Kevin's KodeKitten Acatemy

Intro to Web Development

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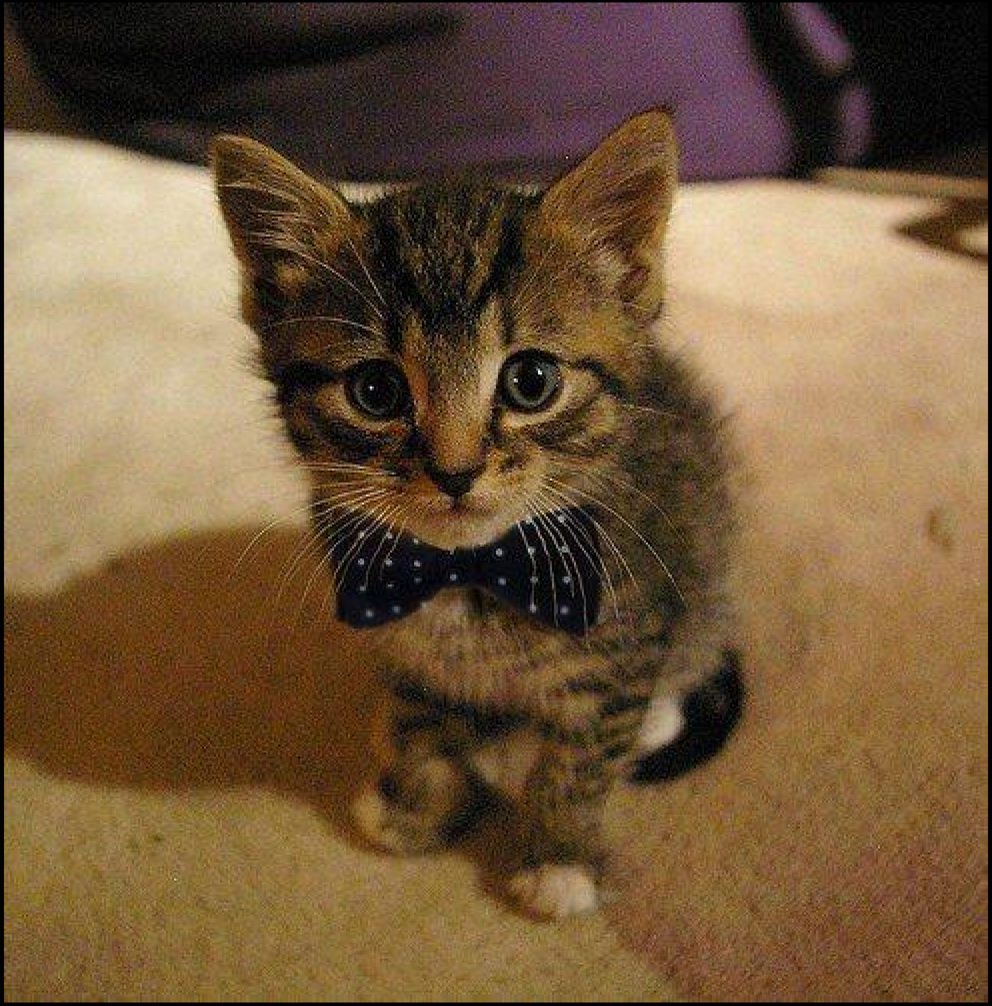
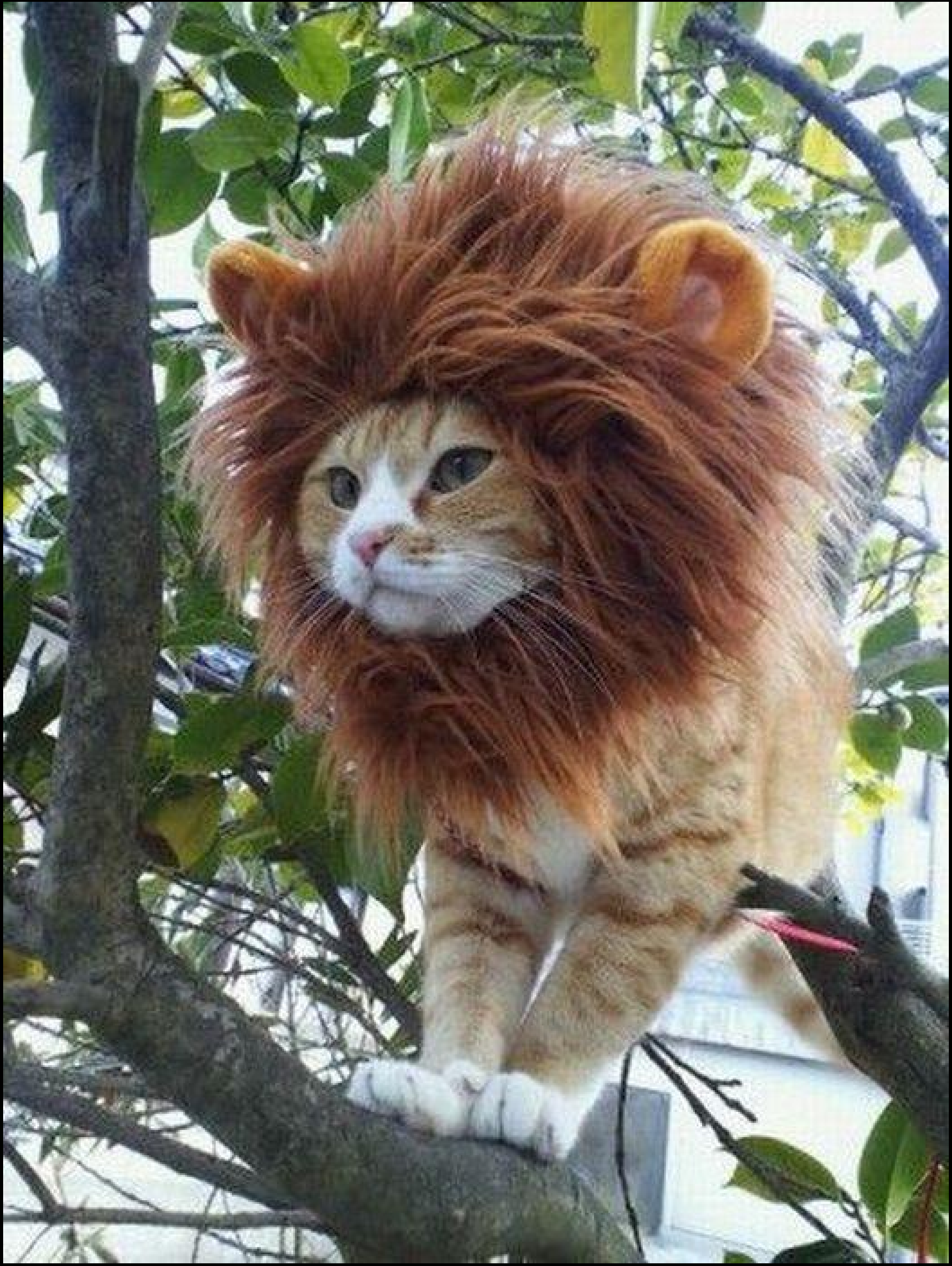
StudentRND

