

HTML, CSS, & Fundamentals of Development

School of Visual Concepts
Scott Thiessen, instructor

<http://movingobjects.io/svc/>
scott@movingobjects.io

Welcome!

Welcome!

Introductions

- Who are you?
- What do you do/make/study?
- What do you want to learn or get out of this class?
- What's your favorite animal?

Welcome!

Primary goal

Develop the skills and confidence to
realize your (website) ideas

Welcome!

What we'll cover

<http://movingobjects.io/svc/>

Welcome!

How we'll cover it

- Overview of topics & syntax
- Writing code together
- Weekly website projects
- Online resources + optional reading

Welcome!

How we'll cover it

- No grades, no tests
- **Participate!** Ask questions! Practice!

Today

- Web Basics & Terminology
- Using a Code Editor
- What is Markup?
- HTML Syntax
- Anatomy of an HTML Page
- Managing Your Files

Web Basics & Terminology

What is the Web?

The **World Wide Web** is the part of the internet that has websites on it.

A **website** is a bunch of pages connected to each other with links.

What is the Web?

You use a **browser** to see the websites that are on the web.



What is the Web?

To get your website on the internet for others to see, you need to upload it to a server computer.

A **server** is a computer that "serves" up websites when they're asked for.

Content, Design, & Code

Content is the reason we make websites

Design is the process of creating the user experience

Code is how we execute the design to deliver the content and experience

Web coding languages

HTML gives structure and meaning to your content

CSS adds style and layout

(JavaScript allows interactivity and dynamic content)

Code files

HTML and **CSS** files are ordinary text files. You can open and edit them in any text editor.

Code editors make the process of writing code easier and more enjoyable.

Using a Code Editor

Why Use a Code Editor?

- Syntax highlighting
- Autocomplete
- Code hints
- Themes/plugins/customization

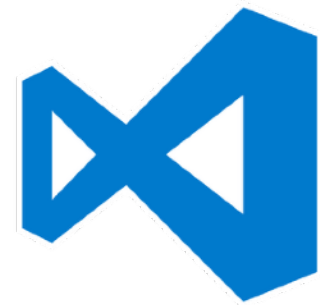
Code Editors



Atom



Sublime
Text



Visual Studio
Code

Web Basics & Terminology

Atom

FREE, simple to use, open-source

Available at: <http://atom.io>

Web Basics & Terminology

Atom

Let's try it out!



What is
Markup?

What is Markup?

Web browsers don't
understand your content

Browsers don't know what the content on
your webpage is, unless you tell it.

Markup is the way you describe your
content to a browser.

What is Markup?

What Markup Does

- Tells the browser what your content is, so it can display it properly
- Allows you to style your page using CSS

What is Markup?

My Report On Bugs

Scott Thiessen

July 9, 2010

Insects are the biggest group of animals on earth by far: there are more than 800,000 different kinds (or species) which have been described. New species of insects are continually being found: scientists think there are millions of species still not yet discovered. There are more insects than all other kinds of animals.

Insects have six legs; and most have wings. Insects were the first animals capable of flight. As they develop from eggs, insects undergo metamorphosis. Insects live all over the planet: almost all are terrestrial (live on land). Few insects live in the oceans or in very cold places, such as Antarctica. The most species live in tropical areas.

What is Markup?

My Report On Bugs

Scott Thiessen

July 9, 2010

Heading

Author

Date

Insects are the biggest group of animals on earth by far: there are more than 800,000 different kinds (or species) which have been described. New species of insects are continually being found: scientists think there are millions of species still not yet discovered. There are more insects than all other kinds of animals.

Paragraph

Insects have six legs; and most have wings. Insects were the first animals capable of flight. As they develop from eggs, insects undergo metamorphosis. Insects live all over the planet: almost all are terrestrial (live on land). Few insects live in the oceans or in very cold places, such as Antarctica. The most species live in tropical areas.

Paragraph

What is Markup?

HTML to the rescue!

