Booting process:

Bios → prepare h/w & transfer control to bootloader.

Bios loads bootsector at address 0x7C00 and jumps here.

Bootloader is present in first 512bytes of bootdisk.

Bootloader → load the kernel from disk to memory

Bootloader: Starts as Intel 8088.

-put processor in the modern mode i386

-load xv6 kernel.

-transfer control.

Bootasm.s and bootmain.c

Real mode:

16-bit general purpose registers.

1Mb -20bits address space.

To generate 20bit addr.

16 \* value of segment register

Segment reg used is implicit

Logical addr : segment selector : offset.

Segment translation => logical to linear

Paging enabled => logical to Physical Addr.

Protected Mode (x386,x286): 32bit address space ( accessible upto 4Gb )

segment register is an index into a global descriptor table (GDT).