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## What is the difference between client-side and server-side programming?

I have this code:

```
<script type="text/javascript">
  var foo = 'bar';
  <?php
    file_put_contents('foo.txt', ' + foo + ');
  ?>

  var baz = <?php echo 42; ?>;
  alert(baz);
</script>
```

Why does this not write "bar" into my text file, but alerts "42"?

javascript php client-side server-side

edited Aug 21 '14 at 10:45

Cody Gray  
118k 16 226 311

asked Dec 12 '12 at 13:03

deceze  
241k 34 278 411

Feel free to edit. Just needed *something*... :) – [deceze](#) Dec 12 '12 at 13:09

@T.J. Haven't seen a nice canonical one. If you know one *with a good answer*, please share. – [deceze](#) Dec 12 '12 at 13:09

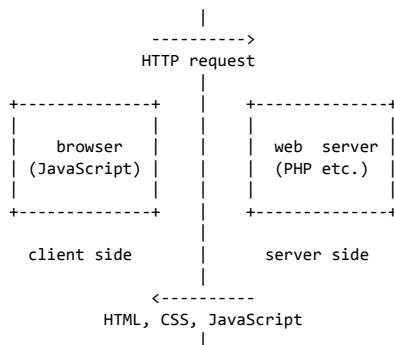
1 @deceze I'm not so sure about random's revision. Just pingin you to roll it back if you wish. – [Mike](#) Dec 11 '13 at 23:32

1 You should not be including meta commentary about the question in the question itself. The question should just be asking a question, not explaining why you're asking a question. – [Servy](#) May 12 '14 at 18:47

1 This question actually has *no* specificity to JavaScript or PHP and is instead a broad definition of the differences between client-side and server-side programming. A title edit has been suggested of "What is the difference between client-side and server-side programming?" and the client-side and server-side tags added. – [Jhawins](#) May 19 '14 at 15:43

### 3 Answers

Your code is split into two entirely separate parts, the *server side* and the *client side*.



The two sides communicate via HTTP requests and responses. PHP is executed on the server and outputs some HTML and maybe JavaScript code which is sent as response to the client where the HTML is interpreted and the JavaScript is executed. Once PHP has finished outputting the response, the script ends and nothing will happen on the server until a new HTTP request comes in.

The example code executes like this:

```
<script type="text/javascript">
  var foo = 'bar';
```

```

<?php
    file_put_contents('foo.txt', ' ' + foo + ' ');
?>

var baz = <?php echo 42; ?>;
alert(baz);
</script>

```

Step 1, PHP executes all code between `<?php ?>` tags. The result is this:

```

<script type="text/javascript">
    var foo = 'bar';

    var baz = 42;
    alert(baz);
</script>

```

The `file_put_contents` call did not result in anything, it just wrote " + foo + " into a file. The `<?php echo 42; ?>` call resulted in the output "42", which is now in the spot where that code used to be.

This resulting HTML/JavaScript code is now sent to the client, where it gets evaluated. The `alert` call works, while the `foo` variable is not used anywhere.

**All PHP code is executed on the server before the client even starts executing any of the JavaScript. There's no PHP code left in the response that JavaScript could interact with.**

To call some PHP code, the client will have to send a new HTTP request to the server. This can happen using one of three possible methods:

1. A link, which causes the browser to load a new page.
2. A form submission, which submits data to the server and loads a new page.
3. An [AJAX](#) request, which is a Javascript technique to make a regular HTTP request to the server (like 1. and 2. will), but without leaving the current page.

[Here's a question outlining these method in greater detail](#)

You can also use JavaScript to make the browser open a new page using `window.location` or submit a form, emulating possibilities 1. and 2.

edited Aug 22 '14 at 16:05



AstroCB

5,584 9 25 45

answered Dec 12 '12 at 13:03



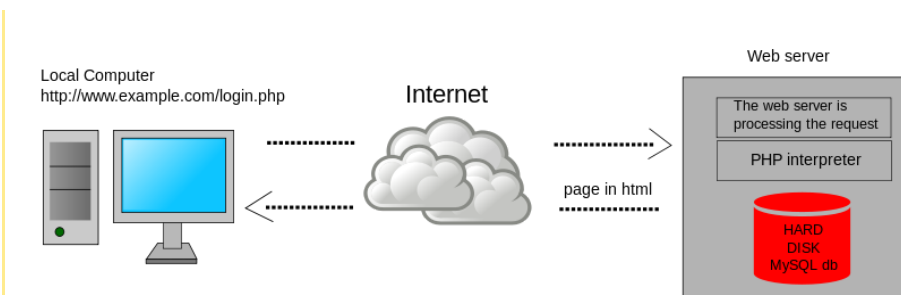
deceze

241k 34 278 411

This answer begins with "Your code is split into two entirely separate parts, the server side and the client side." and should explain why I've changed the title by itself. – [Jhawins](#) May 19 '14 at 15:52

