CS 219

Lecture 18

1. xv6 specifics.

~ once protected mode is enabled
   on a CPU

   — every address issued is

   not a physical address.

   &w) paging $\overset{mmu}{\wedge}$ uses page table

   for translation.

   ⇒ Kernel also has to use virtual addressing

   ⇒ Kernel page table.

   ⇒ all objects of kernel are VA
                                   references.

TRAMPOLINE ～ ⎫ addresses.
   TRAPFRAME ～ ⎭

⊛ why TRAMPOLINE ?

on an interrupt

- s/w from user to kernel mode
- save user context
- jmp to kernel address (for start of kernel logic execution).
  - save user context/regs.
  - load kernel context
  - s/w to kernel page table
  - jmp to trap handler,

TRAMPOLINE

TRAPFRAME

uva

Kva

user page table

kernel page table

PA range