- HTML is a markup language
- We can use HTML to “mark up” our content for the browser

HTML Syntax

HTML Syntax

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <meta charset="utf-8">
```

```
    <title>Title</title>
```

```
  </head>
```

```
  <body>
```

```
    Website content here
```

```
  </body>
```

```
</html>
```

HTML Elements/Tags

- HTML tags use `<>` brackets
- Tags wrap around content, with an opening and closing tag

`<html>Some content</html>`

HTML Attributes

- Some tags have attributes that provide more information or meaning
- Attributes have a name and value, joined with an = sign

```
<a href="page2.html">Link</a>
```

HTML Attributes

```
<a>I'm a sad link</a>
```

```
<a href="http://google.com">  
I'm a happy link</a>
```

Rules for Writing Tags

- Tags are written in lowercase
`<a>` not `<A>`
- Tags must be closed
`<p>Happy!</p>` not `<p>Sad`
- Attributes go in quotes
``
not ``

Heading tags

```
<h1>Hello world!</h1>
```

```
<h2>Hello world!</h2>
```

```
<h3>Hello world!</h3>
```

Hello world!

Hello world!

Hello world!

Emphasis & Strong tags

``That's`` not a knife.

``This`` is a
knife.

That's not a knife. **This** is a knife.

Paragraph tag

`<p>This is a paragraph.</p>`

`<p>I am another paragraph.</p>`

Paragraph tag

- HTML ignores "white space"

This is a
paragraph.

I am another
paragraph.

This is a paragraph. I am
another paragraph.

Paragraph tag

- HTML ignores "white space"

`<p>`This is a
paragraph.`</p>`

This is a paragraph.

`<p>`I am another
paragraph.`</p>`

I am another paragraph.

Paragraph tag

- To avoid problems, put all non-heading text in paragraph tags

Anchor (link) tag

```
<a href="http://svcseattle  
.com">School of Visual  
Concepts</a>
```

[School of Visual Concepts](http://svcseattle.com)

URLs

- An **absolute URL** points to another website, and must include the **http://**

```
<a href="http://svcseattle  
.com">School of Visual  
Concepts</a>
```


URLs

- A **relative URL** (no http://) points to a file within your website

```
<a href="page2.html">Page 2 of  
my website</a>
```

HTML Syntax

Image tag

- No closing tag!! wut!

```

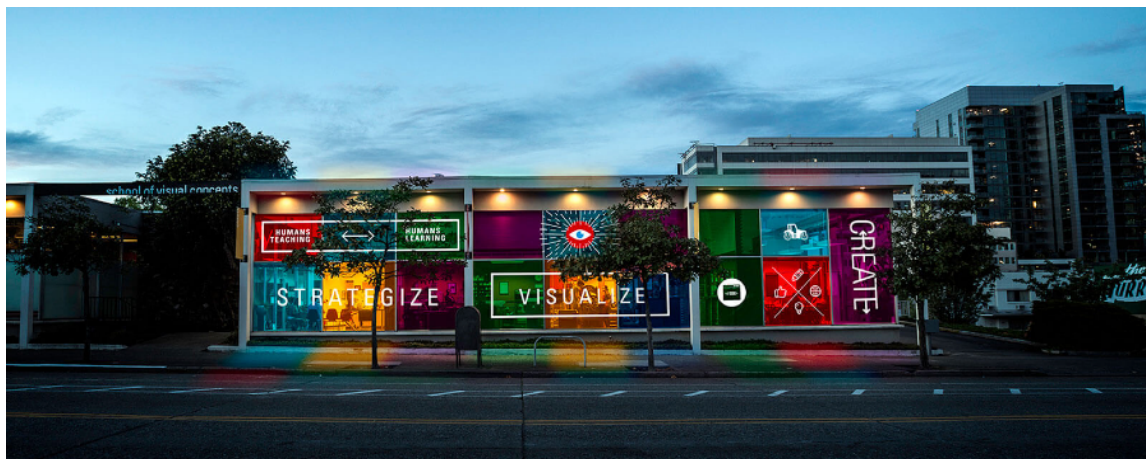
```

HTML Syntax

Image tag

```

```



Comment tag

- Everything inside is completely ignored by the browser
- Write notes to yourself, annotations to code, or disable pieces of HTML

