Operating Systems - Review Questions 3

Deadline: Dec. 8, 2022

1. Name two differences between logical and physical addresses.

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2. Consider a logical address space of 64 pages of 1024 words each, mapped onto a physical memory of 32 frames.

   a. How many bits are there in the logical address?

   b. How many bits are there in the physical address?

   _____

3. Assuming a 1-KB page size, what are the page numbers and offsets for the following address references (provided as decimal numbers).

   a. 3085

   b. 42095

   c. 215201

   d. 650000

   e. 200000

   _____

4. Consider a logical address space of 256 pages with a 4-KB page size, mapped onto a physical memory of 64 frames.

   a. How many bits are required in the logical address?

   b. How many bits are required in the physical address?

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5. CUnder what circumstances do page faults occur? Describe the actions taken by the operating system when a page fault occurs.