HTML & CSS

Maher Khan

Recitation 1
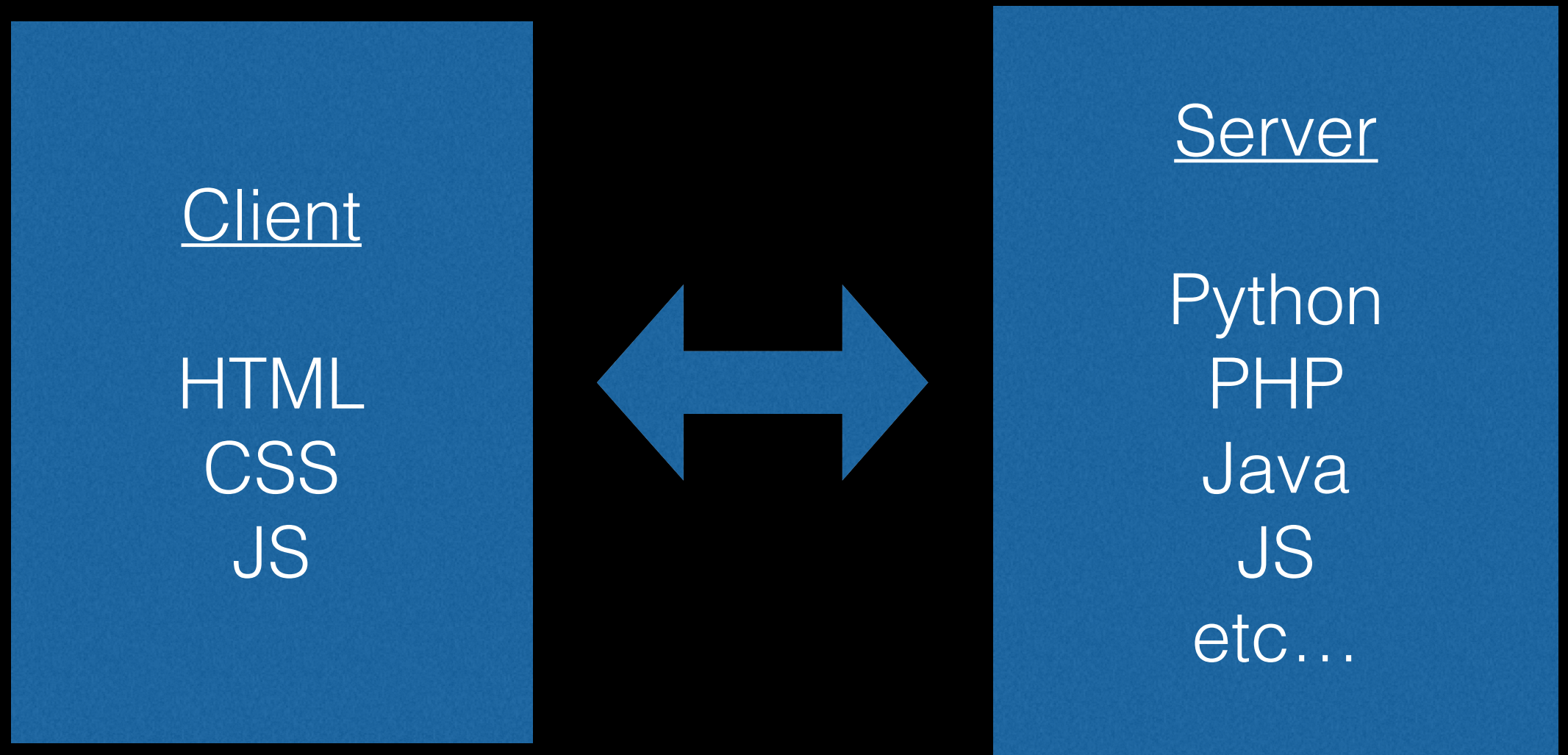Date: 7th September, 2018

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- PhD in Computer Science at Pitt
  (Expected 2023)

- BSc in Computer Science
  BSc in Information Systems
  (Dual Degrees)
  University Honors, Phi Kappa Phi, Dean's List (7 semesters)
  Class of 2017, Carnegie Mellon University

- Working with web applications since 2014

- 3 years TA experience at CMU

- Favorite framework: Django

Client Side vs Server Side

Client

HTML
CSS
JS

Server

Python
PHP
Java
JS
etc…

Client Side

HTML	Content
CSS	Presentation
Javascript	Processing

HTML: Hyper Text Markup Language

- Current version is HTML5 (added multimedia)

- Different rendering across browsers, but homogeneity across browsers (for the most part)

- Easy to parse in Javascript

- Markup: tags starting and ending with angle brackets, e.g. <p>

- Content: Everything else (arguably)

Terminology

- Element: a start and end tag and the content in between, e.g. <p>Content</p>

- Attribute: name/value pairs specified in a start tag, e.g.

- Comments: tags that will be ignored at rendering, e.g. <!— This is a comment -->

Skeleton of an HTML document

```
<!DOCTYPE html>

<html>

    <head>

        <meta charset="utf-8"/>

        <title>My first page</title>

    </head>

    <body>

        Here is my first webpage!

    </body>

</html>
```

Selection of Tags

- **\<h1> \<h2> \<h3>**: headers (\<h1> is the biggest by convention)

- **\<p>**: delimitates a paragraph

- **\<img>**: image

- **\<a>**: specifies an anchor (typically an hyperlink)

- **\<ul>**: unordered list

- **\<li>**: list item

- **\<div>**: delimitates a block

- **\<span>**: group in-line document (use mainly for style)

Deprecated Tags

- Elements related to styling became deprecated

- <center> <b> <i>
 <font> <frameset> <frame>

Why CSS?

- Multiple pages - one style

- Multiple platforms - different layouts

- Multiple user abilities - custom layout

CSS format

```
selector {

    property: value;

    property: value;

    property: value;

}
```

CSS: Inline, embedded or separate file?

- **Inline**: style attribute
  <p style="background: blue; color: white;"> ...

- **Embedded**: specified in the header (<head>)
  <style TYPE="text/css">
      p{background: blue; color: white;}
  </style>

- **Separate file**: file locator in the header (<head>)
  <link rel="stylesheet" type="text/css"
  href="style.css"/>

Classes

Classes are attributes of HTML elements for which we want to define **common properties**

    `<div class="special">...</div>`

Define the same style for all elements of the same class

    `.special {`

        `margin-top: 10px;`

        `font-family: "Helvetica", "Arial";`

    `}`

IDs

IDs are attributes of HTML elements for which we want to **identify uniquely**

```
<div id="sale">...</div>
```

Define the style for the element with specific ID

```
#sale {

    padding: 20px;

    color: #000000;

}
```

The CSS Box Model

- Let's look at
  https://css-tricks.com/the-css-box-model/

Time for an example?