

Operating Systems (1401311-3)

HW #3

Due Date: Sunday, 2.1.1431 H

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1. Given the following Reference string: 1, 2, 3, 2, 4, 2, 4, 1, 3, 2. What is the number of page faults if only 4 frames are used with the following replacement algorithms:
    - a. FIFO
    - b. MRU
  
  2. Consider a paging system with the page table stored in memory.
    - a. If a memory reference takes 120 ns, how long does a paged memory reference take?
    - b. If we add associative registers, and 85 percent of all page-table references are found in the associative registers, what is the effective memory reference time? (Assume that finding a page-table entry in the associative registers takes 10 ns if the entry is there.)
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Ethics Policy: All assignments are individual and only individual work will be accepted. Detected copies of assignments (written or programming assignments) will result in zeros for the whole group (including the student who actually solved the problem). Remember that if you cheat, you are cheating no one but yourself.