To determine why *PHP* code doesn't work in *JavaScript* code we need to understand what is **client side** and **server side** language and how they work

*Server-side languages (PHP etc.):* They retrieve records from databases, maintain state over the [stateless HTTP connection](#), and do a lot of things that require security. hey reside on the server, these programs never have their source code exposed to the user



[image attr](#)

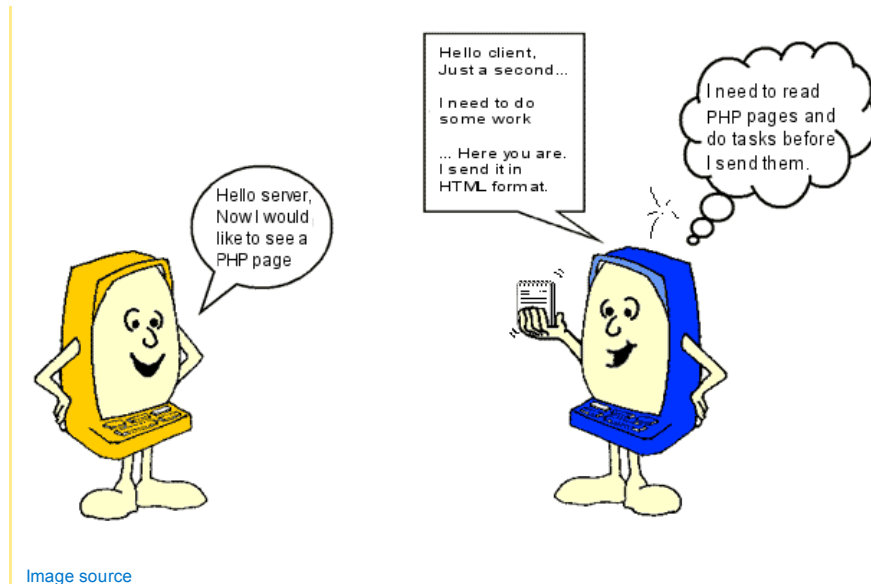
so you can easily see that server side language handle HTTP request and process it and as [@deceze](#) said *PHP is executed on the server and outputs some HTML and maybe JavaScript code which is sent as response to the client where the HTML is interpreted and the JavaScript is executed*

while at the other hand *Client Side Language (like JavaScript)* Reside on browser and run at the

browser , *Client-side scripting* generally refers to the class of computer programs on the web that are executed client-side, by the user's web browser, instead of *server-side*.

JavaScript is visible to the user and can be easily modified so for security stuff we must not relay on JavaScript

So when you make a *HTTP* request on server than The server first reads the *PHP* file carefully to see if there are any tasks that need to be executed and send response to client side and again as @deceze said \*Once PHP has finished outputting the response, the script ends and nothing will happen on the server until a new *HTTP* request comes in.\*



[Image source](#)

So now what can I do if I need to call PHP? It depends how you need to do it: either by reloading the page or by using an AJAX call.

1. You can do by reloading page and send *HTTP* request
2. you can make AJAX call with JavaScript and this does not require reloading page

#### Good Read:

1. [Wikipedia : Server-side scripting](#)
2. [Wikipedia : Client-side scripting](#)
3. [Madara Uchiha : Difference between client side and server side programming](#)

edited Aug 22 '14 at 16:10



AstroCB

5,584 9 25 45

answered Jul 1 '13 at 11:52



NullPointer

28.1k 12 60 94

Your Javascript will execute on the client, not on the server. This means that `foo` is not evaluated on the server side and therefore its value can't be written to a file on the server.

The best way to think about this process is as if you're generating a text file dynamically. The text you're generating only becomes executable code once the browser interprets it. Only what you place between `<?php` tags is evaluated on the server.

By the way, making a habit of embedding random pieces of PHP logic in HTML or Javascript can lead to seriously convoluted code. I speak from painful experience.

answered Dec 12 '12 at 13:46



NitayArt

176 5

Your answer here is noteworthy as it makes mention to the/a interpreter. However, javascript can be compiled and run in a server environment, and it can be interpreted by a server as well. – [Brett Caswell](#) Mar 10 at 17:10

protected by [Alma Do](#) Aug 11 '14 at 9:41

Thank you for your interest in this question. Because it has attracted low-quality answers, posting an answer now requires 10 [reputation](#) on this site.

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