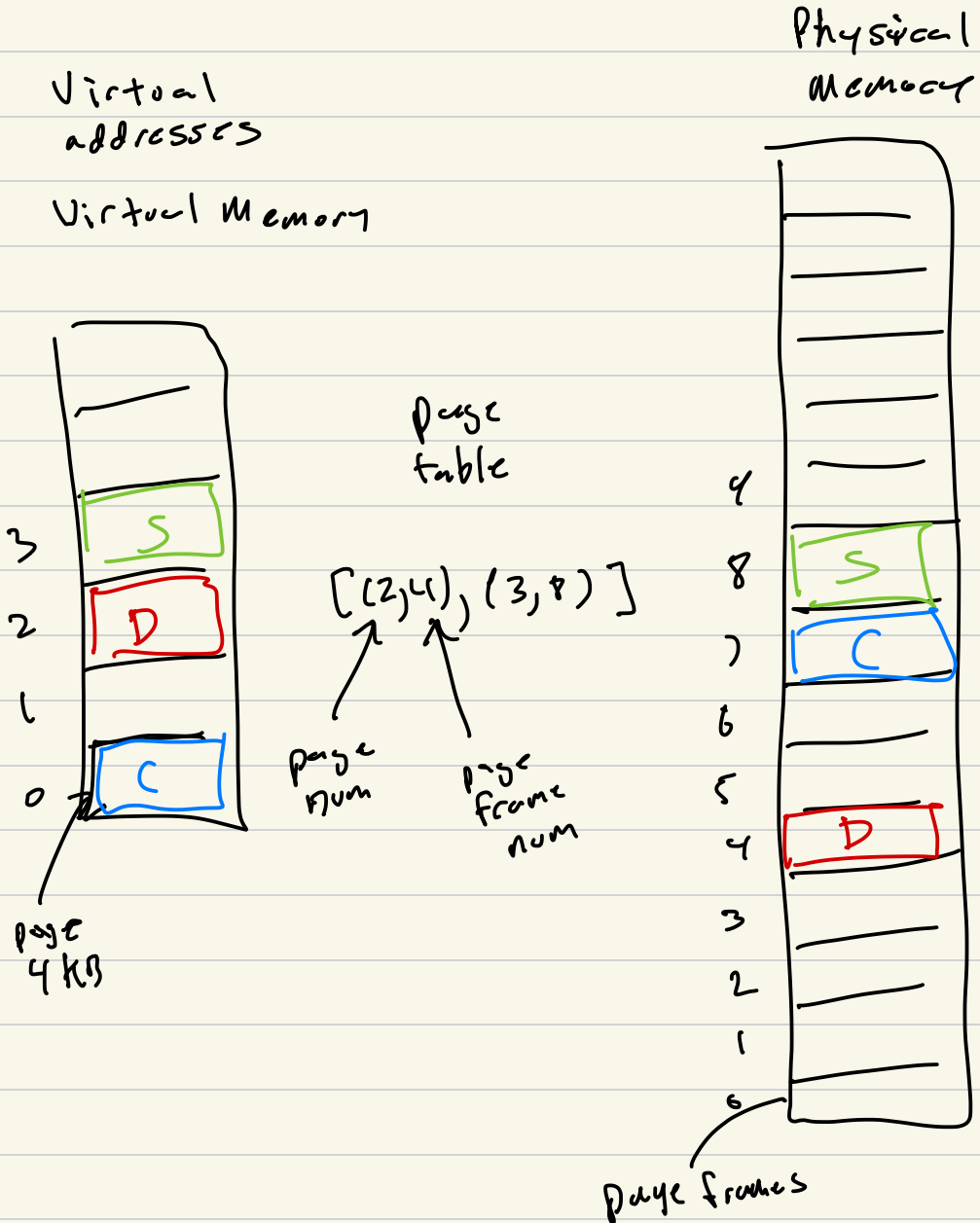
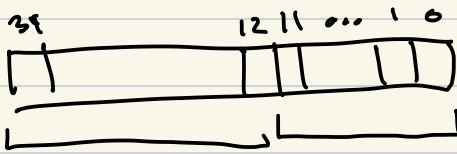


