Slide 1

Administrivia

- Reminder: Quiz 2 Monday. Likely topics conditional execution, functions.
- Reminder: Homework 3 due today.
- Homework 4 on the Web; due next Friday.

Slide 2

Minute Essay From Last Lecture

- Many people, maybe most, had seen recursion, but not many seemed confident they remembered it very well. So encountering it in another context may be good!
- Most people (but not all!) though the quiz was more or less what they expected, except that several people didn't expect the question about binary etc. number systems to be quite what it was.

Slide 3

Recursive Functions — Recap/Review

- A recursive function is one that calls itself (except for its "base case(s)").
- An obvious(?) use of recursive functions is to compute mathematical functions defined recursively. But there are other uses!
- (Review sum example, maybe do one more (counting)?)

Slide 4

A Little About Character Data

- (We can't work with strings of character data until we know about arrays. But we can work with single characters, which allows for more kinds of examples.)
- Single characters represented by type `char`. 7-bit, usually ASCII, so range is enough to represent digits, alphabetic characters (upper- and lower-case), various punctuation. Not enough for all non-English languages, alas.
- Worth noting that `char` values are a subset of `int` values, so functions for working with characters sometimes take/return `int`s.
- Can do I/O with `scanf` and `printf`, but simpler to use `getchar` and `putchar`.

Slide 5

Functions and Recursion, More Examples

- First a trivial but fun(?) example of using recursion: Print line of text in reverse order.
- Next a less-trivial example using recursion and also the use of functions to decompose a problem: Get an integer from standard input, without scanf.

Slide 6

Minute Essay

- What if anything did you find interesting, difficult, or otherwise noteworthy about Homework 3?