Using PHP in a Web Application

Internet Applications, ID1354

Contents

Section

- Cookies
- HTTP Sessions
- HTTP Parameters
- Application Scope and File Handling
- To Identify a List Item
- Architecture

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- A cookie is only passed to the server from which it originated.

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- **`name`** and **`value`** is the cookie's name/value pair.
- **`expire`** tells the instant in time when the cookie expires. **`time()`** returns the current time, so **`time()+60*60*24*30`** sets the cookie to expire in 30 days.

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- The following statement retrieves all cookies with the name **userid**.

```
$_COOKIE["userid"];
```

- The **isset** function can be used to check if a cookie is set.

```
if (!isset($_COOKIE["userid"])) {
    echo '<a href="login.php">log in</a>';
}
```

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- If many servers set the same third party cookie, the third party server can track the user's surfing.
- Typically used for marketing.
- There are many other ways, beside cookies, to identify a user for tracking purposes.
  - Flash, Silverlight and HTML5 storages
  - HTML5 canvas painting
  - content of caches and cache tags like Last-Modified or ETag
  - social networks
  - fingerprinting mechanisms like supported ciphersuites, DNS content, HTTP headers, plugins and fonts, clock drift, CPU and GPU benchmarks, network level information, user behavior

The EU Cookie Law

A person shall not store or gain access to information stored, in the terminal equipment of a subscriber or user unless the requirements of paragraph (2) are met.

(2) The requirements are that the subscriber or user of that terminal equipment

1. is provided with clear and comprehensive information about the purposes of the storage of, or access to, that information; and
2. has given his or her consent.

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  - Applies to authentication and shopping baskets?

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- Defines a HTTP header, and how to handle it on the server.
- It is not mandatory in any way to obey the users preferences.
- Must be implemented by server developer.

Question 1

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- The UID is stored on the client, for example in a cookie or as part of URLs, and included in each request to the server.
- The only way to terminate a session is to manually unset all data related to the session in the server-side code.
- If a session is not explicitly terminated, it times out after an interval specified in server configuration, and session data is removed.

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- This means that a variable created in one request will not exist in later requests.
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- This storage is called a session save handler, and is configurable. Normally, and also normally by default, a file is used.

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- To delete all data from the session, use the `session_destroy` function.

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  - If it is present, its value will be used as the id of the current session.
  - If it is not present, it will be created and its value will be set to the id of the current session.
- We must understand that the **`PHPSESSID`** cookie is the link between a browser and that browser's session data on the server.

Session Example

At session start

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const USER_KEY = 'user_key';
session_start();
//Assuming $user is an object with user data.
$_SESSION[USER_KEY] = serialize($user);
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At session end.

```
session_destroy();
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- **`$_GET`** is an array with all parameters in a HTTP GET request, **`$_POST`** is a similar array for a POST request.

HTTP Parameter Example

The following code retrieves the value of the **address** parameter, which might originate from an HTML form.

```
//The text field where the user types the address
//must have the attribute name='address'

const ADDRESS_KEY = 'address';
if (!empty($_POST[ADDRESS_KEY])) {
    $address = $_POST[ADDRESS_KEY];
}
```

Question 3

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Application Scope Data

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- If data is to be shared between different users, such a mechanism must be constructed.
- A simple approach is to store data with application scope in a database.
- Other alternatives are a text file, an xml file or a plug-in such as memcached, `http://www.memcached.org/`, which stores key/value pairs in memory.

File Handling

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```
\file_put_contents($path_to_file,
                   $data, FILE_APPEND);
```

```
\file_get_contents($path_to_file));
```

Question 4

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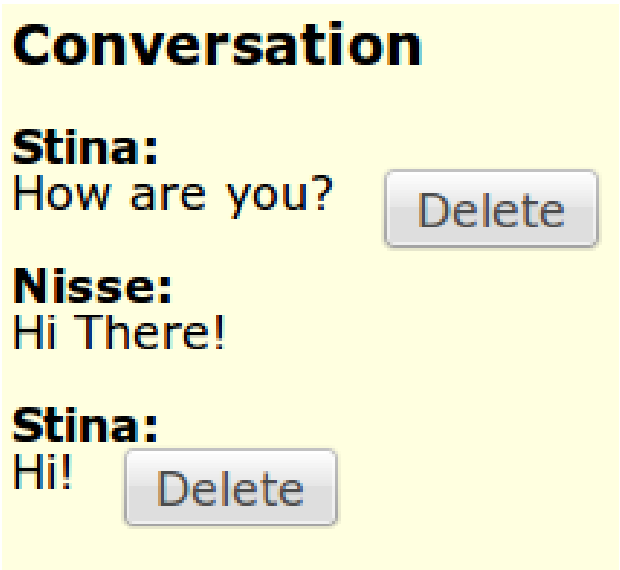
The Problem



- There is a list with buttons (or links) for multiple items, like the chat application example to the left.

