

Ceng 328 - Quiz 3

Solve all questions.

For Thursday section

1. (1.75 pts) An address generated by a CPU is referred to as a _____.
 - A) physical address
 - B) logical address
 - C) post relocation register address
 - D) Memory-Management Unit (MMU) generated address

2. (1.75 pts) The mapping of a logical address to a physical address is done in hardware by the _____.
 - A) memory-management-unit (MMU)
 - B) memory address register
 - C) relocation register
 - D) dynamic loading register

3. (1.75 pts) _____ is the dynamic storage-allocation algorithm which results in the smallest leftover hole in memory.
 - A) First fit
 - B) Best fit
 - C) Worst fit
 - D) None of the above

4. (1.75 pts) With segmentation, a logical address consists of _____.
 - A) segment number and offset
 - B) segment name and offset
 - C) segment number and page number
 - D) segment table and segment number

Choose only one question.

5. (8 pts) What is the context switch time, associated with swapping, if a disk drive with a transfer rate of 2 MB/s is used to swap out part of a program that is 200 KB in size? Assume that no seeks are necessary and that the average latency is 15 ms. The time should reflect only the amount of time necessary to swap out the process.
6. (8 pts) When does external fragmentation occur?

For Friday section

1. (1.75 pts) Absolute code can be generated for _____.
 - A) compile-time binding
 - B) load-time binding
 - C) execution-time binding
 - D) interrupt binding
2. (1.75 pts) _____ is the method of binding instructions and data to memory performed by most general-purpose operating systems.
 - A) Interrupt binding
 - B) Compile time binding
 - C) Execution time binding
 - D) Load-time binding
3. (1.75 pts) Suppose a program is operating with execution-time binding and the physical address generated is 300. The relocation register is set to 100. What is the corresponding logical address?
 - A) 199
 - B) 201
 - C) 200
 - D) 300
4. (1.75 pts) _____ is the dynamic storage-allocation algorithm which results in the largest leftover hole in memory.
 - A) First fit
 - B) Best fit
 - C) Worst fit
 - D) None of the above

Choose only one question.

5. (8 pts) Distinguish between internal and external fragmentation.
6. (8 pts) Explain the basic method for implementing paging.