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ECE 331
1/26/17

- Ints vs. Chars?
  - → Memset writes a byte value to memory
    - → but it tries to do it as fast as possible for that architecture   *datatype doesn't make a dif. for <u>memset</u>

#InScript //header/printing stuff

#8) rm *1[0-9]* *2[0-5]* <u>-rf or -f</u>

Permissions / r-x--x--x yo   //want everyone to read it
  ⇒ chmod a+r yo   //a is all, r is read
  //want rwx r-x r-x yo
    ↳ chmod 755 yo

Ownership:

chown mike yo   //change owner   * Have to be root to change ownership
chgrp Elite yo   //change group
chown mike.Elite yo

#/usr/lib/ //No requirements?

Packages

- Debian derived:
  uses apt. /dpkg   "depackage"- does actual install/format
                     "apt"- manages install
      aptitude - provides "half-decent" output

[sudo apt-get update]   //apt-get upgrade   //updates all pack.
                             list-update   //removes packages outdated

$$\begin{bmatrix} \text{apt-cache search tux} \\ or \\ \text{aptitude search tux} \end{bmatrix} \rightarrow \text{lists}$$

*rehash ?

=> dpkg -L xtux   (just directories)

sudo apt-get remove xtux (read <u>output</u>!)

   => dpkg -L tux

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ls / wc   (in usr/bin)

-> lines, words, characters

dpkg -S /usr/bin (ghostscript!)
dpkg -l ghostscript (try -s)

<div style="border:1px solid">

*PostScript
(adobe - renders
  pages for
  HP printers)
-> it's a language

</div>

*Print random
  <u>maze</u>

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apt-get source avrdude (moves sourcecode
  to current directory) [//error for sources.list]

[dpkg-buildpackage -us -uc //unsigned source & changes]

* Build dependencies
   apt-get build-dep package

      --commit (patching)
   *then <u>rebuild</u>

//~~get~~ for using kernel, don't <u>upgrade</u>!! (need to match)

            armhf
              hard float
          armv7l - ???

links

hard → have a second name for the same data
"point" to same data

symbolic → ref a filename/contents from other directories

ln ⌣ ⌣   i.e. ln x y   link count
   ↑ ↑   ↓
existing new   ln x z   -rw .... 3 pi pi
file   file

*deleting file is 'unlinking' - link count goes to 0

{ ls -al / sort -k2 -n }
              ↑   ↖ numerically
          2nd column

ls -i psed s2p
1442153 psed 1442153 s2p

*same man page! (stream editor)
⇒ argv[0] will determine how the program runs!
                                    (psed or s2p)

cyan is a link → to something

ln -s x y
rm x
//y don't 'exist'

(* yacc ≈ bison)

File system : FS

Ext 4 fs → newer

Ex +2fs

HD - Partition
Look @ partition
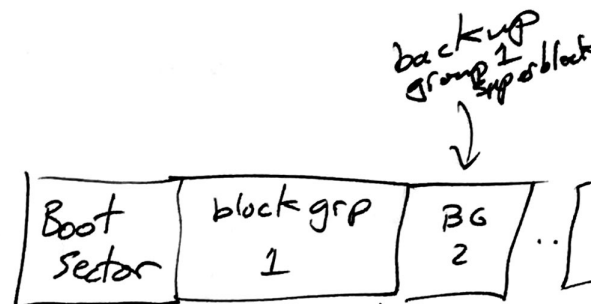
backup group 1 sup o block

| Boot Sector | block grp 1 | BG 2 | .. |

Directory

| inode # | entry len. | name len | filename |

* When you look for a file, you match name, get inode, and go look to see if you have permissions, etc. and so on...

```
4   2   1   x
4   2   1   y
↑
a hard link!
```

| super block | B.G. Descr | Block bitmap | inode bitmap |

| Inode table | Data |

FS metadata

if any inode is free or not

if DATA blocks are used

only a part of the entire inode table

(size, name, permission, type, time, owner, group, etc.) data block maps

inode contains metadata of a file