Slide 1

Administrivia

- Reminder: Quiz 2 Monday. Topics will come from material up through recursive functions.
- Reminder: Midterm next Friday. Review sheet to be on the Web soon. Topics what we've discussed so far, up through loops.
- Homework 4 on the Web; due next Wednesday (but accepted without penalty through Friday). Be advised that there are four problems in all, and while I think most of them are not too challenging, one of them may be. However, they should be good review for the midterm.

Slide 2

Recursion — Some Thoughts on When To Use

- As noted in class, recursive functions can be simple to write but potentially inefficient (though in some cases a sufficiently smart compiler can reduce or eliminate the inefficiency — look up "tail recursion" to find out more).
- Examples from beginning programming courses are rarely compelling — usually seems that a loop might be simpler as well as probably more efficient.
- But there are not-quite-so-simple situations in which recursive solutions are simple to write and get right, while non-recursive solutions are decidedly not simple — anything involving "trees", plus at least two widely-used algorithms for "sorting" (putting things in order).

Slide 3

Loops, Continued

- Last time we showed basic syntax for `for` and `while` loops. One more syntax, namely `do while` loop (see slide from last time).
- When to use which one? "it depends", and sometimes a matter of style, but if you know how many times you want to repeat something, a `for` loop is probably more idiomatic, while if you don't, a `while` is probably better.
- (Examples as time permits.)

Slide 4

Minute Essay

- Will you be here next Friday for the midterm (10/23)? (I ask because a few students seem to have university-approved absences some Fridays.)
- Any questions?