CS 326 Page Tables in xv6

page tables



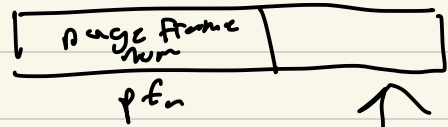
Assume a 32 bit architecture



Page number
20 bits

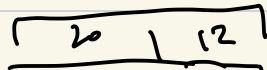
Page offset
12

VA



PA

$p_n \rightarrow [PT] \rightarrow pfn$



PTE 6.75

pfn PTE 6.75

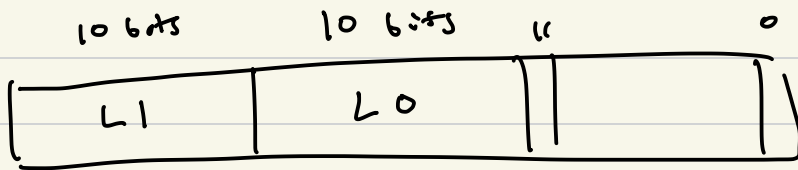
2^{20}
 $\approx 1MB$

$$2^{20} \cdot 2^2 = 2^{22} = 4MB$$

index

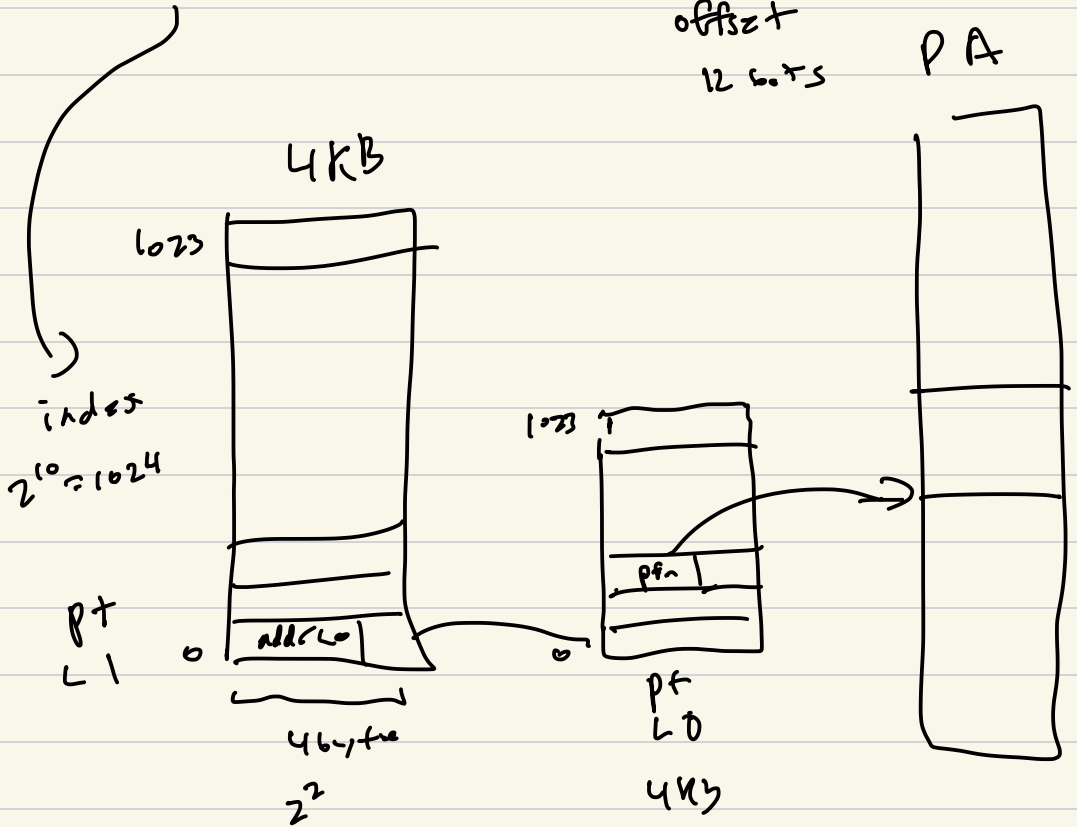
