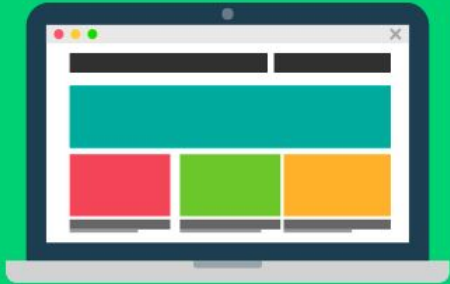# Backend Development

Hamidreza Hosseinkhani - 2020

FRONTEND

CLIENT-SIDE DEVELOPMENT

BACKEND

SERVER-SIDE DEVELOPMENT

Which stack?!
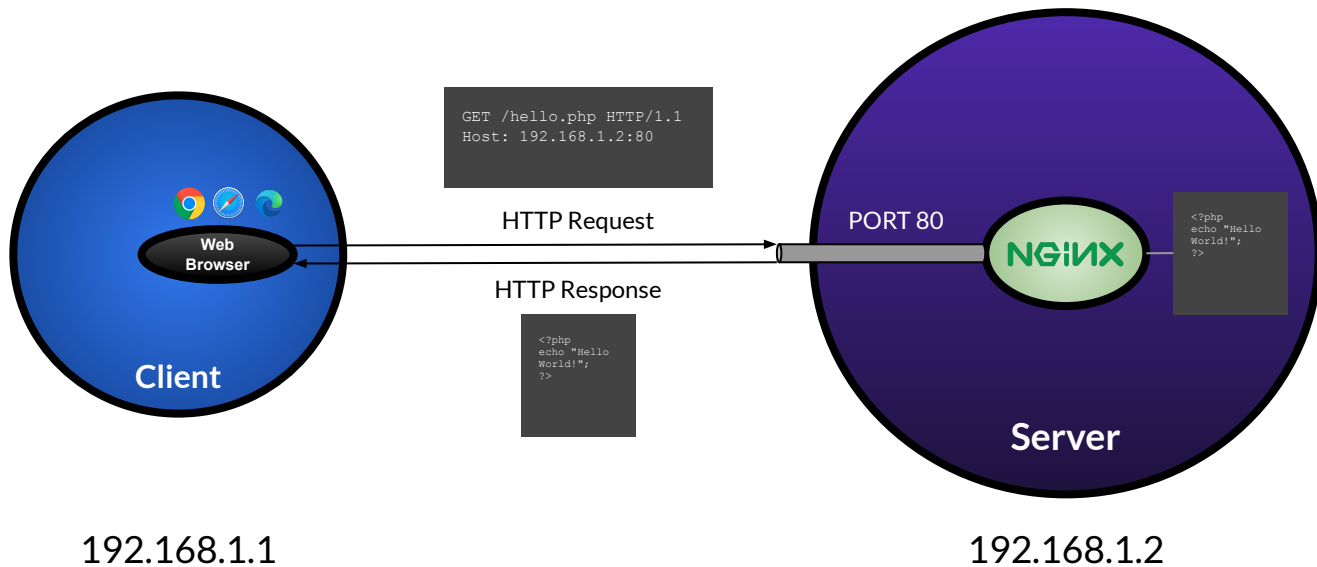
- **PHP**: Lumen, Laravel, …
- **Node.js (JavaScript)**: Express, …
- **Python**: Flask, Django, …
- **Go**
- **Java**: Spring Boot
- **Kotlin**: Ktor
- **C#**: ASP.NET Core
- …

Let's see some PHP syntax!

Serve a php script as a regular file

GET /hello.php HTTP/1.1
Host: 192.168.1.2:80

HTTP Request

HTTP Response

```
<?php
echo "Hello
World!";
?>
```

PORT 80

```
<?php
echo "Hello
World!";
?>
```

Web Browser

Client

Server

192.168.1.1

192.168.1.2

Web service architecture

Server

Client

```
GET /hello.php HTTP/1.1
Host: 192.168.1.2
```

HTTP Request

HTTP Response

PORT 443

localhost/sample.php

Hello World!

NGINX

php

```
<html>
  <head>
    …
  </head>
  <body>
    …
  </body>
```

```
<?php
echo "Hello
World!";
?>
```

192.168.1.1

192.168.1.2
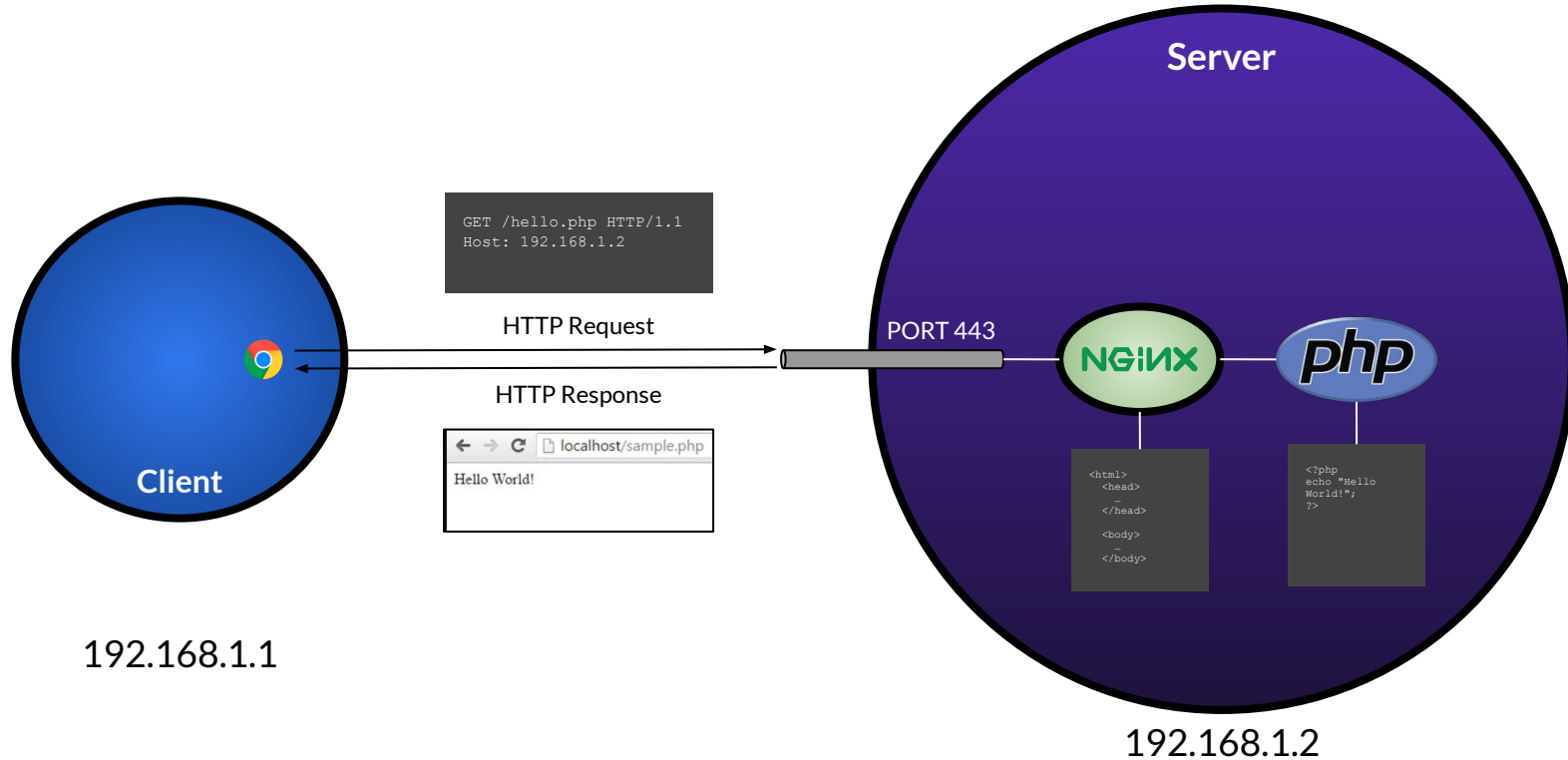
Web Browser

http://example.com/hello.php

Hello world!

JavaScript Script

```
window.onloa
  $('start')
  $('end').o
  var bounds
  for (var i
  boundary
```

④ Execute script

User's Computer

① **GET**
hello.php

Web Server

PHP Script

```
<?php
include('header.p
if (isset($_GET['
  page = $_GET['p
} else {
```

② Execute script

```
<!DOCTYPE html PU
<html xmlns="http
  <head>
    <title>Hello
```
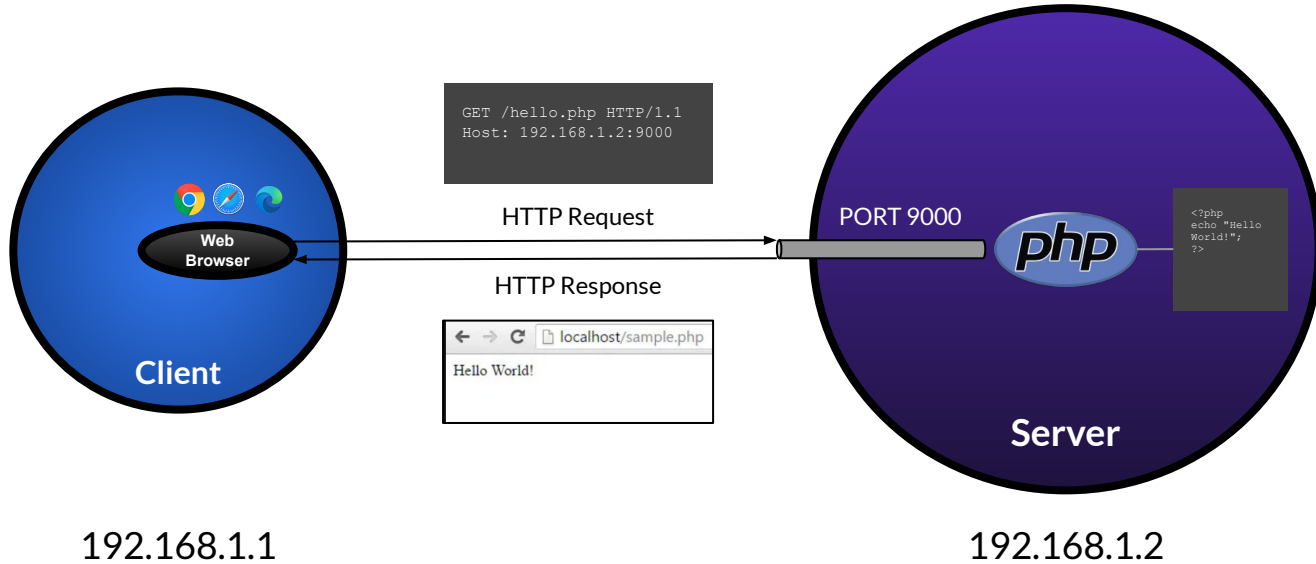
HTML Output

③

Server Computer

Process a php file and get the result

HTTP Requests

- GET
- POST
- PUT
- DELETE
- …

```
GET /news.php?id=1234 HTTP/1.1
Host: my-news-site.com
```

```
POST /news.php HTTP/1.1
Host: my-news-site.com
Content-Type: application/x-www-form-urlencoded
Content-Length: 27

title=TITLE_OF_NEWS&content=CONTENT_OF_NEWS
```

```
PUT /news.php HTTP/1.1
Host: my-news-site.com
Content-type: text/html
Content-length: 16

**NEW NEWS FILE**
```

```
DELETE /news.php?id=1234 HTTP/1.1
Host: my-news-site.com
```

HTML Forms

Shipping Address

*Name:	
*Address:	
Address:	
*City:	
*State:	
*Zip:	

```html
<form action="formprocessor.html" method="get">
    <p class="required">* Required</p>
    <div class="fieldSet">
        <fieldset>
            <legend>Shipping Address</legend>
            <p><label class="field" for="Name"><span>*</span>Name:</label><input type="text" name="Name" class="textbox-300" /></p>
            <p><label class="field" for="Address"><span>*</span>Address:</label><input type="text" name="Address" class="textbox-300" /></p>
            <p><label class="field" for="Address2">Address:</label><input type="text" name="Address2" class="textbox-300" /></p>
            <p><label class="field" for="City"><span>*</span>City:</label><input type="text" name="City" class="textbox-300" /></p>
            <p><label class="field" for="State"><span>*</span>State:</label><input type="text" name="State" class="textbox-300" /></p>
            <p><label class="field" for="Zip"><span>*</span>Zip:</label><input type="text" name="Zip" class="textbox-300" /></p>
        </fieldset>
    <div>
</form>
```

```css
div.fieldSet {
    border: solid black thin;
    width: 500px;
    background-color: #ffffb0;
}
fieldset {
    border: none;
    margin: 0 0 0 -10px;
    padding 0;
}
legend {
    font-size: 20px;
    background-color: blue;
    color: white;
    width: 100%;
    padding: 5px;
}
label.field {
    text-align: right;
    width: 100px;
    float: left;
    font-weight: bold;
}
input.textbox-300 {
    width: 300px;
    float: left;
}
fieldset p {
    clear: both;
    padding: 5px;
}
label span, .required {
    color: red;
    font-weight: bold;
}
```