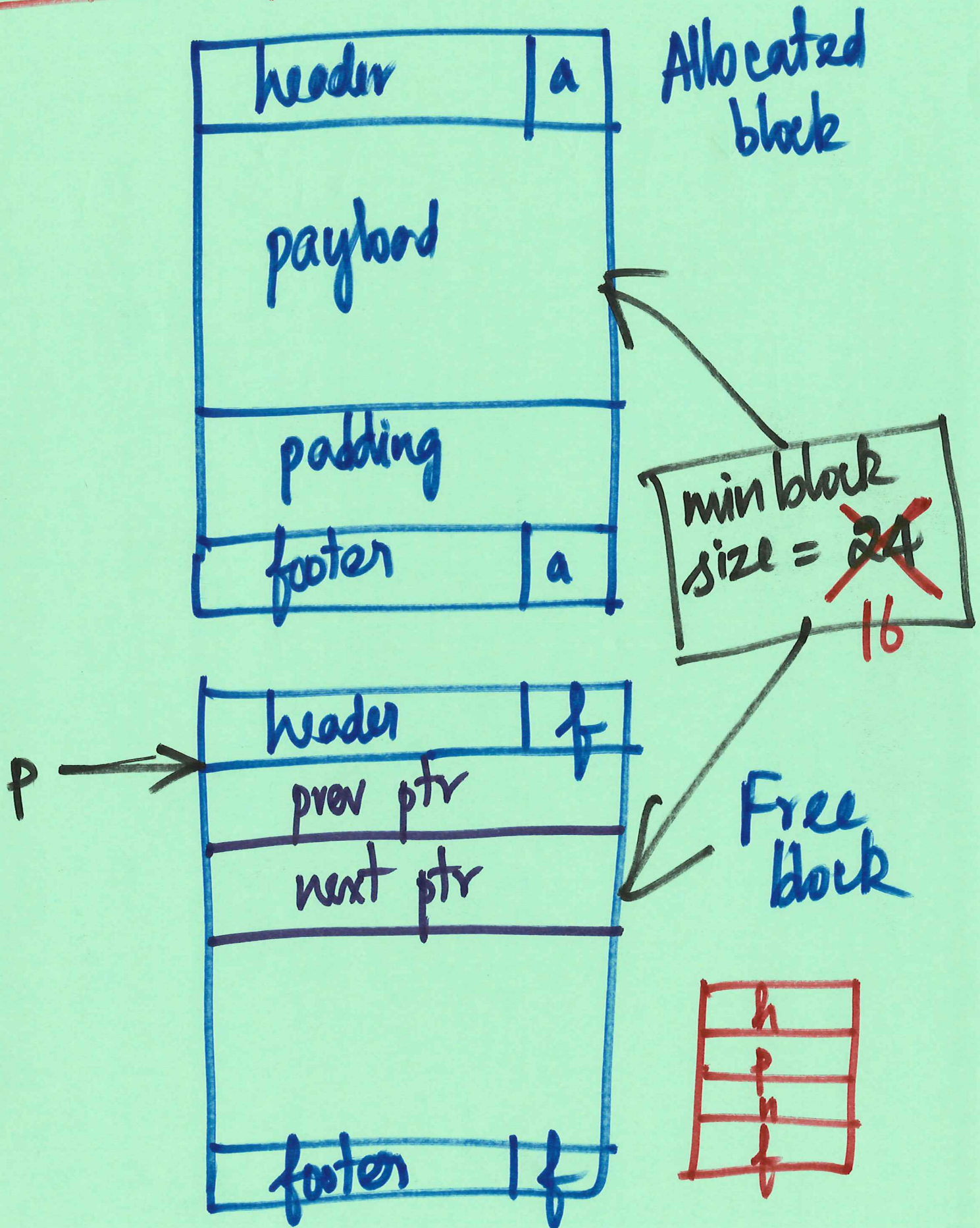
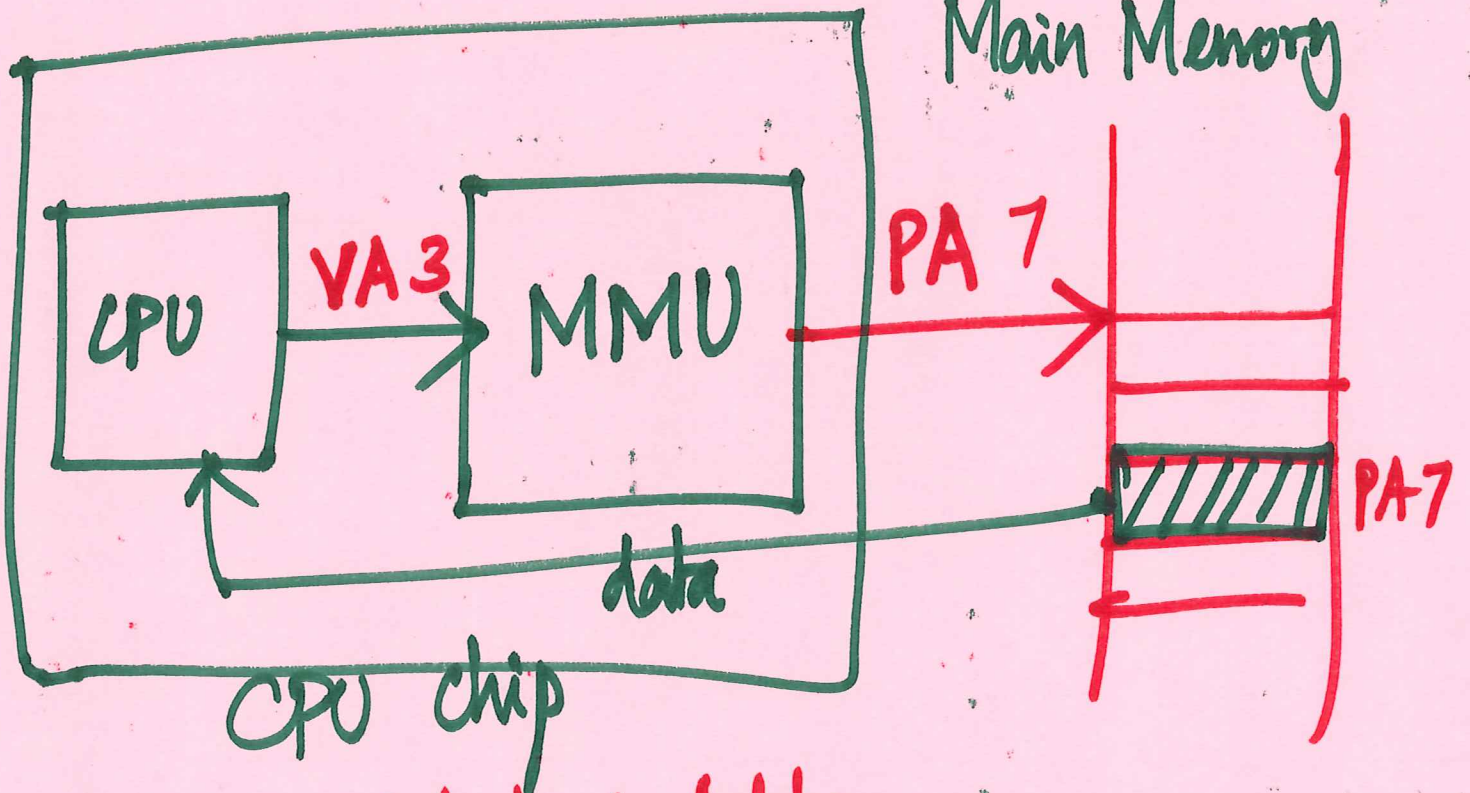
