Slide 1

Administrivia

- Reminder: Homework 1 due Friday, 11:59pm.
- Homework 2 on the Web; due next week. First programming homework.

Slide 2

Minute Essay From Last Lecture

- Many people said what we had done looked at least a little like something they had worked with. For those who've used Java, if the syntax looks familiar, no accident!
- A few people commented on how much code it takes to do even simple things and speculated on how much would be needed to do anything interesting. Yes, but often you can build on library code.
- One person mentioned a different approach to the "making change" example — which I like better than mine. (!)

Slide 3

Example — "Counting Change", Continued

- Review problem statement: Given a number of pennies, show how to represent it with minimum number of coins (pennies, nickels, etc.).
- Last time we started writing a program, based on the idea of first figuring out how many pennies, then how many nickels, etc. This works, but . . .
- We could also first figure out how many dollars, then quarters, etc. More straightforward, so let's do that.

Slide 4

Type Conversions

- Implicit conversions: When you assign a value of one type to another (e.g., `float` to `int`), or write an expression that mixes types, C will perform an implicit conversion.
- Explicit conversions: Putting a type in parentheses before an expression means you want to convert to the indicated type. Example:

  ```
  (float) (1 / 2)
  ```

  versus

  ```
  (float) 1 / (float) 2
  ```

Slide 5

Defining Named Constants with Preprocessor Directives

- Sometimes it makes sense to use numeric constants in programs — e.g., in "count change" example.
- But sometimes it's more readable, for humans, to give these constants a name. Can do this with `#define`. Examples (somewhat contrived):

  ```
  #define PENNY_CENTS 5
  ```

  Then when you write `PENNY_CENTS`, compiler (strictly speaking, its preprocessor) replaces it with 5.

Slide 6

Minute Essay

- Have you tried writing and running any programs yet?
- Any questions?