Administrivia
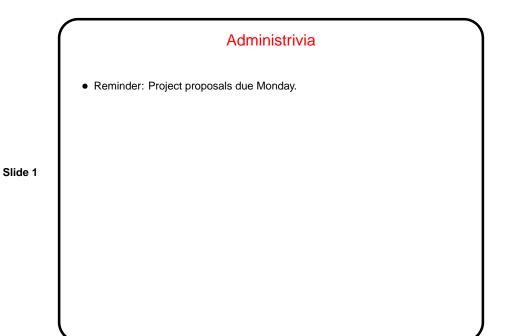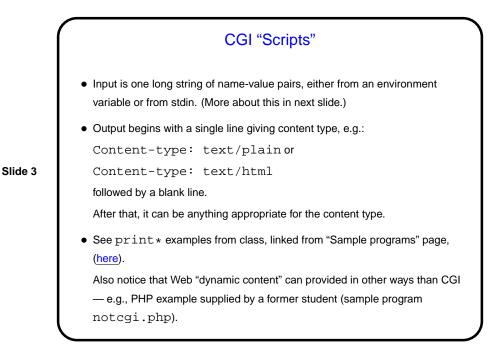
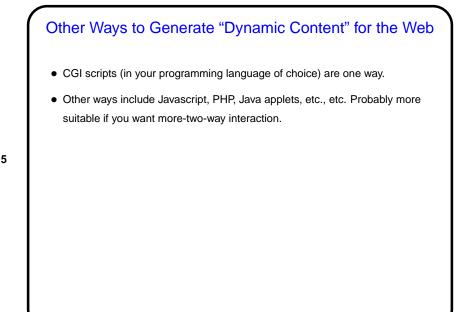- Reminder: Project proposals due Monday.

Slide 1

A Little about CGI

- What's CGI? "Common Gateway Interface" — protocol for communicating between Web forms and (your) programs.

- Programs can be in any language that can read from stdin, write to stdout, and read environment variables.

- May require some setup/configuration in Web server. More information in tutorials linked from "Useful links" page (here).

Slide 2

- Notice that there are security implications — you're potentially letting anyone with a Web browser to execute these programs on whatever computer is serving the Web pages. No problem if they're harmless, but "be careful"?

CGI "Scripts"

Slide 3

- Input is one long string of name-value pairs, either from an environment variable or from stdin. (More about this in next slide.)

- Output begins with a single line giving content type, e.g.:

  `Content-type: text/plain` or

  `Content-type: text/html`

  followed by a blank line.

  After that, it can be anything appropriate for the content type.

- See `print*` examples from class, linked from "Sample programs" page, ([here](#)).

  Also notice that Web "dynamic content" can provided in other ways than CGI — e.g., PHP example supplied by a former student (sample program `notcgi.php`).

Input to CGI "Scripts"

Slide 4

- Missing link: CGI programs get input via environment variable or standard input, but where does it come from?

- Usual answer — HTML "form" (FORM tag). See examples linked from "Sample programs" page.

- Input, as examples show, is in the form of variable=value pairs. Parsing this could be a pain, so might best to do this in a language that provides nice library functions for it (e.g., Perl), and/or search for appropriate already-written functions in your programming language of choice.

Other Ways to Generate "Dynamic Content" for the Web

- CGI scripts (in your programming language of choice) are one way.

- Other ways include Javascript, PHP, Java applets, etc., etc. Probably more suitable if you want more-two-way interaction.

Slide 5

Minute Essay

- Have you written "dynamic content" Web pages? using what?

Slide 6