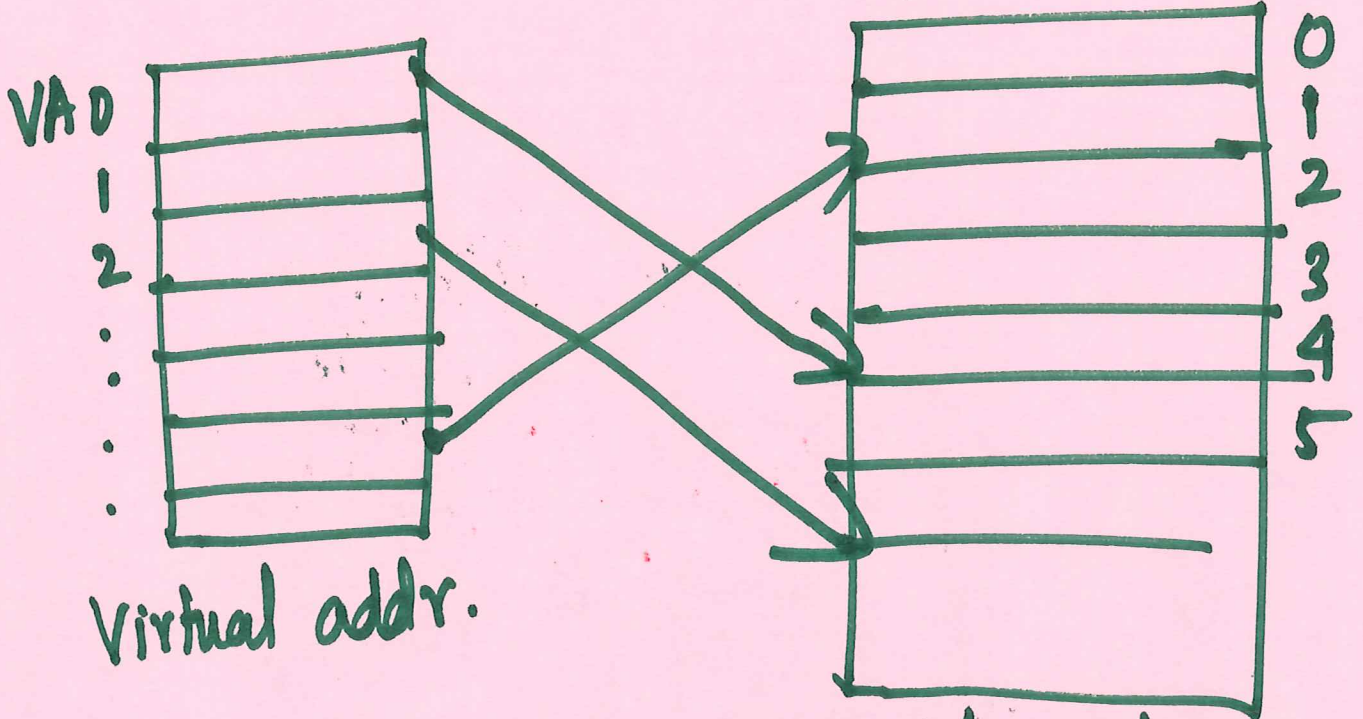


