

3. (a) 2100

- (1) mutual exclusion
- (2) hold-and-wait
- (3) no preemption
- (4) circular wait

(b) preventing any condition of (1), (2), (3), (4)

(c) tell system what resource need, Banker's algorithm.

4. (a) 160ns

(b) $EAT = 0.9 \times 70 + 0.1 \times 160 + 3 = 72 + 16 + 3 = 91ns$

5. (a) 4K \rightarrow 12 bit logical address offset

$32 - 12 = 20 \rightarrow$ page number

$2^{20} = 1M$ entries #

(b) 12 bit logical address offset

$\frac{2^{20}}{2} = 2^{10} = 1K$ entries #

6. (a) 程式需要多少空间多少, 但是会导致不连续的file.

(b) 已经切好了記憶體, 但是造成有一些切割, 但没有使用的空间

B11002108 高树等

15 B11002108 = ...

8. (a) LRU

	1	2	3	4	2	1	5	6	2	1	3	7	6	3	2	1	2	3	6
F ₁	1					-					-								
F ₂		2			-				-		-								
F ₃			3				5												
F ₄				4				6											

9. 因所提权给 process 的 page 数量不够, 使出现 page fault

15. B11002108 10/11/17
(1) read root /

10. B11002108 10/11/17

(a) $1805 \rightarrow 2296 \rightarrow 1212 \rightarrow 2746 \rightarrow 2800 \rightarrow 544 \rightarrow 1617 \rightarrow 336 \rightarrow 1533 \rightarrow 4495 \rightarrow 3681 \Rightarrow 12308$

(b)

(c) 6851

(d) 6809

(e)

(f)

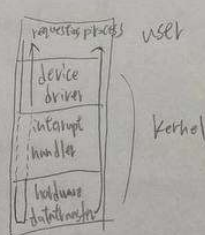
11. 1720000hau

12.

kernel user



$t \rightarrow$
synchronous

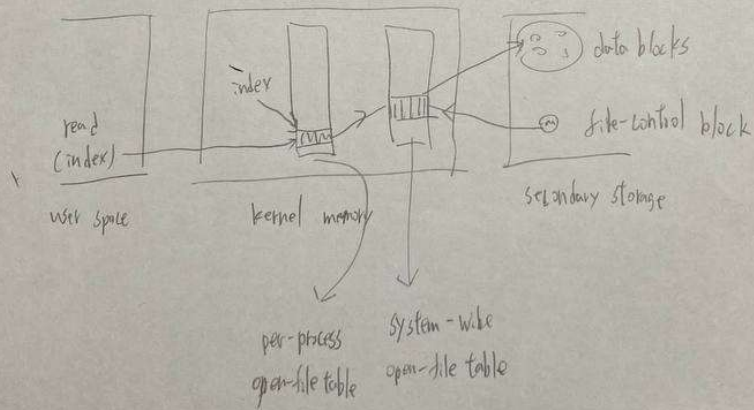
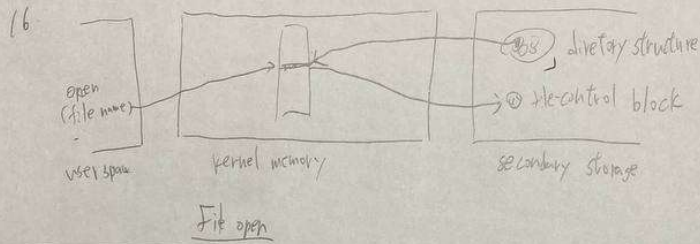


$t \rightarrow$
asynchronous

13. No, only can read

14. $(12 \times 2)KB + 2048 \times 2K + (2048 \times 2048 \times 2K) + (2048^3 \times 2K) \approx 16TB$

- 15 B11022108 2014
- (1) read root /
 - (2)(3) read disk block containing b and c
 - (4) read disk block containing file c
- 4 step



File read

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17.

screen

*demo*1
*demo*2
*demo*6
*demo*9
*demo*6
*demo*9

output1

*demo*5
--child--
*demo*3
--parent--
*demo*3

output2

*demo*3
*demo*4
*demo*9
*demo*10
*demo*9
*demo*10