Web Design and Programming (0107558)
Internet Programming (0107571)[1]

Cookies and Sessions

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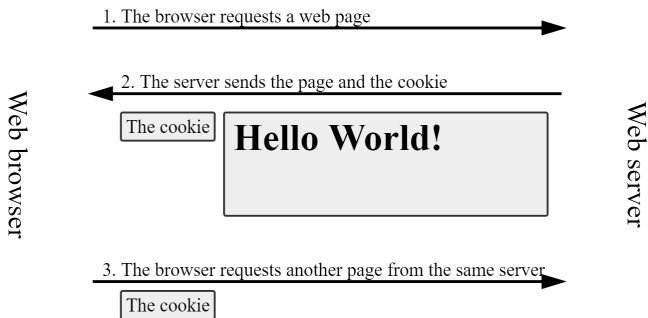Department of Computer and Communications Engineering

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[1]Michael Mendez. *The Missing Link: An Introduction to Web Development and Programming*. Open SUNY Textbooks 2014.

Cookies and Sessions

Cookies

- ▶ Cookies are server data stored in the browser.
- ▶ It is a small file that the server embeds on the user's computer.
- ▶ It is a key value pairs that are sent to the server with each request.

1. The browser requests a web page →

← 2. The server sends the page and the cookie

| The cookie | **Hello World!** |

Web browser

Web server

3. The browser requests another page from the same server →

| The cookie |

Cookies and Sessions

Cookies

- With PHP, you can both create and retrieve cookie values.
- A cookie is created with the setcookie() function.

  ```
  setcookie(name, value, expire, path, domain, secure, httponly);
  ```

- setcookie() function must be called before any html tags.
- Cookies have expiration date.
- Shopping cart content is one example of cookies use.

Cookies and Sessions

Demo
7-cookies.php

Cookies and Sessions

Sessions

▶ Sessions allow the PHP script to store data on the web server that can be later used, even between requests to different PHP pages.

▶ Every session has a different identifier, which is sent to the client's browser as a cookie or as a $_GET variable.

▶ Session ID is a 32-long hexadecimal random number. It is generated once a new connection to the server is established.

Cookies and Sessions

Sessions

- ▶ The HTTP address doesn't maintain state. Session comes to rescue.
- ▶ By default, session variables last until the user closes the browser.
- ▶ A session is started with the session_start() function.
- ▶ session_start() must be called before any html tags.

Cookies and Sessions

Demo
8-session.php

Cookies and Sessions

Quiz - 1

- How does a web server recognize a particular web browser?
    - Web link
    - None of these
    - Cookies
    - Name
- The Web is a stateful system.
    - True
    - False
- The browser does not always maintain a connection to the server.
    - True
    - False
- Cookies can be made to last for how long?
    - Minutes
    - Months
    - Till the session ends
    - Any of these

Cookies and Sessions

Quiz - 2

- ▶ If a browser is contacting a server for the very first time, the browser does not send cookies in its first request.
    - ▶ True
    - ▶ False
- ▶ Sessions are server controlled and are protected from the users direct access to it.
    - ▶ True
    - ▶ False
- ▶ session_start() is used to
    - ▶ Restore an old session
    - ▶ Make a new session
    - ▶ Relocate a session
    - ▶ Rename a session
- ▶ session_start() can be placed anywhere in the php file.
    - ▶ True
    - ▶ False
- ▶ The [   ] function is used to remove a session.

Cookies and Sessions

Quiz - 3

- ▶ $_SESSION is a:
    - ▶ Variable that stores session details
    - ▶ Associative array
    - ▶ All of these
    - ▶ Super global variable
- ▶ PHP applications can make changes to the $_SESSION variable.
    - ▶ True
    - ▶ False
- ▶ End users can make changes to the $_SESSION variable.
    - ▶ True
    - ▶ False
- ▶ Generally, if there are no cookies for a web site in the browser, PHP will make a new session as soon as the user tries to access the url.
    - ▶ True
    - ▶ False

Cookies and Sessions

Quiz - 4

- When do session cookies expire?
    - After the user closes a tab on their browser
    - After 24 hours
    - After the expire date passes
    - After two hours
    - When the browser is closed
- Where are non-session cookies stored?
    - In the memory of the PHP server
    - On the hard drive of the PHP server
    - On the hard drive of the user's computer
    - In the cloud on a separate memcached server
    - In the database on the server

Cookies and Sessions

Quiz - 5

- What is the typical session identifier?
  - The MD5 hash of the user's email address
  - A large random number chosen by the server
  - The MD5 hash of the domain name of the server
  - The number of seconds since January 1, 1970
  - A large random number chosen by the browser
- If a browser does not support cookies, how can PHP maintain a session?
  - By using the browser's network address as the session identifier
  - By using an MD5 hash of the user's email address as the session identifier
  - By using the "secure cookie" header to force the browser to set a cookie
  - By including the session identifier as a parameter every GET and POST request