```
<!-- This is a comment -->
```

Anatomy of an HTML Page

HTML Page Structure

```
<!DOCTYPE html>
```

HTML Page Structure

```
<!DOCTYPE html>
```

```
<html>
```

```
</html>
```

HTML Page Structure

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
  </head>
```

```
</html>
```


HTML Page Structure

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <meta charset="utf-8">
```

```
  </head>
```

```
</html>
```

HTML Page Structure

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <meta charset="utf-8">
```

```
    <title>Title</title>
```

```
  </head>
```

```
</html>
```

HTML Page Structure

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <meta charset="utf-8">
```

```
    <title>Title</title>
```

```
  </head>
```

```
  <body>
```

```
  </body>
```

```
</html>
```

HTML Page Structure

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <meta charset="utf-8">
```

```
    <title>Title</title>
```

```
  </head>
```

```
  <body>
```

```
    Website content here
```

```
  </body>
```

```
</html>
```

Managing Your Files

Managing Your Files

Goal

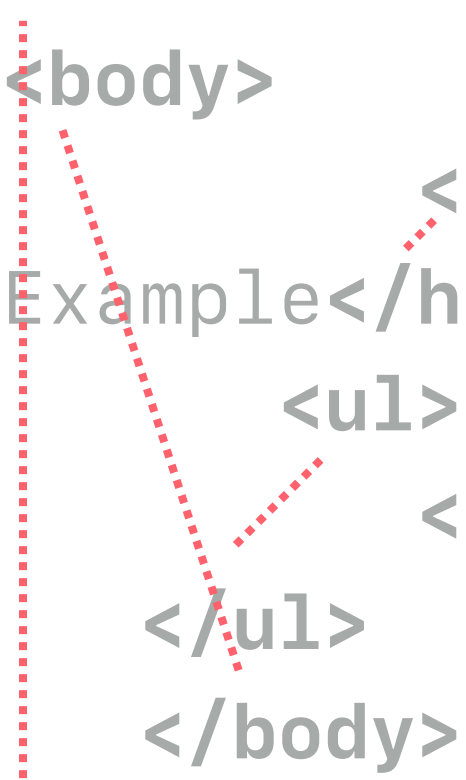
- Logical & consistent file organization and prevents errors and makes it easier to work with your web files

Indenting HTML

```
<html>
<body>
    <h3>
Example</h3>
    <ul><li>Item 1</li>
    <li>Item 2</li>
    </ul>
  </body>
</html>
```

Indenting HTML

```
<html>
<body>
  Example
  <h3>
    <ul><li>Item 1</li>
      <li>Item 2</li>
    </ul>
  </h3>
</body>
</html>
```

A diagram illustrating HTML indentation. Red dotted lines connect the closing tags to their corresponding opening tags, showing the nesting structure. A vertical line connects the opening <body> tag to the closing </body> tag. A diagonal line connects the opening <h3> tag to the closing </h3> tag. Another diagonal line connects the opening tag to the closing tag. The text 'Example' is placed between the <body> and </body> tags, and the <h3> and </h3> tags are indented relative to it. The and tags are indented relative to the <h3> and </h3> tags. The and tags are indented relative to the and tags.

Indenting HTML

```
<html>
  <body>
    <h3>Example</h3>
    <ul>
      <li>Item 1</li>
      <li>Item 2</li>
    </ul>
  </body>
</html>
```

Organizing Your Files

- Keep all your files for a website within one project folder
- For better organization, keep your images in an images folder within the project folder

Naming Your Files

- No spaces
- Capitalization matters
- No special characters, except hyphens and underscores
- Your main page should be **index.html**

Naming Your Files

- Make it easy: use lowercase and hyphens for all filenames
- `index.html`
- `page-2.html`
- `adorable-kittens.jpg`

Naming Your Files

- Use meaningful filenames to make it easier to identify what's in a file
- Be consistent with how you name and group files

Week 1 Project

Favorite Animal Website

- Make a webpage about your favorite animal. Include headings, paragraphs, lists, and images.
- Add an additional page to your animal website, and link to it from the first page.

Homework

Recommended Resource

- Go through the Khan Academy Intro to HTML tutorial and complete the 4 challenges

Questions? Comments?

- Visit <http://movingobjects.io/svc> for class slides, code samples, resources
- Email me: scott@movingobjects.io