COMMON COMMANDS AND UTILITIES

COMMANDS YOU SHOULD KNOW

- chown/chmod/mkdir/cd/grep
- cd /rm/echo/cat/ls/ln/man
- | > >> < <<
- grep/more/less

MAN

```
MAN(1)                          Manual pager utils                          MAN(1)


NAME

       man - an interface to the on-line reference manuals


SYNOPSIS

       man  [-C  file]  [-d]  [-D]  [--warnings[=warnings]]  [-R encoding] [-L
       locale] [-m system[,...]] [-M path] [-S list]  [-e  extension]  [-i|-I]
       [--regex|--wildcard]   [--names-only]  [-a]  [-u]  [--no-subpages]  [-P
       pager] [-r prompt] [-7] [-E encoding]  [--no-hyphenation]  [-p  string]
       [-t] [-T[device]] [-H[browser]] [-X[dpi]] [-Z] [[section] page ...] ...
       man -k [apropos options] regexp ...
       man -K [-w|-W] [-S list] [-i|-I] [--regex] [section] term ...
       man -f [whatis options] page ...
       man  -l  [-C  file] [-d] [-D] [--warnings[=warnings]] [-R encoding] [-L
       locale] [-P pager] [-r prompt] [-7]  [-E  encoding]  [-p  string]  [-t]
       [-T[device]] [-H[browser]] [-X[dpi]] [-Z] file ...
       man -w|-W [-C file] [-d] [-D] page ...
       man -c [-C file] [-d] [-D] page ...
       man [-hV]
```

PROCESS CONTROL AND MONITORING

- ps – list processes
- pstree -Au
  - List out processes and relationships
- kill/killall
- top – used to monitor processes and system usage

NICE AND RENICE

- nice – allows us to specify the priority of a task being started
- renice – allows us to specify the priority of a task already started

- Allowable range -20 to +19 with default value of 0
- nice -n [+/-#] [CMD]

/PROC DIRECTORY

- A set of files that represent the state of the kernel.
- Great for find info about the system and how its currently configured.

FILE SYSTEMS

- What is a file system?
- What does a file system need to do?

FILE SYSTEMS

- What is a file system?
  - Responsible for managing the files on a device.
- What does a file system need to do?
  - Keep track of where the file is
  - File Length
  - Ownership
  - File name
  - File path
  - File type (block, character, directory, etc.)

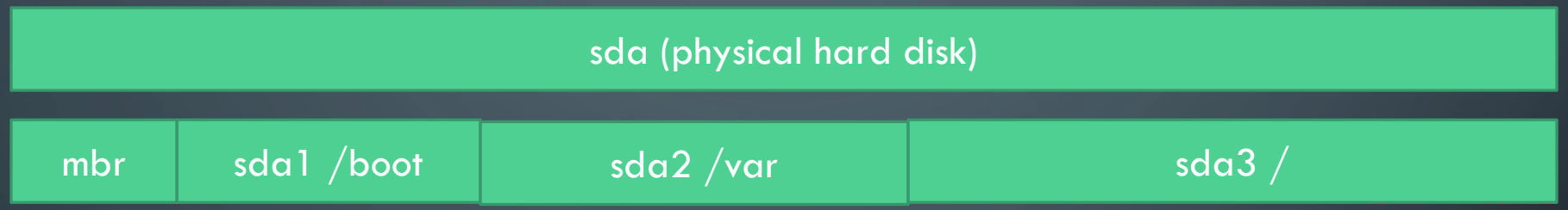
FILE SYSTEM TYPES

- ext2
- ext3 – ext2 w/ Journaling
- ext4
- resierfs
- FAT/FAT32/NTFS
- ISO 9660

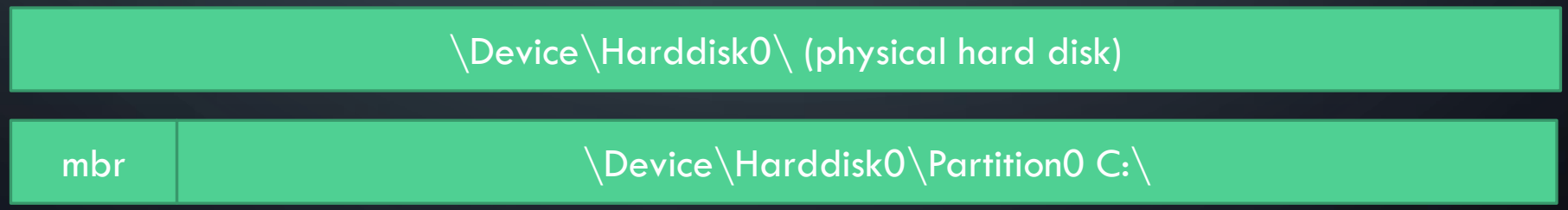
- Can use df -T to determine mounted file systems and their types.

PARTITION

- Why do we want partitions?
- First step: fdisk

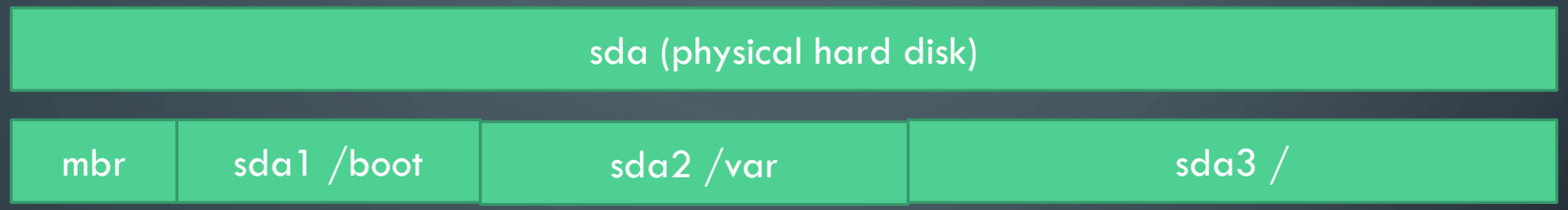


- What does fdisk do?
  - fdisk –l
- Windows:



PARTITION

- Now we format!
  - Does format wipe all of our data?



- mkfs.ext3 /dev/sda2
- What does this do: mkfs.ext3 /dev/sda
  - Is it valid?
- Windows corollary: format c:
  - FORMAT volume /FS:filesystem …

FILE SYSTEM NAVIGATION

/bin – system binary executables /boot – kernel and boot files /dev – system devices /etc – startup and config files /home – home dir for users /lib – shared libraries (think dll) /media – mount for removable media /mnt - mount	/opt – optional install dir /proc /root – home dir for root (optional) /sbin – binaries for su /selinux /sys /tmp – temporary files (wiped on restart) /usr – typical installed programs, man pages, local files, etc. /var – logging, pids, mail
/usr --/bin – binary executables --/include --/lib --/local – local version of /usr --/sbin – binary executables for su --/share --/src – shared source code (kernel, etc.)	/var --/log --/mail --/opt --/run – pids --/spool – spools printers, mail, etc. --/tmp – non volatile temp

FILE TYPES

- Regular Files
- Directory
- Character device file
- Block device file
- Local domain socket
- Named pipe
- Symbolic Link

MOUNT

- mounts a device to a folder to allow access

- `mount -t ext2 /dev/hda2 /boot`

- `mount -t ntfs /dev/hdb1 /mnt/win/`
  - `/mnt/win/Users/Mike/Desktop/rickroll.avi`

- `mount /media/cdrom`