

# Quiz

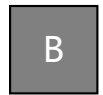
Nov. 13, 2024

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



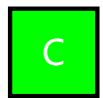
A

A process' address space can be much larger than the available physical memory.



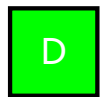
B

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

填空题 2分



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