

CS114: Lecture 7

Advanced Filesystem, More scripts

HW2 is graded – look at comments!

HW3 will be posted online later today,
due next Wednesday 10/17

Check out vocabulary link on website

“Humor”

- <> ! * ' ' #
- ^ " ` \$ \$ -
- ! * = @ \$ _
- % * <> ~ # 4
- & [] . . /
- | { , , SYSTEM HALTED
- (Fred Bremmer, Steve Kroese)
- < = > = waka; * = splat

Homework 2 wrap-up

- Test code before you submit!
- `>` vs. `>>`
- Job id vs. process id
- A job is EITHER suspended OR foreground OR background
- `ls /usr/bin/?? | ...`
 - The current directory is only for convenience

Escaping

- Goal: create a file named ' " *
(quote double-quote space star)
- touch \' \" \ *
- touch \' \" \" \" \ *
- touch " ' " ' " ' ' ' ' * ' !
- touch " ' " ' " * ' !
- touch \' ' " * ' !

Where are the drive letters?

- Hidden in “mount-points”
- `mount device mountpoint`
 - Now, when I access a path starting with `mountpoint`, I'm really accessing `device`
- Remove with `umount` (not `unmount`)
- Usually need to be superuser (root) to `mount` / `umount`
- `mount` w/ no arguments – list mountpoints

Disk-related commands

- `df` – disk free space
 - Displays free space for all mounted disks
- `du -k directory file file ...` – disk usage
 - Actual disk usage for any arguments

Softlinks

- Sometimes I want to pretend the path is `foo` when it's really `/bar/baz`
- `ln -s /bar/baz foo`
- `ln -s real-path pretend-path`
- Softlinks can be absolute (starting with `/`) or relative (starting with `.`, `..`, or just the filename)
- Demonstration: where is `~/work/cs114/links/start` really?

Shell scripts

- If I type “myscript” at the shell prompt
 - and `myscript` is marked executable
 - and begins with `#!/bin/mycommand -x`
- Operating system actually executes
 - `/bin/mycommand -x myscript`
- If `mycommand` is a shell, `myscript` is a shell script
 - But `mycommand` can be anything
- Demonstration: `catscript`, `echoscript`, `lsscript`

Shell and environment variables:

setvar

```
#!/bin/sh
```

```
DEPTH=.:$DEPTH
```

```
export DEPTH
```

```
depth=.:$depth
```

```
echo DEPTH:$DEPTH
```

```
echo depth:$depth
```

```
echo "Press Ctrl-D to continue"
```

```
cat
```

```
./setvar
```

