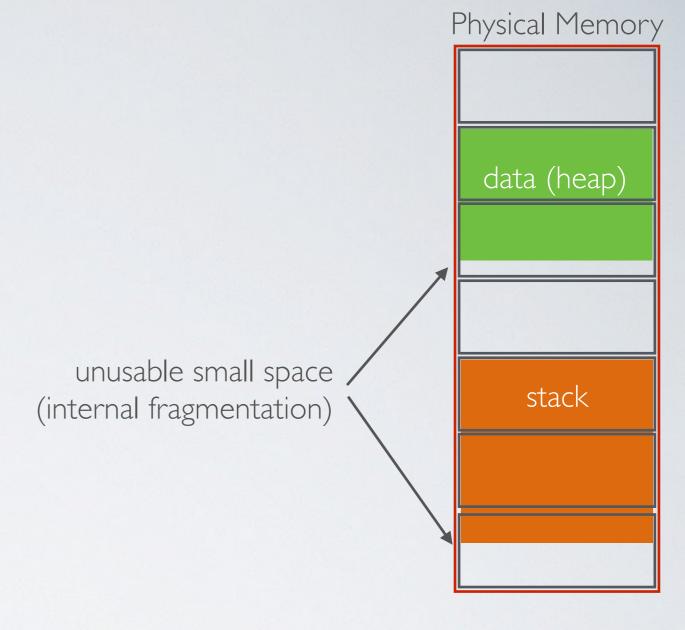
Paging Trade-offs



- ✓ Eliminates external fragmentation
- ✓ Simplifies allocation, free, and backing storage (swap)
- Average internal fragmentation of .5 pages per "segment"

Paging Data Structures

Pages are fixed size (e.g. 4K) so a virtual address has two parts:

- · virtual page number : most significant bits
- and the page offset: least significant 12 bits (log₂ 4k)

The page table is a collection of page table entry (PTE) that maps

- a virtual page number (VPN)
 i.e the index in the page table
- · to physical page numbers (PPN) a.k.a frame number
- and includes bits for protection, validity, etc ...