INTRODUCTION TO SERVER-SIDE WEB PROGRAMMING

Static vs. Dynamic Web Design

Static Web Page

Dynamic Web Page—

Page contents change based on:
  - User input, form completion, etc.
  - Database interaction
  - External data sources (RSS feeds, etc.)
Dynamic Web Design

Web page created contains embedded script which runs on the server before page is sent to client.

Page typically features static XHTML and CSS, and output derived from script execution.

Programmer must be competent at XHTML and CSS coding, as program output must feature correct tags, syntax, etc.

Pages created must be fully XHTML compliant.

Use of CSS to control formatting eases script output.

Example dynamic web pages

Server-side script which creates no output but does page-related processing

XHTML Header

Static XHTML Content

Output created by server-side script

Static XHTML Content

Output created by server-side script

Output created by server-side script

Static XHTML Content

Output created by server-side script

http://einstein.etsu.edu/~pittares/CSCI2910/examples/1-1.php
Client-Side scripting

Interpreted language. Browser typically employs "___ script engine" to execute code and control content output and display.

Script source code is exposed to the user.

User may disable script support.

Client-side vs. Server-side scripting

Client-side

Minimal processing on server. Server sends web page with embedded script. Client's browser executes script.

Server platform and language support largely irrelevant. Just retrieves file and transmits.

Client browser may not fully support or script execution may be turned off. Browsers inconsistent in execution. Security issues—user can see (change?) script embedded in source.
Client-side vs. Server-side scripting

Server-side

Can connect to various data sources and customize reply to client.

Easier large-scale site creation. No need to create hundreds of static pages; instead create smaller set dynamic pages.

Poor coding by programmer may open resources to attack through security flaws.

Script tied to server execution environment. Server must support desired scripting language.

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