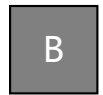# Quiz

Apr 23, 2024

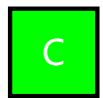Which of the following is/are true about address space and address translation?

A A process' address space can be much larger than the available physical memory.
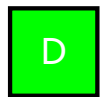
B Contiguous memory address in a process' address space must be contiguous in the physical memory.

C The programs use virtual addresses to locate variables in the address space.

D The memory controller uses physical addresses to locate data in the DRAM module.

提交

Which of the following is/are true about the base & bounds scheme?

A Each process has its own values for the base & bounds registers , so the OS should set up the registers during context switch.

B The CPU hardware is responsible for providing the base/bounds registers, which can be updated by both user code and kernel code.

C Limitations include the difficulty of inter-process memory sharing, the lack of support for large address space, and internal fragmentation.

D The CPU hardware must keep track of the list of free memory chunks and be responsible for memory allocation and reclamation.

提交

Which of the following is/are true about memory allocation strategies?

A Worst fit algorithm returns the largest free memory chunk that is smaller than the requested size.

B Criteria of evaluating memory allocation strategies include allocation time and degree of fragmentations.

C Both best fit and first fit require scanning the entire free memory list.

D First fit is fast with respect to allocation time, so it is optimal among the three algorithms.

提交

A 32-bit integer 0xd14af583 is stored at address 0x4c, assuming the machine is little-endian, then what is the value of the highest bit of the byte of address 0b01001110?

[填空1]

作答