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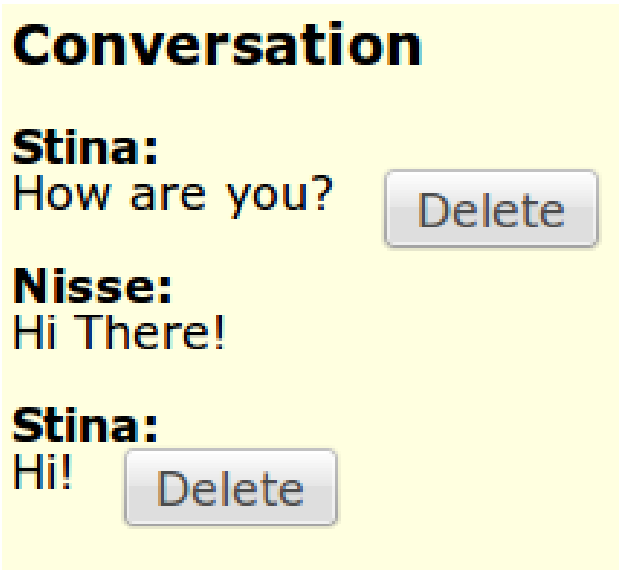

- There is a list with buttons (or links) for multiple items, like the chat application example to the left.
- How can we know which button the user clicked? In this chat example, how can we know which entry Stina wants to delete?

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  - In this chat example, that means one form for each entry that has a `Delete` button.
- Each form includes a hidden field, which holds an identifier for the list item where the form is placed.
  - In this example, we use the time when the entry was written as identifier.

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- A hidden field is not displayed in the browser, but included when the form is submitted.
  - The HTML for the chat conversation is listed below.

```
<p class="author">Stina:</p>
<p class="entry">How are you?</p>
<form action="DeleteEntry" method="POST">
  <input name="timestamp" value="1511858876" type="hidden">
  <input value="Delete" type="submit">
</form>
<p class="author">Nisse:</p>
<p class="entry">Hi there!</p>
<p class="author">Stina:</p>
<p class="entry">Hi!</p>
<form action="DeleteEntry" method="POST">
  <input name="timestamp" value="1511858849" type="hidden">
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- Code is not complete, just illustrates the principle. Complete code is found on course web page.

