X or X11: “server” for graphical user interface

“startx” launches the server and the first “client” which is a ”window manager”

Many window managers out there

<Diagram>

twm
One of the first

KDE
A “modern” one
• “filesystem” starts with /

• Unlike Windows C:\ D:\ etc

• Underneath filesystem:
  • directories (folders)

• Some are real disks
  • EIDE disk/USB key/CD/DVD ....

• Some are a bit “fake”

• Disks can get “partitioned”

• Each partition (sort of) looks like a separate disk

• Different filesystem types
  • FAT (FAT16 FAT32 exFAT) MS DOS
  • NTFS MS Window
  • HFS old MAC
  • APFS new MAC
  • ext (ext2 ext3 ext4) Linux
  • .......
• Shells
  • bash sh csh tcsh zsh ksh
  • You are setup to use bash

• Commands:
  command –option parameter
  Command –option parameter

• In most (all?) cases invoking a command through the shell means running a program
- **bin**
  - binaries...minimum set of syst. programs

- **boot**
  - Stuff needed for system to boot ("kernel")

- **dev**
  - devices...special directory

- **etc**
  - System config files

- **home**
  - User stuff

- **lib**
  - Library files

- **lost+found**
  - Broken files

- **media**
  - DVDs, CDROM

- **mnt**
  - Where you attach more stuff

- **opt**
  - “optional” packages

- **proc**
  - Processes...special directory

- **root**
  - Home directory of “superuser”

- **run**
  - Used by system during boot time

- **sbin**
  - Utilities for sysadmin

- **srv**
  - Used by “servers”

- **sys**
  - Used by kernel...special directory

- **tmp**
  - Temporary junk

- **usr**
  - Most other programs

- **var**
  - Where system normally writes stuff during operation
Pathnames. Relative vs absolute. Meaning of ~ ("tilde")

Make a text file with emacs

ls cd pwd

man info

less more cat

cp mv rm

mkdir

grep

apropos

alias

which