pt. addr

4 bytes
 2^2 bytes



offset
12 bits

PA



$$2^{10} \cdot 2^2 = 2^{12} = 4KB$$

L1

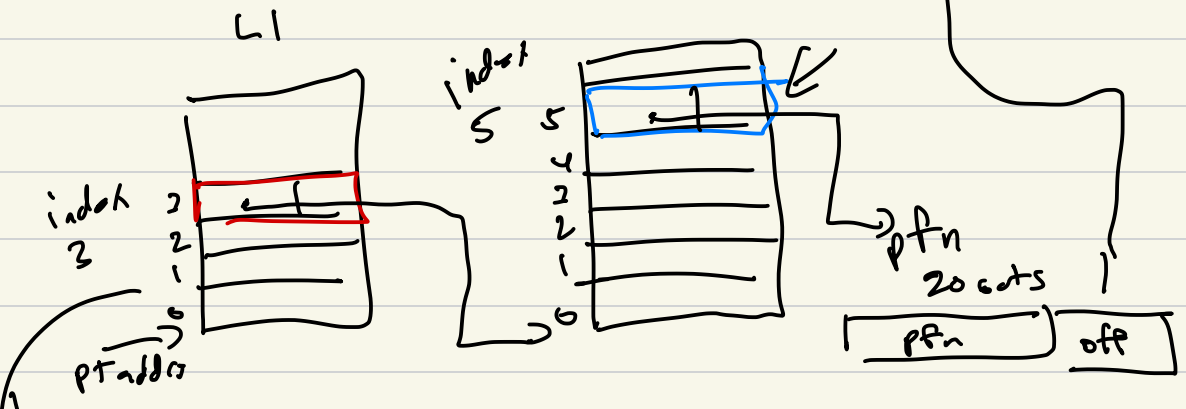
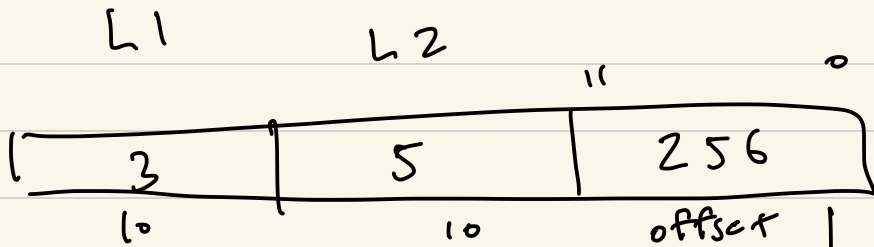
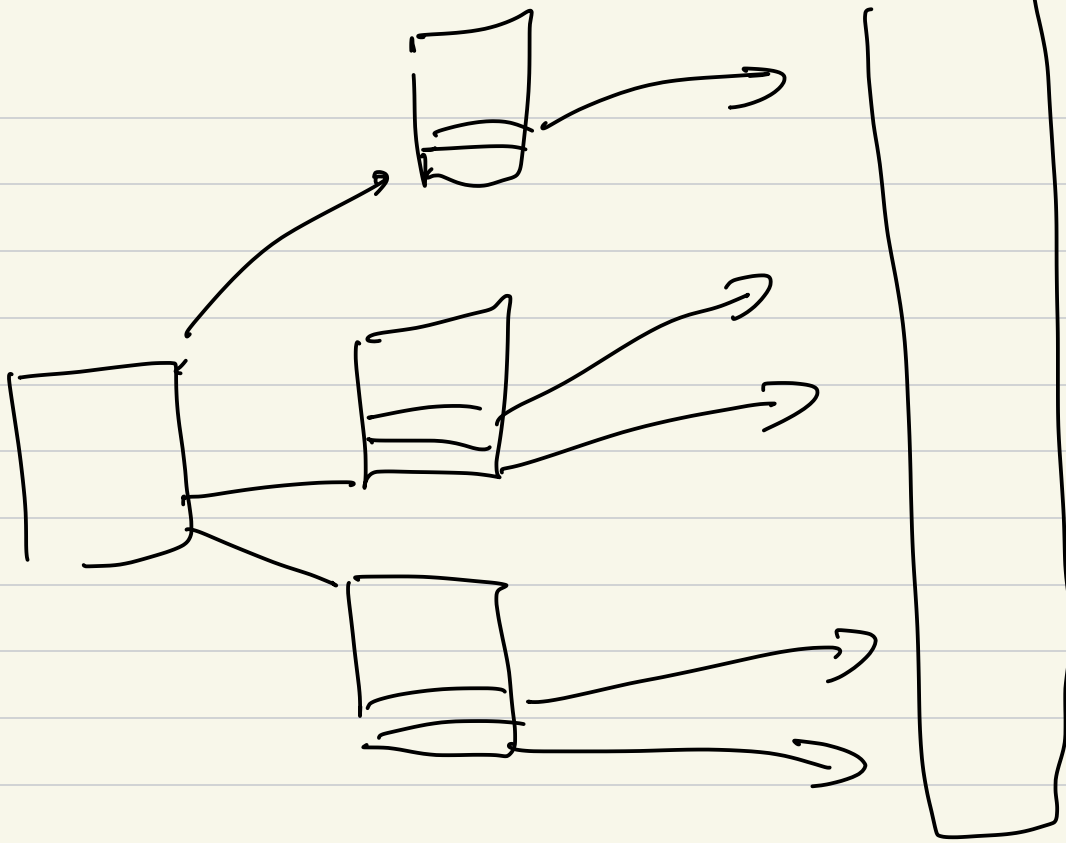


L2



P1





L1

entries

$$2^{10} = 1024$$

L0

$$2^{10} = 1024$$

$$2^{10} \cdot 2^{12} = 2^{22} = 4 \text{ MB}$$

8
16

$$2^{10} \cdot 2^{22} = 2^{32} = 4 \text{ GB}$$