# Explicit free list



# Virtual Memory

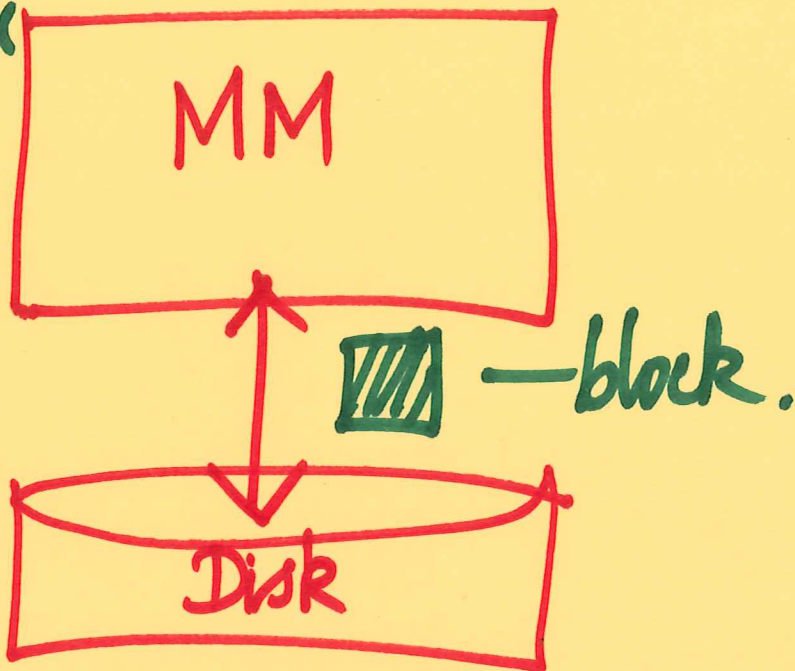


VA - Virtual Addr.  
PA - Physical Addr

# Main Memory as a cache

Fully associative  
cache.

Write back.



blocks  $\rightarrow$  pages

page size = 4 KB to 2 MB.

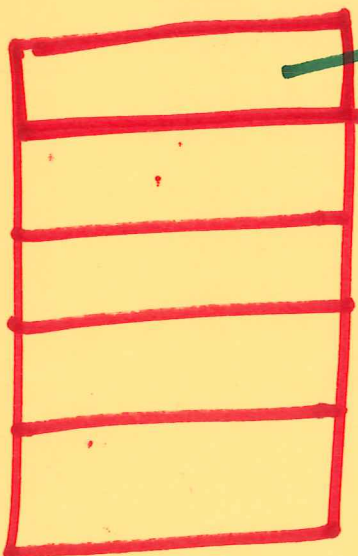
(block size)

