Gmail **Aftab Hussain <aftab.hussain46@gmail.com>**

(no subject)

Aftab Hussain <aftab.hussain46@gmail.com> Sat, Nov 10, 2018 at 6:16 PM
Draft

HW2 EX2, general page mapping question

How are the slot numbers/page numbers chosen in physical memory? I am getting some confusion in exercise 2 because the page table exists at 0x8000 and the physical page exists at 0x8004. When I am drawing my diagram, I have the page directory existing in slot 5 because its address is 0x5000 and the page table existing in slot 8 because the address is 0x8000. I am a little confused on what slot then the actual page at 0x8004 would be in. If someone could help, I would really appreciate it!

hw2

edit · good question | 0

the students' answer, *where students collectively construct a single answer*

You calculate the actual physical page from the offset . The ppt has an example showing this

edit · good answer | 0

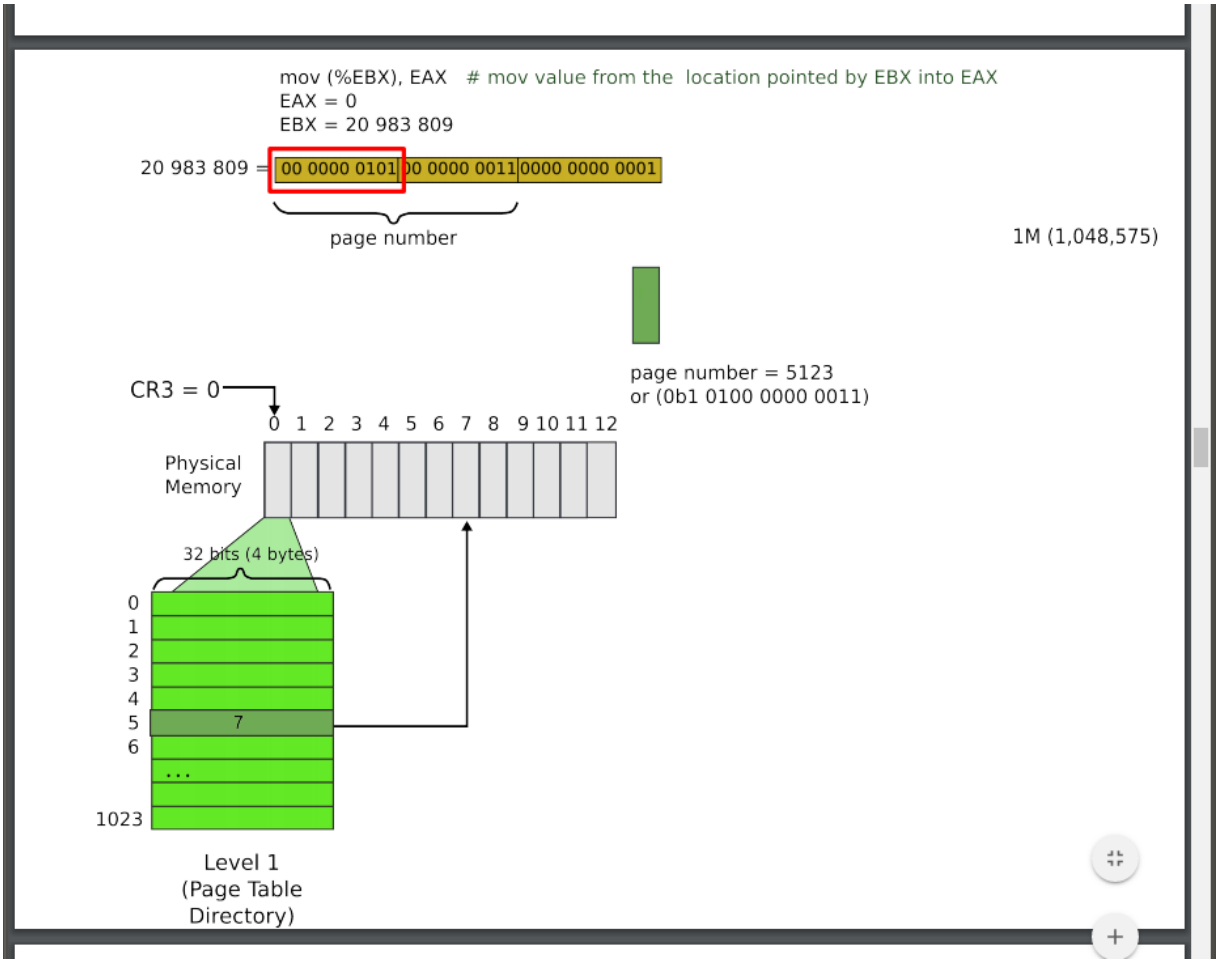
the instructors' answer, *where instructors collectively construct a single answer*

Click to start off the wiki answer

followup discussions *for lingering questions and comments*

Resolved

Unresolved



Looking at the slides in lecture 5 (Address Translation), I do not understand why 7 was selected for the page in physical memory that holds the page table? Or why in the slide after that, page 12 in physical memory is chosen for the location of the actual page. I understand that the first 10 bits correspond to the slot number in the page directory, the next 10 bits correspond to the slot number in the page table, and the last 12 bits correspond to the bit offset within the actual page. I just do not understand how the information within the these are chosen. If someone could explain how and/or why 7 was chosen it would be really helpful

Aftab Hussain 3 days ago "Looking at the slides in lecture 5 (Address Translation), I do not understand why 7 was selected for the page in physical memory that holds the page table? "

The first 10 bits from the page number, gives us the page table directory entry: which is 00000 00101. This is 5 in decimal.

>So from CR3 register (the control register), we get the address of the page table directory.
>From EBX register, we get the entry inside the page table directory, in which we are interested. We look at the first 10 bits of EBX's contents.
>The first 10 bits give us entry 5. So, we go to entry 5 of the page table directory, and we see it contains 7, and therefore we select the corresponding page from the physical memory. (We have used 7 as just an example. The content of entry 5 in the page table directory could have anything else).