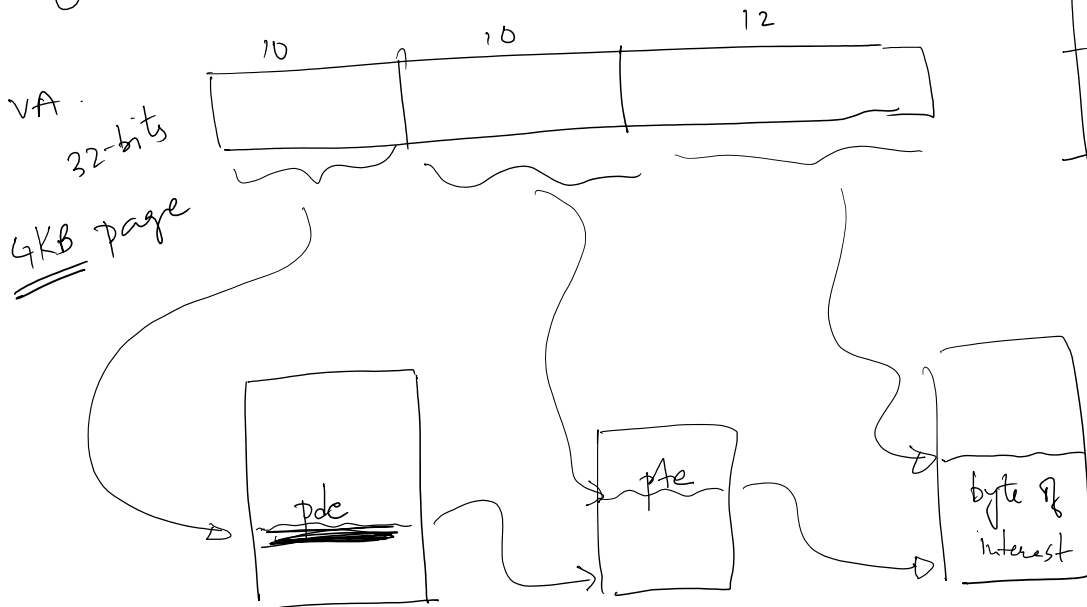


Paging // Quiz 2?

worries

- (external) fragmentation
- contiguous alloc. for translation meta-data
- utility // efficiency.
- fast allocate what is needed.

① the translation mechanism



CR3

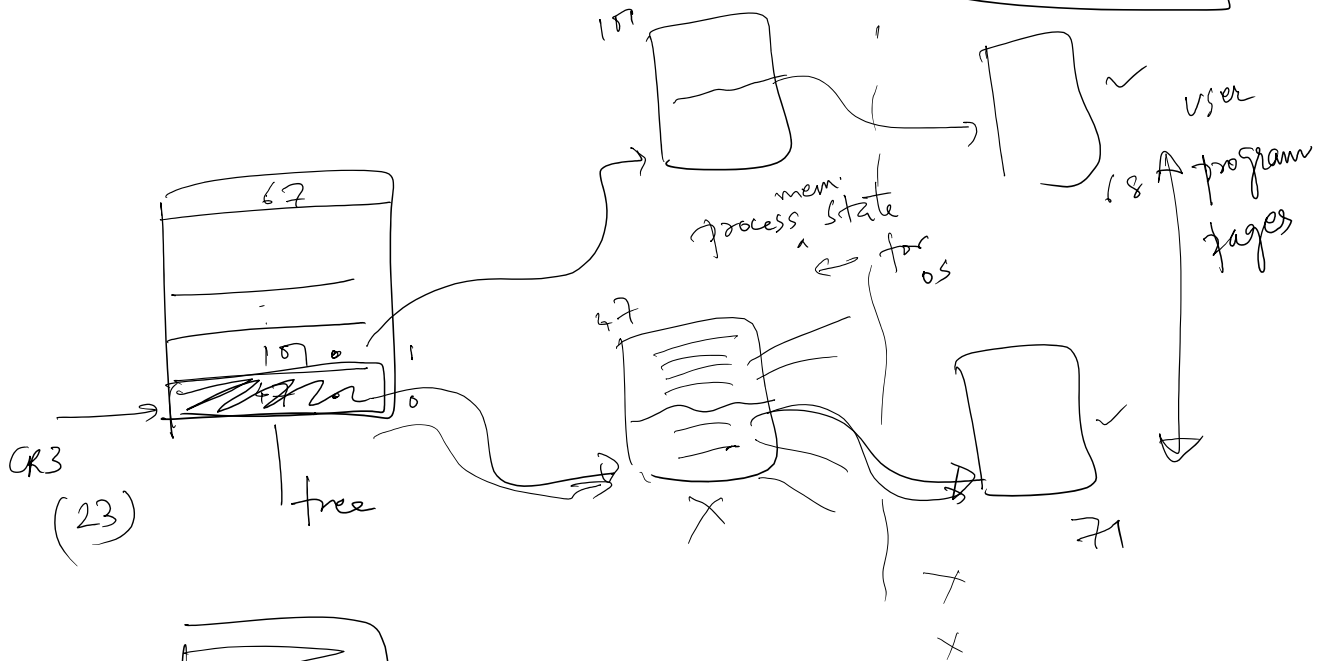
h/w regs.