```
for ($i = count($entries) - 1; $i >= 0; $i--) {
    $entry = unserialize($entries[$i]);
    if ($entry->getTimestamp() ==
        $_GET[CHAT_TIMESTAMP_KEY]) {
        $entry->setDeleted(true);
        $entries[$i] = serialize($entry);
        break;
    }
}
```

Question 5

Section

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  - Duplicated code since similar code will appear in several such files.

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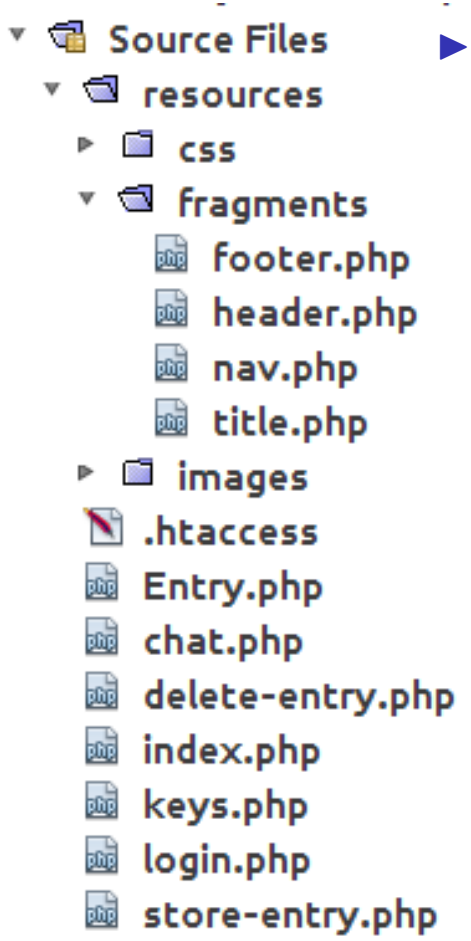

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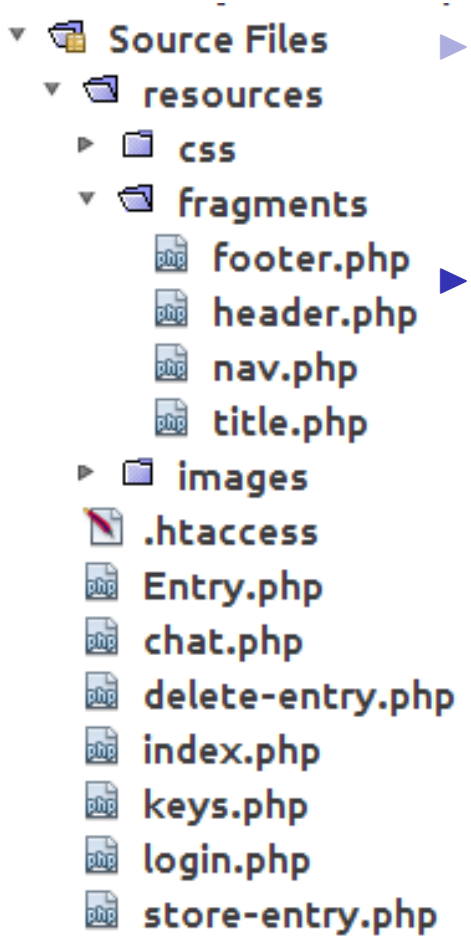

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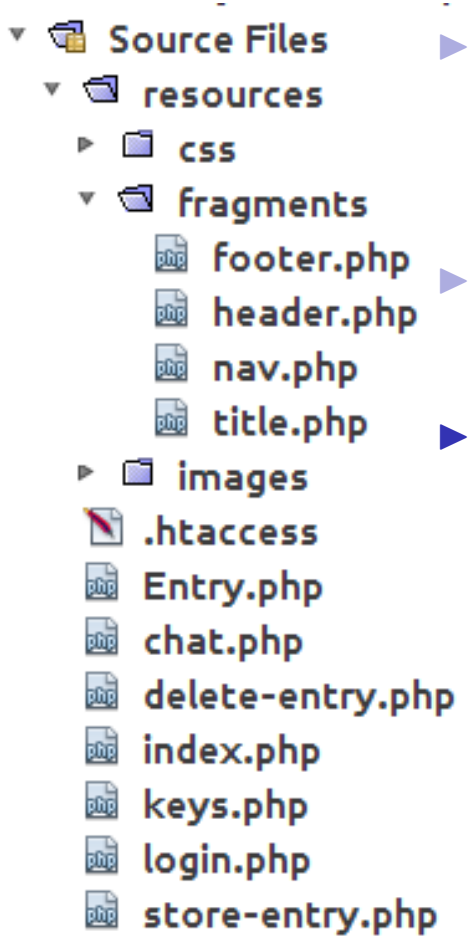

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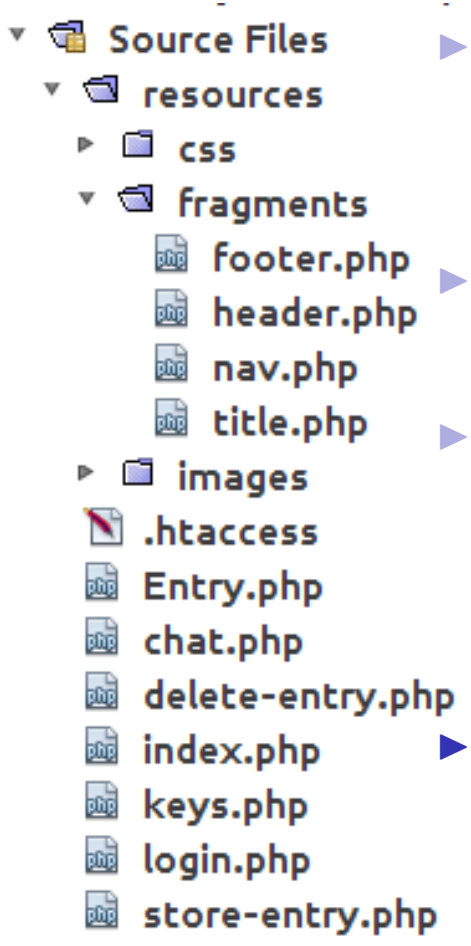

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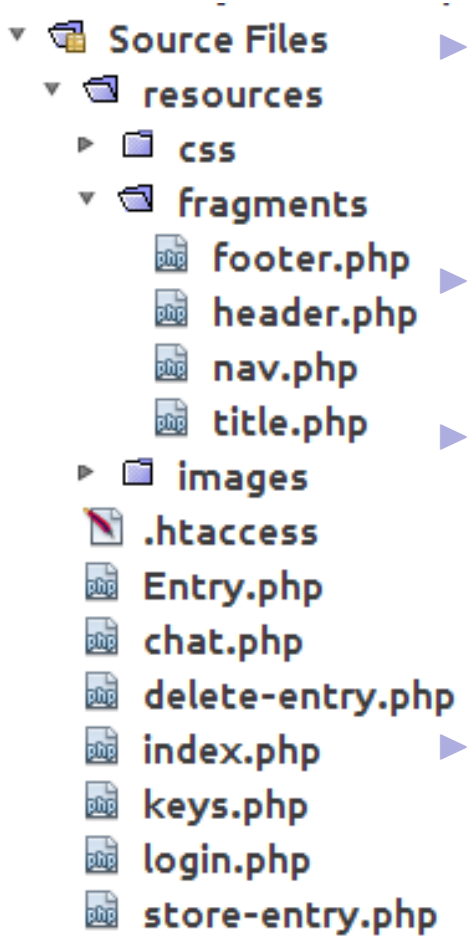

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- The files handling HTTP requests are **`login.php`**, **`store-entry.php`** and **`delete-entry.php`**