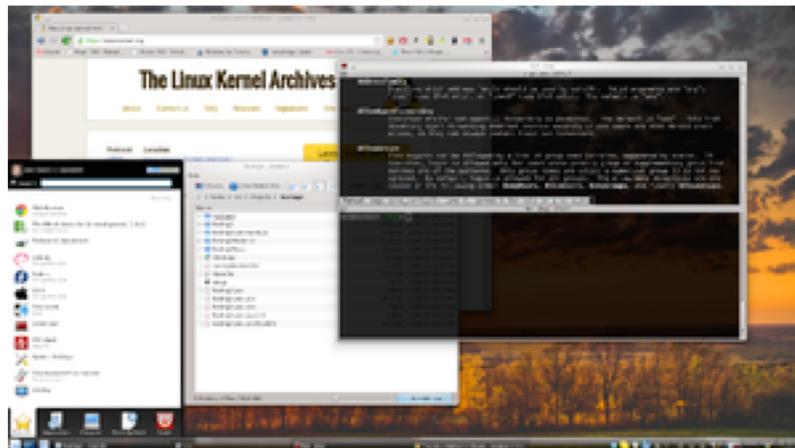


X or X11: “server” for graphical user interface

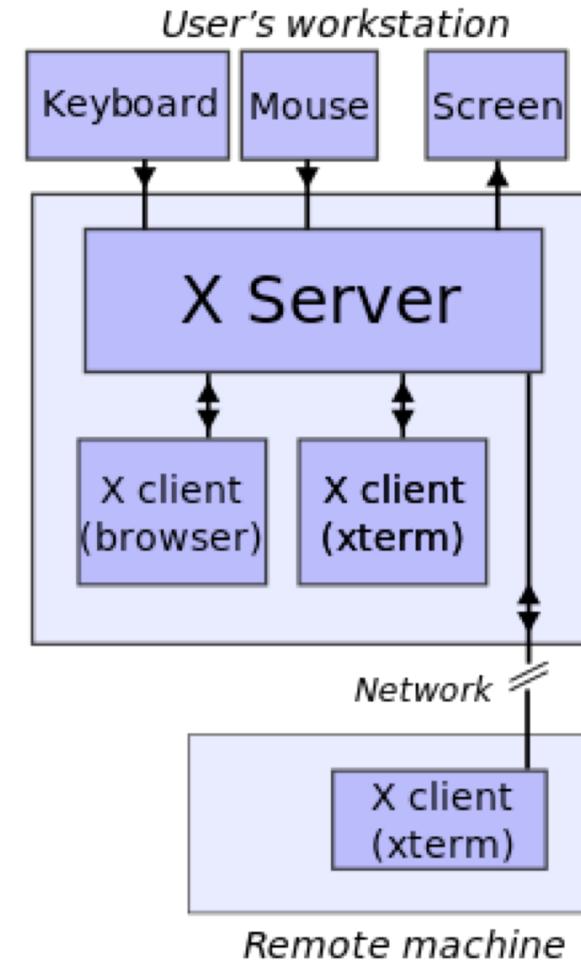
“startx” launches the server and the first “client” which is a “window manager”
Many window managers out there



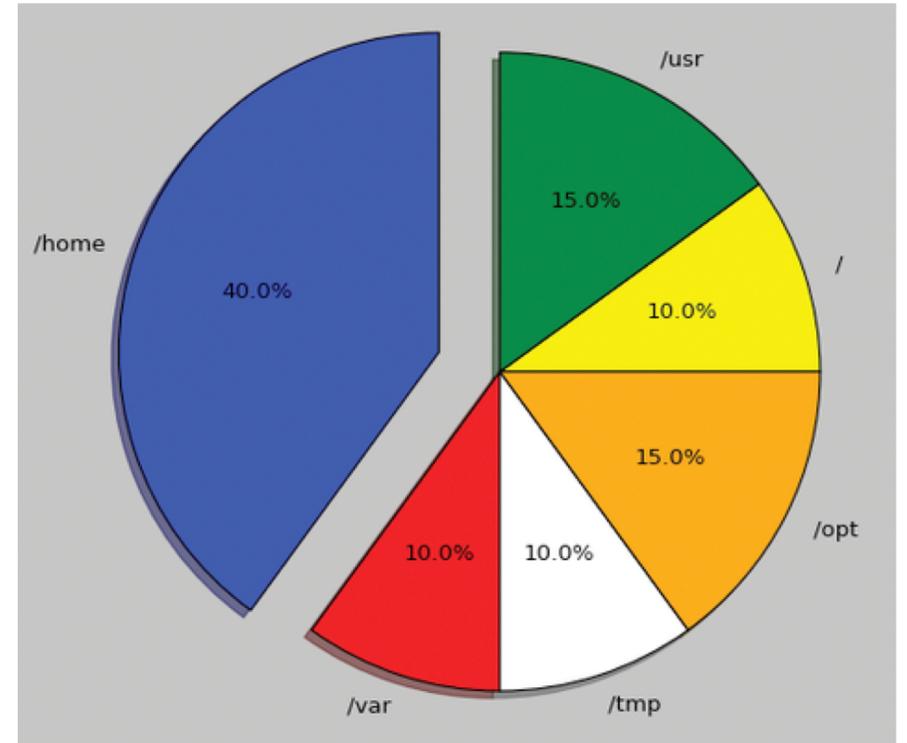
twm
One of the first



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 directoy
- **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