$4 \times 2^{10}$  bytes

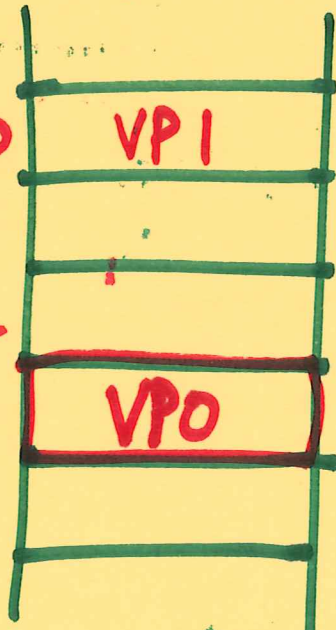
$2 \times 2^{20}$  bytes

Process

VPO  
VP1  
2  
3  
4

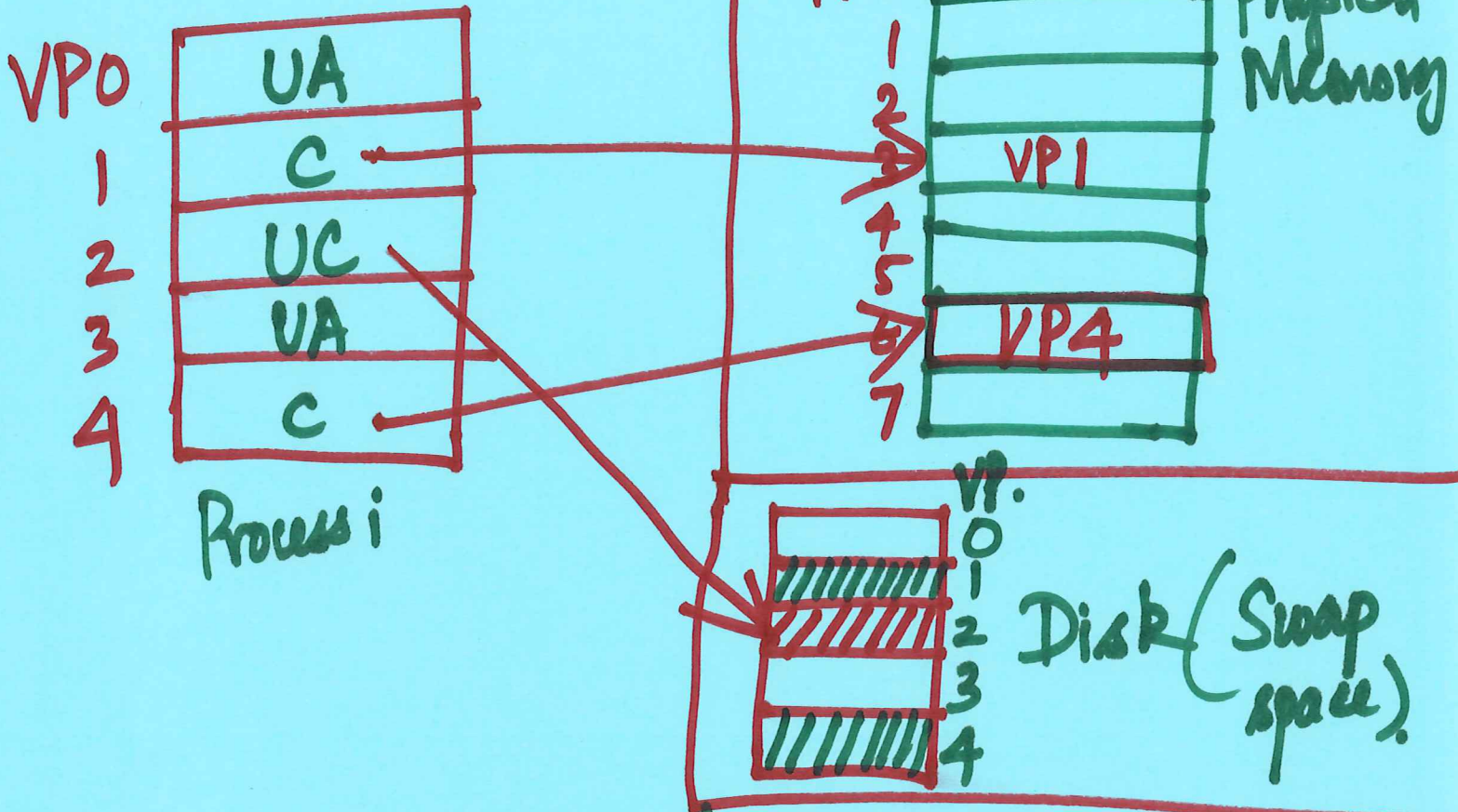


PP0  
1  
2  
3  
4



RAM

VP size = PP size .



3 types of pages

unallocated  
(UA)

cached  
(C)

uncached.  
(UC)

# Page Tables

data structure managed by the OS.

	Valid	Address	
VPN 0	0	null	→ unallocated
1	1	phy Addr on RAM	
2	1	phy addr. (PPN)	
3	0		
4	0		→ <u>disk</u>

# VM - Memory Management

