



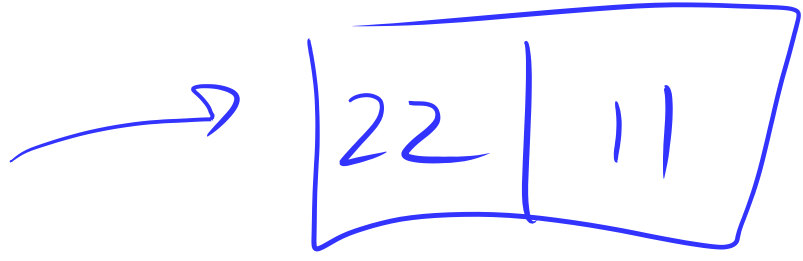
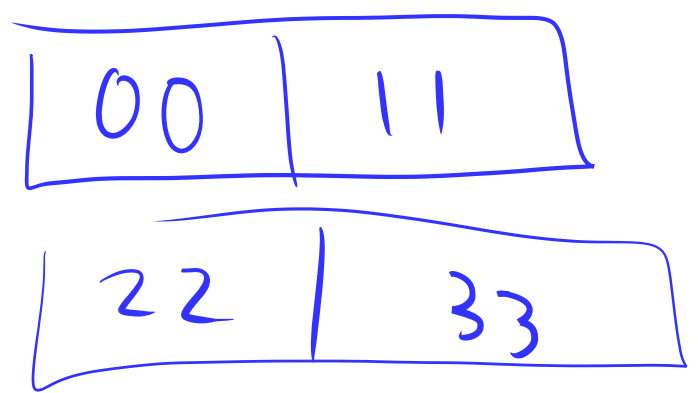
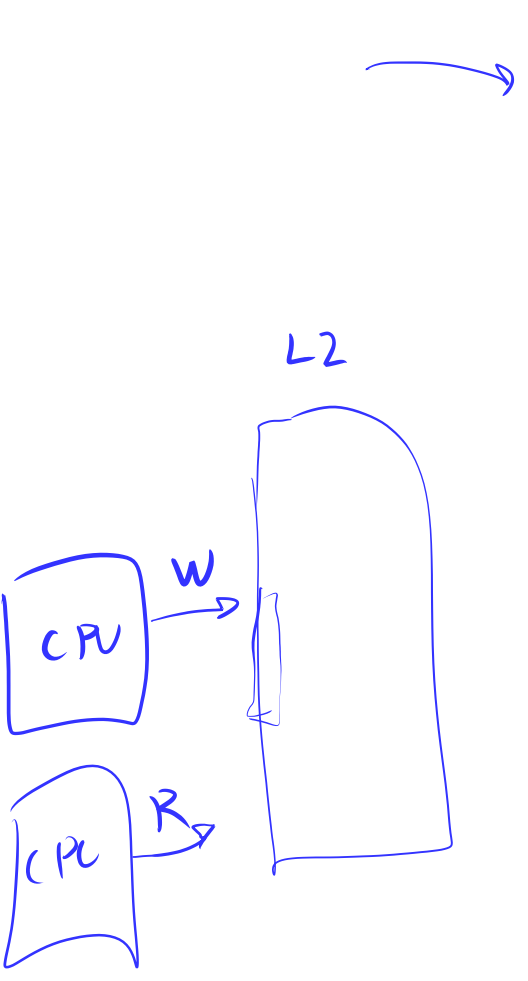
S2-13-5

2^{20} ~~Bytes~~

$\frac{1 \text{ sets}}{4 \text{ Block}}$

$\frac{1 \text{ block}}{32 \text{ bytes}}$

— sets



Synchronization

atomic all happens w/o interruption

atomic mem operations

atomic +=

C.A.S (atomic)

compare and set

Success = $a == b ? a = c : fail$

loop forever {

old value = dest

~~work~~

if (cas (dest, oldvalue, newvalue)) break

OPTIMISTIC

lock-free

}

Mutual exclusion to a code region

synchronized (var) {

lock

bool

locked

lock()



if (locked) wait until unlocked
locked = true

unlock()



locked = false

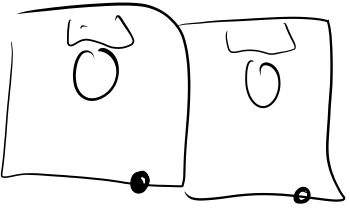
}
unlock

lock(e)



mutex

unlock(e)



Counting semaphore

lock(s)

if (s == 0) wait until position

s -= 1

return

unlock(s)

s += 1