Sessions in php

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PHP Sessions

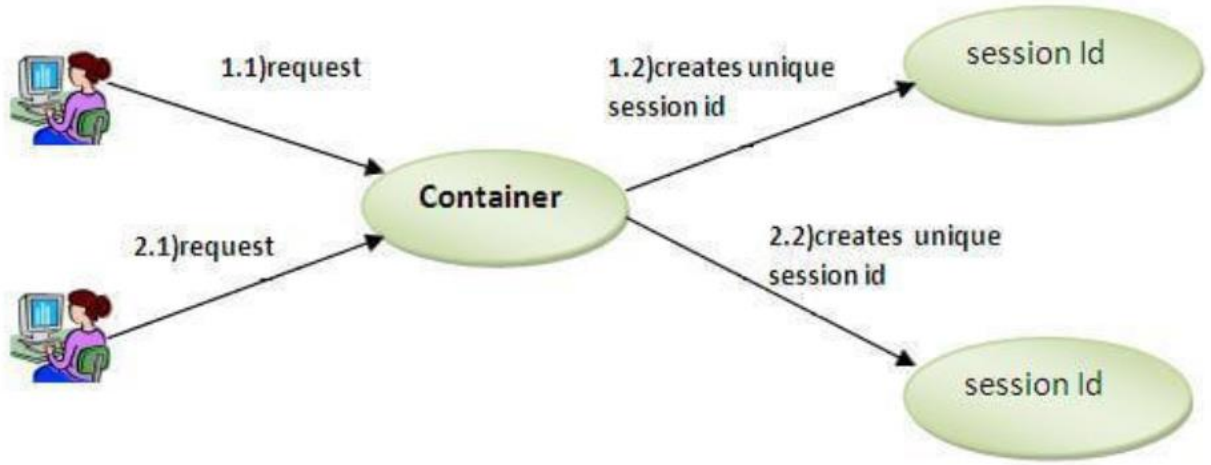
What is a PHP Session?

When you work with an application, you open it, do some changes, and then you close it. This is much like a Session. The computer knows who you are. It knows when you start the application and when you end. But on the internet there is one problem: the web server does not know who you are or what you do, because the HTTP address doesn't maintain state.

Session variables solve this problem by storing user information to be used across multiple pages (e.g. username, favorite color, etc). By default, session variables last until the user closes the browser.

PHP session technique is widely used in shopping websites where we need to store and pass cart information e.g. username, product code, product name, product price etc from one page to another.

PHP session creates unique user id for each browser to recognize the user and avoid conflict between multiple browsers.



A session creates a file in a temporary directory on the server where registered session variables and their values are stored. This data will be available to all pages on the site during that visit.

The location of the temporary file is determined by a setting in the php.ini file called session.save_path. Before using any session variable make sure you have setup this path.

When a session is started following things happen −

1. PHP first creates a unique identifier for that particular session which is a random string of 32 hexadecimal numbers such as 3c7foj34c3jj973hjkop2fc937e3443.

2. A cookie called PHPSESSID is automatically sent to the user's computer to store unique session identification string.

3. A file is automatically created on the server in the designated temporary directory and bears the name of the unique identifier prefixed by sess_ ie sess_3c7foj34c3jj973hjkop2fc937e3443.

PHP session_start() function

PHP session_start() function is used to start the session. It starts a new or resumes existing session. It returns existing session if session is created already. If session is not available, it creates and returns new session.

Syntax

```
bool session_start ( void )
```

Example

```
session_start();
```

PHP $_SESSION

PHP $_SESSION is an associative array that contains all session variables. It is used to set and get session variable values.

Example: Store information

```
$_SESSION["user"] = "Sachin";
```

Example: Get information

```
echo $_SESSION["user"];
```

example

```
<?php
session_start();
?>
<html>
<body>
<?php
$_SESSION["user"] = "Sachin";
echo "Session information are set successfully.<br/>";
?>
<a href="session2.php">Visit next page</a>
</body>
</html>
```

```
<?php
// Start the session
session_start();
?>
<!DOCTYPE html>
<html>
<body>
<?php
// Set session variables
$_SESSION["favcolor"] = "green";
$_SESSION["favanimal"] = "cat";
echo "Session variables are set.";
?>

</body>
</html>
```

Get PHP Session Variable Values

```
<?php
session_start();
?>
<!DOCTYPE html>
<html>
<body>
<?php
// Echo session variables that were set on previous page
echo "Favorite color is " . $_SESSION["favcolor"] . ".<br>";
echo "Favorite animal is " . $_SESSION["favanimal"] . ".";
?>
</body>
</html>
```

Modify a PHP Session Variable

```
<?php
session_start();
?>
<!DOCTYPE html>
<html>
<body>
<?php
// to change a session variable, just overwrite it
$_SESSION["favcolor"] = "yellow";
print_r($_SESSION);
?>
</body>
</html>
```

Destroy a PHP Session

To remove all global session variables and destroy the session, use session_unset() and session_destroy():

```
<?php
session_start();
?>
<!DOCTYPE html>
<html>
<body>
<?php
// remove all session variables
session_unset();
// destroy the session
session_destroy();
?>
</body>
</html>
```

Login Flow With Sessions and Cookies

1. A user opens the login page of a website.
2. After submitting the login form, a server on the other end authenticates the request by validating the credentials that were entered.

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3. If the credentials entered by the user are valid, the server creates a new session. The server generates a unique random number, which is called a session id. It also creates a new file on the server which is used to store the session-specific information.
4. Next, a session id is passed back to the user, along with whatever resource was requested. Behind the scenes, this session id is sent in the PHPSESSID cookie in the response header.
5. When the browser receives the response from the server, it comes across the PHPSESSID cookie header. If cookies are allowed by the browser, it will save this PHPSESSID cookie, which stores the session id passed by the server.
6. For subsequent requests, the PHPSESSID cookie is passed back to the server. When the server comes across the PHPSESSID cookie, it will try to initialize a session with that session id. It does so by loading the session file which was created earlier, during session initialization. It will then initialize the super-global array variable $_SESSION with the data stored in the session file.