

Quiz

Nov 17, 2024

Which of the followings is/are true about paging?

- ☐ A Page to page frame mapping can be one-to-one, one-to-many, and many-to-one.
- ☒ B The size of a page frame must be the same as that of a page.
- ☐ C If a virtual address goes beyond the limit of the address space, an exception will be raised to handle the fault.
- ☐ D The paging scheme addresses the limitation of segmentation as it eliminates internal fragmentation.

提交

Which of the followings is/are true about page tables?

- ☐ A In SV48, the size of a PTE is 4 bytes.
- ☒ B In IA-32, both segmentation and paging are used for translation.
- ☒ C TLB can be considered as a cache for PTEs.
- ☐ D If inverted page table is used, each process should have its own inverted page table.

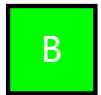
提交

Which of the followings is/are true about page fault exceptions?



A

A page fault exception is raised when the present bit of the PTE is 0.



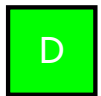
B

The page fault handler looks for a free page frame in the physical memory and triggers page replacement if necessary.



C

The page fault handler determines the disk address of the page from a register.



D

The TLB entry of the PTE will be loaded when the faulting instruction is re-executed.

提交

Which of the followings is/are true about page fault handling?

- ☒ A After handling a page fault, CPU returns to the user mode and re-executes the instruction that triggers the page fault.
- ☒ B The CPU raises a page fault exception when the page is non-present, such that the OS can get involved in the address translation.
- ☐ C When present bit is 1, the PTE stores the disk address of the page; when the present bit is 0, the PTE stores the PFN.
- ☐ D TLB invalidation always happens during page fault handling.

提交