


EE3450 Hw5 - Question 5 (5.17)

 總分 9/9 

Chapter 5 : Large and Fast: Exploiting Memory Hierarchy & Virtual Memory

0分, 共0分

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Question 3-2 (5.12.2)

9分, 共9分

[5.3] means you should have read Section 5.3. Under the Covers, to help you solve this exercise

There are several parameters that affect the overall size of the page table. Listed below are key page table parameters.

Virtual Address Size	Page Size	Page Table Entry Size
32 bits	8 KiB	4 bytes



✓ 1. [5.7] Given the parameters shown above, calculate the maximum possible page table size for a system running 5 processes (in MB). *

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2. [5.7] Given the parameter shown above, and a system running five applications that each utilize half of the virtual memory available, given a two-level page table approach with up to 256 entries at the 1st level. Assume each entry of the main page table is 6 bytes.

✓ 2.1 Calculate the (minimum, maximum) amount of memory required for the 2nd-level page table.(MB) *

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(5,10)



✓ 2.2 Calculate the amount of additional memory required for the 1st-level page table.(byte) *

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