Tutorial 1: *Programming with JavaScript*
Hard Refresh

Web Browser Cache

The Web browser cache is a temporary storage area in memory or on disk that holds the most recently downloaded Web pages. As you jump from Web page to Web page, caching those pages in memory lets you quickly go back to a page without having to download it from the Web again.

The Cache Issue

In some cases, when a website has changed, you may not be able to view the changes because you are actually viewing the cache. Rapid updates, like those on news and discussion sites, can confuse browsers resulting in a cached version of a Web page.

There are two ways to solve the cache issue: a hard refresh, which bypasses the cache and loads the actual page as it is stored on the server, and clearing your cache, which is something you should do periodically anyway.

Hard Refresh Methods

Hard refresh is very useful for web designers who want to make sure that they are viewing the most recent version of their work.

There are two methods for a hard refresh. Both are identical to the browser on the local machine. The http request headers are the only difference.

- **Ctrl + Refresh**

  The *Ctrl+Refresh* header means that any caching servers along the way should return a fresh copy of the page.

- **Ctrl + Shift + Refresh**

  The *Ctrl+Shift+Refresh* headers mean that any caching servers along the way should return a fresh copy of the page, and should also not cache the page for any future requests. In other words, the next time the page is requested, it should either use a previous cache of the page or request a fresh copy, but should not use this one.

Clearing the Cache

In the options menu for your web browser, there is usually a tab for dealing with the cache. You can set the size of the cache and also clear it out. Clearing the cache will remove all of the older saved versions of websites you visit, which means that the entire page will have to be freshly downloaded when you visit it. Clearing the cache is more time consuming than doing a hard refresh, and only needs to be done periodically, but can be beneficial if you are having difficulty with your browser.