Example Operating Systems (con't)

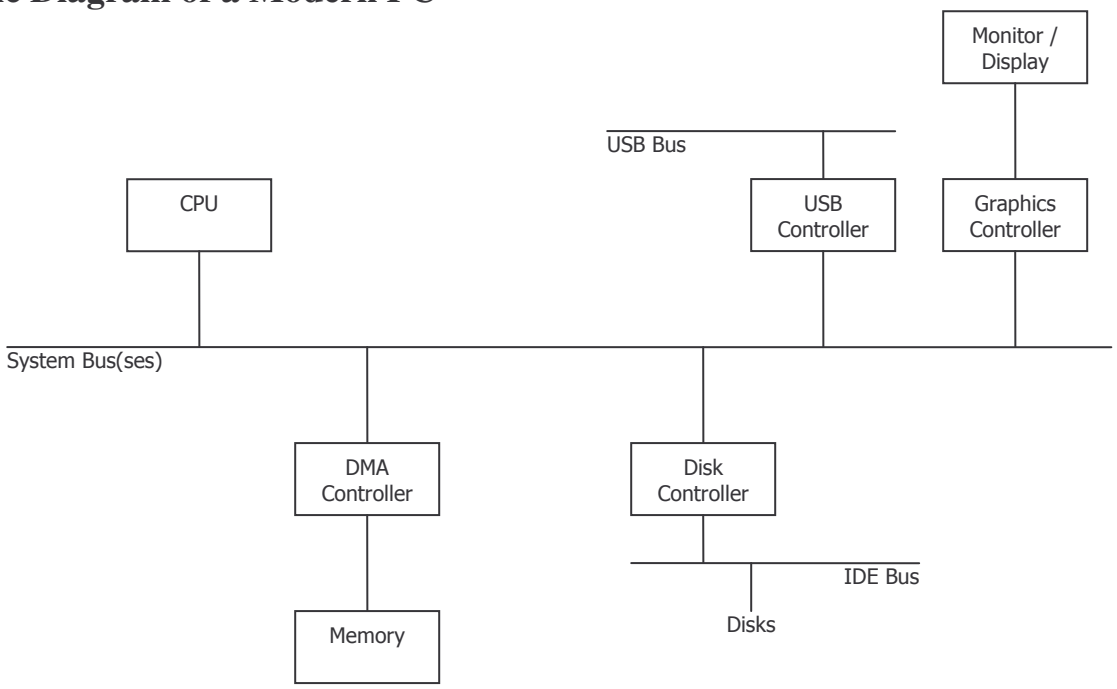
Workstation servers – Linux, Windows Server, Unix

Comments on Unix
AT&T Bell Labs produced Unix in late 60s and 70s
C was created to assist in its development
Variants: BSD (Berkely Standard Distro.), Solaris, HP-UX, etc.
Very reliable for maintaining large amounts of data across several systems. Has high security mechanisms.

Historical Significance of Workstation Servers
MacOS – introduced GUI
Linux – introduced open source
Unix – long legacy, programming languages
Windows Server –

Embedded computers – Windows CE, Embedded Linux, Symbian (used frequently on cell phones), RTOS (Real time OS), Palm OS

Basic Diagram of a Modern PC



Master / Slave control system – CPU is the master controller. DMA, Disk, USB, Graphics controllers are the slave controllers and interrupt the CPU, through the OS, that it is done performing an action.

How does a modern workstation / server differ from this diagram?
The disks could be RAID – redundant arrays of independent disks. SCSI is also fairly common. Most likely will have more network cards to allow more network connections.

Bootstrap Process

Start up process that is traditionally stored in ROM, Flash ROM, or EEPROM … nonvolatile; firmware.

1. Init CPU
2. Configure (init) all device controllers
3. Memory test
4. Start OS Kernel