

Lesson 1 Outline - CGI Positioning

- I. What is CGI?
 - A. A specification for how to communicate from a web page to programs on the web server
 - 1. Original purpose was to allow web pages to activate "scripts" which would execute commands (and/or programs) on the web server
 - 2. Many CGI "scripts" today are actually programs in and of themselves
 - B. Can take input from a web page (usually an HTML form)
 - C. Output is returned to the browser
 - D. CGI scripts run on the **server** not on the client computer (i.e. browser's computer)

- II. Programming Languages
 - A. Language is not defined by the CGI specification
 - B. Some languages are meant to run on the client only, so these are not appropriate for CGI (which runs on the server)
 - 1. JavaScript (with the exception of the "Server" construct)
 - 2. VBScript
 - C. Any language which can run an application or a script on the server can be used for CGI
 - 1. C
 - 2. C++
 - 3. Java
 - 4. Perl
 - 5. UNIX shell
 - 6. Visual Basic
 - 7. Apple Script
 - D. Some languages can be used for either client- or server-side programming; these are fine for CGI (Java)
 - E. The most common language used for CGI is perl,
 - 1. Easy text/string manipulation
 - 2. Interpreted instead of compiled
 - 3. Free
 - 4. Widely available
 - 5. Easy to interface with operating system to execute system commands (reading directories, sending email, etc)
 - F. PHP is gaining popularity
 - 1. Designed as a web-programming language from the beginning
 - 2. Less complicated than perl (since perl was designed for a broader purpose)
 - 3. Easily embedded into HTML pages
 - 4. Very easy to interface to databases (particularly MySQL)

- III. Applications
 - A. What CGI gives you is the ability to create interactive websites (what is interactivity? not just moving graphics!)
 - B. Common applications
 - 1. Shopping carts
 - 2. Bulletin boards
 - 3. Guest books
 - 4. Surveys
 - 5. Form to email
 - 6. Database interface
 - C. Some functions are strictly client-side, and are therefore not appropriate for CGI
 - 1. Form validation (i.e. checking for valid data before submitting a form)
 - 2. Image rollovers