page directory table (page)

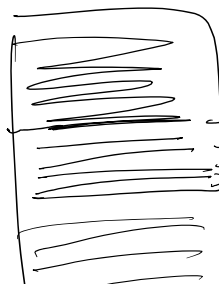
page table entry page

page

Space-time trade off



VA



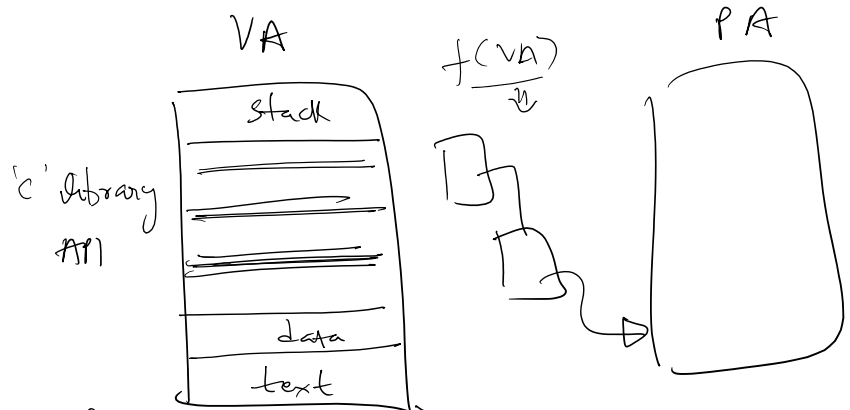
free

reclaimations (i) free



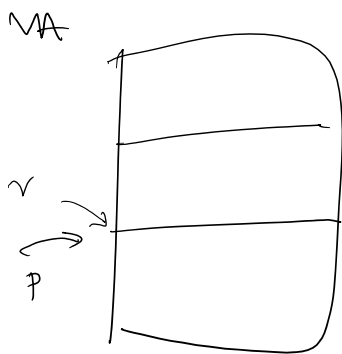
- (i) free
- (ii) OS-induced swapping.

pde & ptes



① `char *p = malloc(1, size of (char));`
`{`

`* (p + 5000) = 'a';` // possibly invalid in VA.

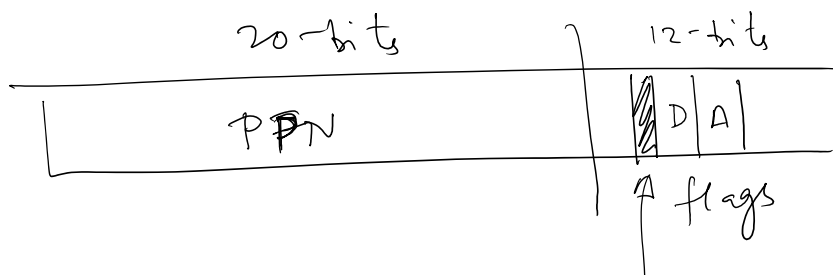


② `p = malloc(1)`
`v = malloc(5000)`

`p + 5000`
 in valid
 in VA.

pde - pte

- page size
- depth of page tables / levels
- size of each entry.
- 32-bits long



1 4 flags
invalid/ valid (PTE-P)