Introduction to Server-Side Scripting

Client-Side Scripting

Client-Side Scripting is accomplished by inserting lines of executable program code (a 'script') directly within an HTML web page. The programming language used to write the script may be JavaScript, VBscript or any other available scripting language which the web browser (web client) knows how to interpret. The script is interpreted and executed by the browser (web client) which displays the web page. The sequence of operations, then, is

1. The browser (Web Client) requests a web page from a web server.
2. The web server returns the page to the web client.
3. The web client processes the html and any embedded scripts and displays the results on the user's display.

Notice that

a. The extension of the pages containing scripts is htm or html; it does not change to reflect the scripting language.
b. The only resources available to the scripts are those on the client machine, none that are on the web server host machine.
c. The browser must be ‘enabled’ for the scripting language.

Server-Side Scripting

As you might guess, Server-Side Scripting consists of scripts that are executed on the web server host machine, not on the client machine. As with client-side scripts, the scripts themselves may be included directly among the text in an HTML document.

However, scripts may also be contained in separate files which are then 'included' in the HTML document. The effect is the same as if the scripts were written as part of the HTML document. The advantage is that these external files can be 'reused' - the same script can then be included, if desired, in
When the page containing the script is requested, the web server passes the page containing the script to a script processor which performs the actions requested by the script and returns the page, which now contains only HTML, to the server who, in turn, forwards it to the requesting web client (browser). The full sequence of events is

1. The browser (Web Client) requests a web page from a web server.
2. The server forwards the page, if scripting is included, to the script processor.
3. The script processor runs the script and returns the results to the server.
4. The web server returns the page to the web client
5. The web client processes the html and any embedded client side scripts and displays the results on the users display.

Notice that

a. The extension of the pages containing scripts is NOT .htm or .html; The extension (.jsp, .vb, .php, etc) tells the server which script processor to use.

b. Many server features and parameters are available to server-side scripts, including
   - Time and Date information
   - The names and IP addresses of the server and client
   - Server environment variables

c. Server-side scripts can create, read and write files on the server

d. Server-side scripts can access data bases on the server

Accessing data bases is a very important feature of server-side scripts, for instance, for businesses on the web, where data bases are used to keep product information. Data

many HTML documents without having to type them over and over again. Also, if changes ever need to be made to the script, only one file needs to be modified, not every HTML page where the script is used.

This is set up in the configuration of the web server. In fact, this configuration could be set up to send pages with .htm or .html extensions to a script processor, if that were desired.
Bases are accessed directly by the scripts, through a common data base access language called SQL (Structured Query Language). See the next diagram: