



**IEEE BRANCH
IONIAN
UNIVERSITY**

Full Stack Web Development

HTML • CSS • JAVASCRIPT • PHP • MYSQL

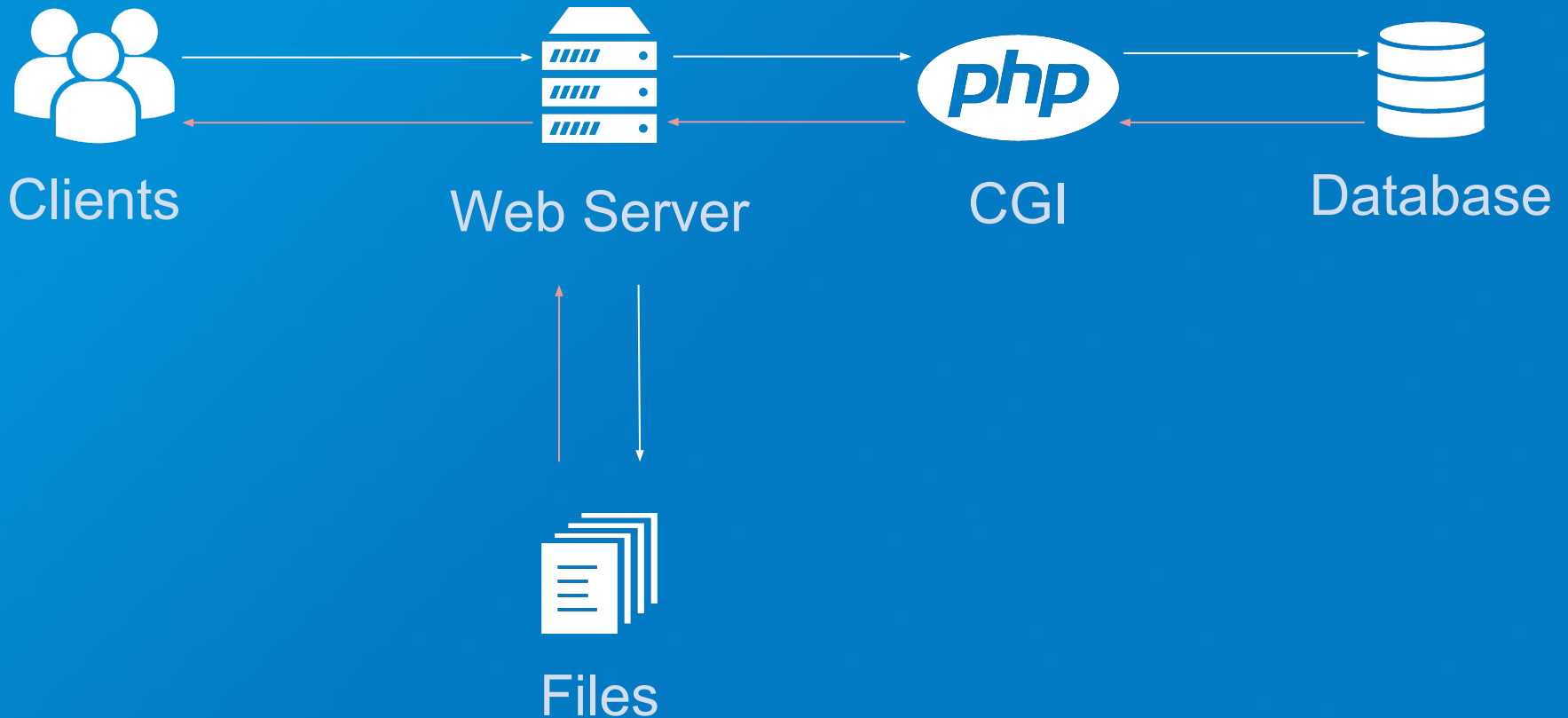
Introduction

Web Application Development

Building Blocks

- Web Server
 - Apache, Lighttpd, Nginx
- Common Gateway Interface
 - Clang, Perl, PHP
- Database Server
 - Relational Databases
 - MySQL, PostgreSQL
 - Non-Relational Databases
 - MongoDB, Redis

Apache + MySQL + PHP



Environment Setup

Hosting a Web Server

- For Personal Computers:
 - XAMPP (apachefriends.org)
 - AMMPS (ampps.com)
- Server setup on Linux
 - LAMP (shor10.me/ZKvq) ([DigitalOcean](https://www.digitalocean.com))

Choosing an IDE

- Cloud9 (ide.c9.io)
- Visual Studio Code (code.visualstudio.com)
- Atom Editor (atom.io)
- Vi/Vim (www.vim.org)

DigitalOcean ([Github Student Developer Pack](https://github.com/GithubStudentDeveloperPack))

- (education.github.com/pack)

Let's get started!

Hypertext Markup Language (HTML)

Syntax

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <meta charset="utf-8">
5      <title>Homepage</title>
6  </head>
7  <body>
8      <h1>Hello World!</h1>
9  </body>
10 </html>
11
```

Structure

```
1  ▾ <body>
2  ▾   <div>
3      <h1>Title</h1>
4      <span>Description</span>
5  </div>
6  ▾   <div>
7      <h1>Title2</h1>
8      <span>Description2</span>
9  </div>
10 </body>
11
```

Elements

```
1  <body>
2    <h1>I'm a header</h1>
3    <h6>I'm a tiny header</h6>
4    <p>A paragraph</p>
5    
6    <br> <!-- I'm a line break! -->
7    <span>I'm a span.</span>
8    <span>I'm an inline element.</span>
9    <div>But I'm a div!</div>
10   <div>I am a block element!</div>
11   <!-- Input is not a container element! -->
12   <input name="content" type="text">
13   <button>Just a button</button>
14 </body>
15
```


Attributes

```
1  <body>
2      <h1 id="first-header">Uno</h1>
3      <h1 id="second-header">Dos</h1>
4      <h1 class="header">Tres</h1>
5  <h1 class="header">
6      <a href="http://www.google.com">
7          Google!
8      </a>
9  </h1>
10 </body>
11
```

Mozilla Developer Network (MDN)

developer.mozilla.org

The **HTML** `<h1>`–`<h6>` **elements** represent six levels of section headings. `<h1>` is the highest section level and `<h6>` is the lowest.

 **HTML Demo: <h1-h6>** Reset

HTML **CSS**

```
1 <h1>Beetles</h1>
2   <h2>External morphology</h2>
3     <h3>Head</h3>
4       <h4>Mouthparts</h4>
5     <h3>Thorax</h3>
6       <h4>Prothorax</h4>
7       <h4>Pterothorax</h4>
8
```

Output
Beetles
 External morphology
 Head
 Mouthparts
 Thorax
 Prothorax
 Pterothorax

Using The Browser Developer Tools

- Chrome / Mozilla / Edge
 - Ctrl + Shift + I
 - F12
- Features
 - Elements
 - Console
 - Network
 - Performance monitoring
 - Many, many more
- You change elements without altering code and refreshing!