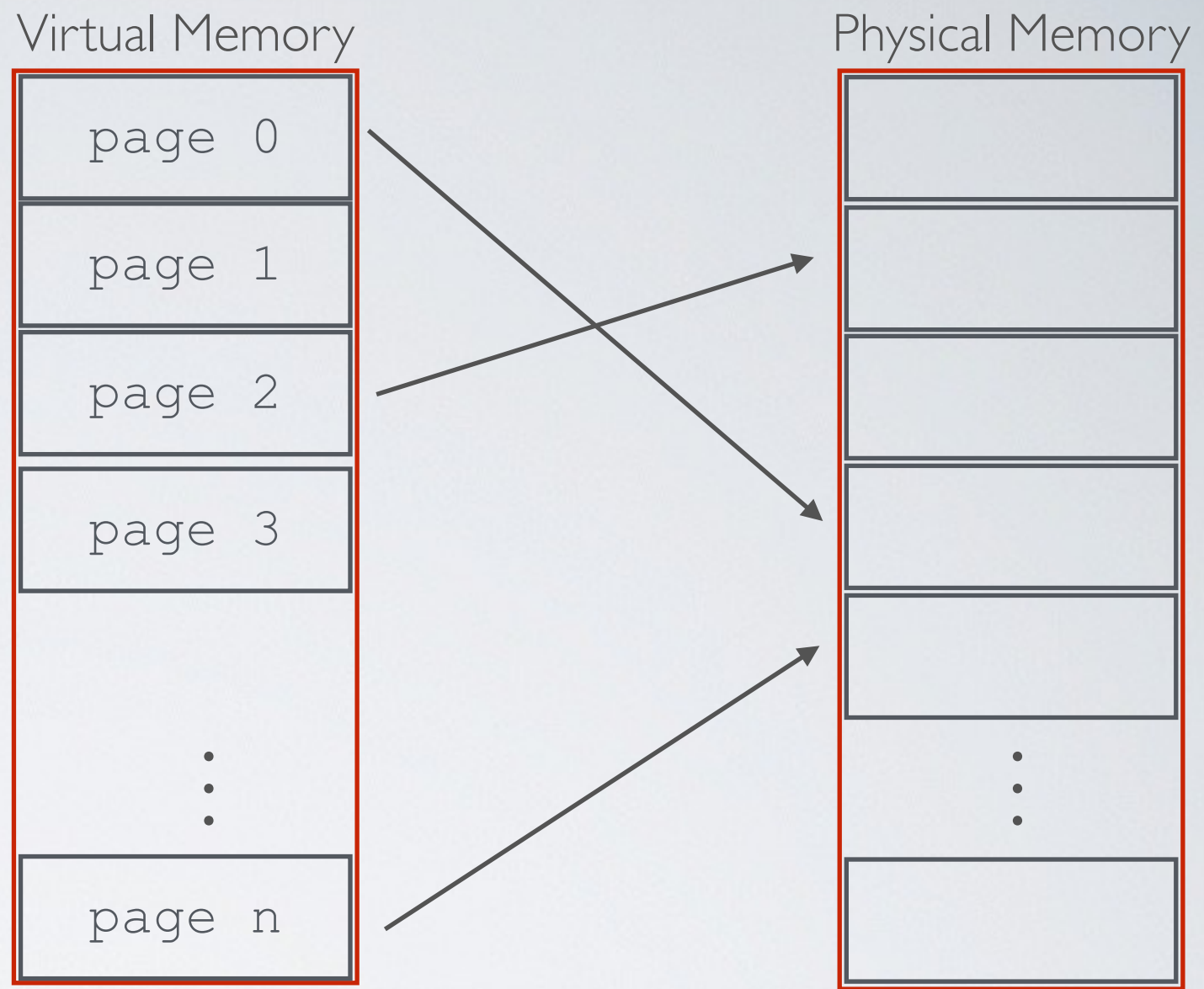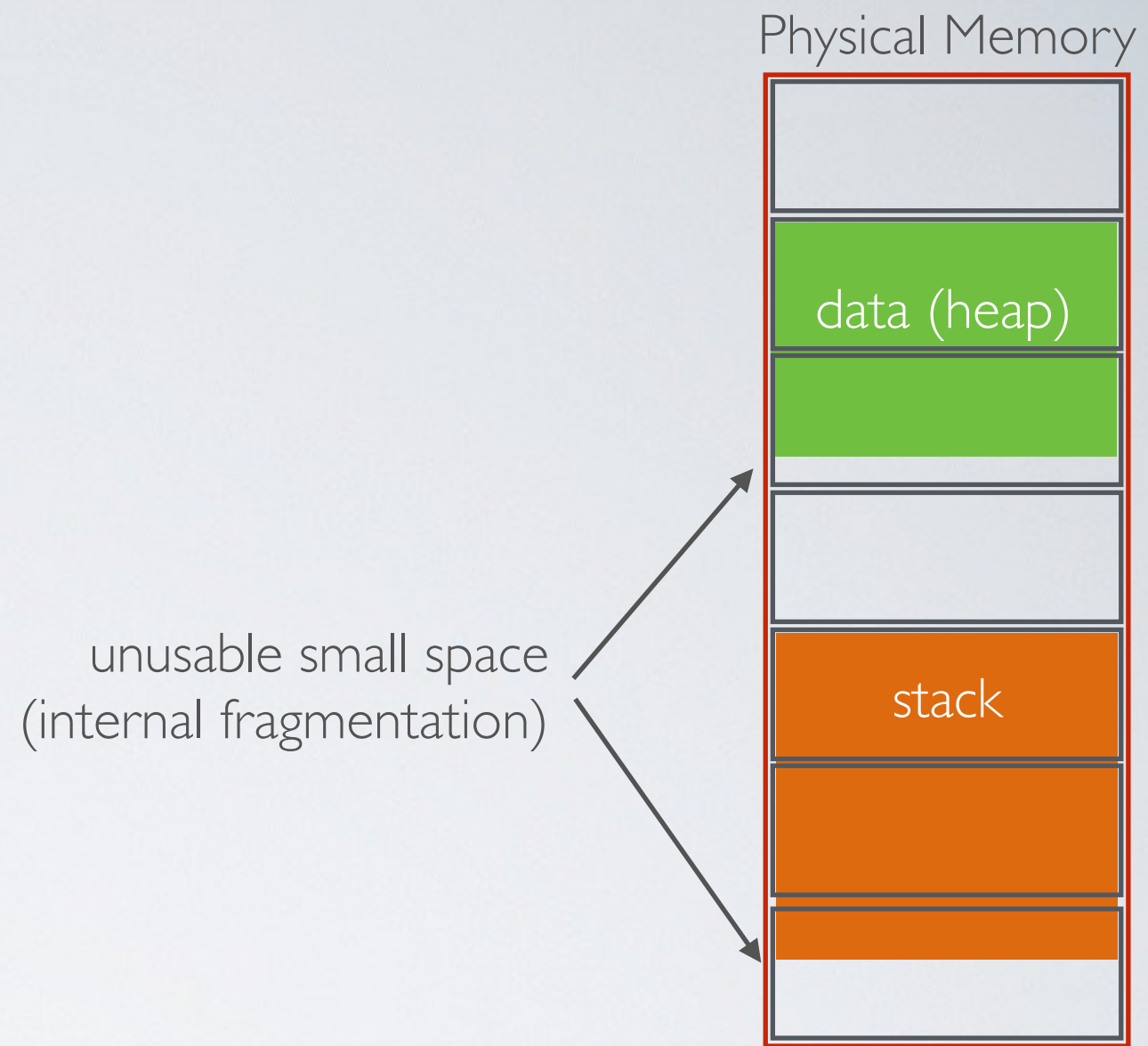| |
|---|
| page 0 |
| page 1 |
| page 2 |
| page 3 |
| ⋮ |
| page n |

Physical Memory

➡ Divide memory up into fixed-size pages
  to eliminate external fragmentation

Each process has a collection of maps from virtual pages to physical pages

✓ Can share/protect memory at page granularity

Paging Trade-offs

Physical Memory

data (heap)

unusable small space
(internal fragmentation)

stack

✓ Eliminates external fragmentation

✓ Simplifies allocation, free, and backing storage (swap)

◉ Average internal fragmentation of .5 pages per "segment"