

Slide 1

Administrivia

- (None?)

Slide 2

Minute Essay From Last Lecture

- Many people had seen some of what we looked at last time, though not all, and some said they'd seen part of it but hadn't been sure what it was or meant.

A Little about CGI

Slide 3

- 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 standard input (and/or from environment variables) and write to standard output.
- Requires some setup/configuration in Web server. Our current Web server is set up this way, but I think it's not the default.
- Note that there are security implications: you're potentially letting anyone with a Web browser execute these programs on whatever computer is serving the Web pages. No problem if they're harmless, but "be careful"?

CGI "Scripts"

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- Input is one long string of name-value pairs, either from an environment variable or from standard input. (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.
- (`print*` examples.)

Input to CGI Scripts

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- Missing link: CGI programs get input via environment variable or standard input, but where does it come from?
- Usual answer: HTML “form” (FORM tag).
(Examples.)
- 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.

CGI Scripts — the Good, the Bad, the Ugly

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- The “good” is that the scripts can pretty much be in any language that can read from standard input (and/or from environment variables) and write to standard output.
- The “bad” is the security risks (though, at least by default, the script will only be able to read files readable by anyone and write files writeable by anyone).
- The “ugly” is that input from HTML forms is in the form of one big text string that has to be parsed (though some languages may have library functions for that).

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 7

Minute Essay

- Have you written “dynamic content” Web pages? using what?
- Do you plan to be here Monday?

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