

Exercises: Cookies

1. In a previous problem, you had two pages. You used the Referer header to force users to get to page 2 by following a link from page 1. Now, suppose that it is not necessary to *always* go to page 1 before page 2; you just want to make sure that users have been to page 1 *at least once* before they are allowed to visit page 2. For example, page 1 might be a page that introduces the site and gives some legal disclaimers, and users are required to visit that page at least once before they can see the second page.

Create two servlets. If a user visits page 2 before having ever visited page 1, they should get redirected to page 1. **Note:** some people find this problem easier if they manually delete cookies between tests. To do this in IE 5/6, start at the Tools menu, then select Internet Options, General, and Delete Cookies. With IE 7, start at the Tools menu, then select Internet Options, General, and click “Delete” under “Browsing history”. With Firefox, click on Tools, then Options, then Privacy, then Cookies—you’ll have various options from there.

2. Write a servlet that displays the values of the firstName, lastName, and emailAddress request parameters. But, remember what users told you in the past, and use the old values if the current values are missing. So, if a parameter is missing and the client is a first-time visitor, have the servlet list “Unknown” for the missing values. If a parameter is missing and the client is a repeat visitor, have the servlet use previously-entered values for the missing values.
3. Make a small page that displays some simple information of your choosing. Make another page that lets users choose the foreground and background color that they want the first page to use. For example, if users never visit the the color choice page, the main informational page should use default colors of your choosing. But if a user visits the color choice page and chooses a yellow background and red foreground, all subsequent visits to the main page by that user should result in red on yellow. There is no need to vet the colors; you can accept whatever color values the user gives you.

If you are a bit rusty with HTML, you set colors as follows:

```
<BODY BGCOLOR="colorName" TEXT="colorName">
```

or

```
<BODY BGCOLOR="#RRGGBB" TEXT="#RRGGBB">
```

(where R, G, and B are hex values for the red, green and blue components. I.e., #FF00FF is magenta -- 255 for red, 0 for green, and 255 for blue).

4. Repeat exercise number one, but with session cookies, not persistent cookies. Visit it twice in IE, then click on the IE icon *on the desktop* to start a new browser. Is this considered the same session or a new one? Repeat the process with Firefox. Notice that they work differently.
5. Check out your cookie files in IE and Firefox. On IE, start at the Tools menu, then do Internet Options, General, Settings, View Files. It is easier to find the cookie files if you do “Delete Files” first. With Firefox, do a search (“Find”) for a file called cookies.txt in a Mozilla folder. See if you notice a cookie from doubleclick.net in both cases. Take a look at the structure of these files to see if you can figure out how they represent the various cookie parameters.