Administrivia

- Reminder: Project proposals due Monday. Information on Web updated with a list of projects from a previous semester.

Slide 1

"Programming" Problems

- Today's class — for a couple of semi-real-world problems, think of as many ways as we can to solve them using tools presented so far.

Slide 2

Mass File Rename

- How many ways can we think of to do a "mass rename" of files? e.g., rename all `.cc` files to `.cpp`?

- (A really good solution will do something reasonable if aren't any `.cc` files, and will work even if file names contain spaces.)

Slide 3

- Linux has a `rename` command — exactly what we want, but not available on all UNIX systems, and — are there other ways?

Mass File Rename, Continued

- Another way:

```
for file in  ls *.cc
do
  mv $file  basename $file .cc .cpp
done
```

(Or could use `sed` to make new file name.)

Slide 4

- A problem — the above fails if filename contains spaces. It also doesn't do the right thing if there aren't any files. How to fix this?

Mass File Rename, Continued

- One way is to use a `while` loop rather than a `for`:

```
ls *.cc | while read file
do
  mv "$file" " basename \"$file\" .cc .cpp"
done
```

Slide 5

Finding Broken Links

- How many ways can we think of to find "broken" (or "stale") symbolic links?

- Linux has a `symlinks` command too. Other ways? (To be continued next time.)

Slide 6

Slide 7

Minute Essay

- None — sign in.