Inspire. Create. Learn.



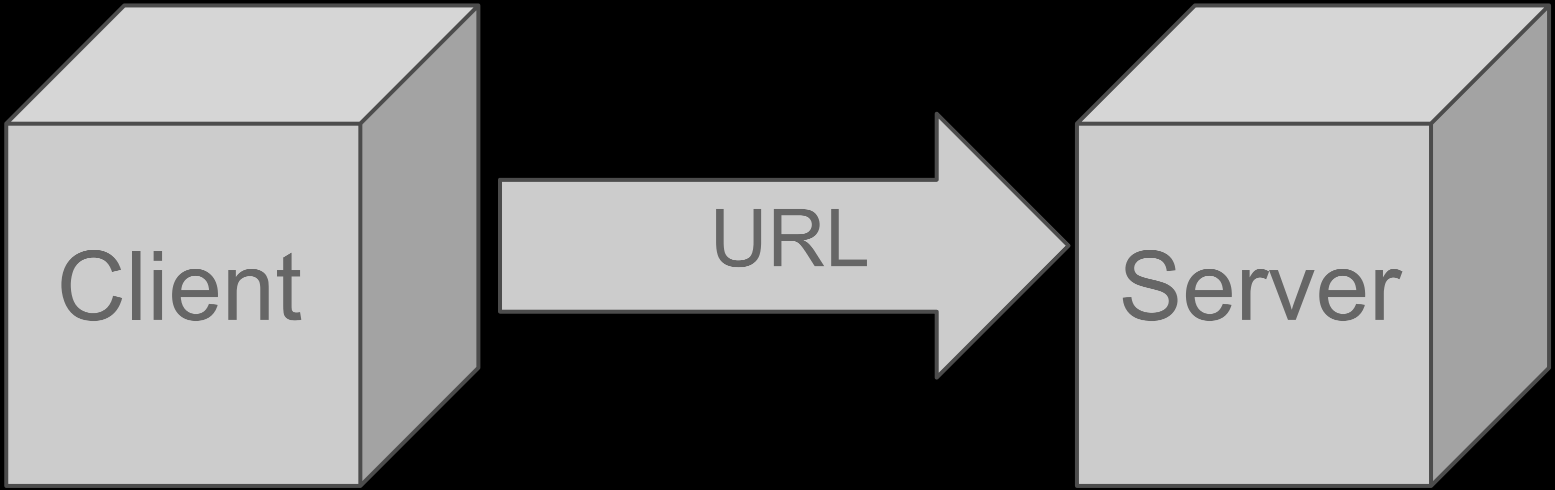


General Web Dev Info

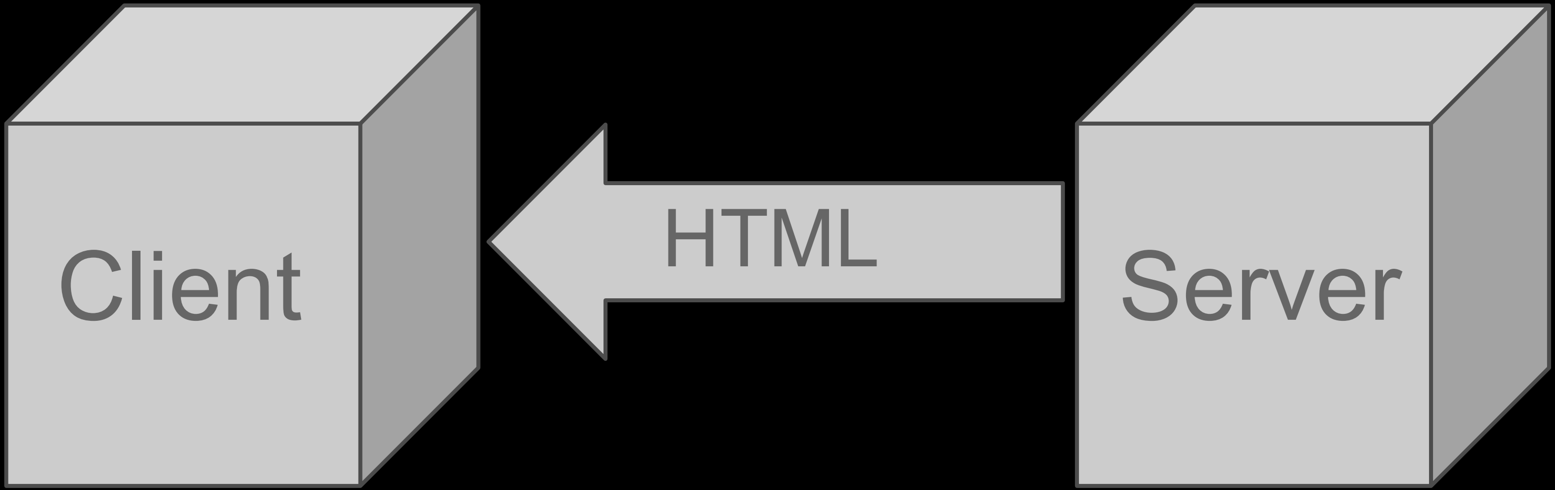
HTML = Content

CSS = Presentation

General Web Dev Info



General Web Dev Info



Environment

- A browser for development (preferably FireFox or Chrome)
- A text editor with syntax highlighting
- I reccomend TextWrangler for Mac, Notepad++ for Windows.

HTML

HTML

- Hyper Text Markup Language
- Used to *describe* the content (text, images, videos, etc) of the page
- Uses code called *tags* and plain text
- Each kind of tag is called an *element*
- Represents the whole web page

HTML Tag Syntax

```
<p>Kitties are the <em>coolest!</em></p>
```

HTML Tags

- <!DOCTYPE html> = document type
- <html> = root of the whole page
- <head> = information about the page
- <body> = content for the page
- <!-- *comment text* -->

HTML Tags

<body>

- Placed directly inside the <html> tag
- Stores all of the HTML that will be on the web page

```
<body>Some web page content</body>
```

HTML Tags

<head>

- Placed directly in the <html> tag
- Stores information about the page itself

HTML Tags

<title>

- Required for valid HTML
- Defines the title at the top of the browser
- Goes inside the <head> tag

HTML Tags

```
<!DOCTYPE html>
```

- Declares that the file is an HTML file
- Written at the very top of the file
- Is stupid, just deal with it

Hello, world!

```
<!DOCTYPE html>
<html>
    <head>
        <title>My first website!</title>
    </head>
    <body>
        Hello, world!
    </body>
</html>
```

HTML Common Mistakes

Issues with DOCTYPE

```
<!DOCTYPE html>
```

- Must include in every HTML file
- Should be the first thing in the file
- HTML5 allows the nice one above; HTML4 requires a more complicated one

HTML Tags

- <title> = page title
- <p> = paragraph
- <h1>...<h6> = headers
- <a> = anchor
- <img> = image
- <em> = emphasis
- <strong> = strongly emphasized text

HTML Tags

<p>

- Defines a paragraph
- Is a block element

HTML Tags

<h1>, <h2>, <h3>, <h4>, <h5>, <h6>

- Defines headings for sections for varying "levels"
- <h1> is the highest level heading
- <h6> is the lowest level heading
- Usually rendered as bigger text
- Text gets smaller with level
- Are block elements

HTML Tag Syntax

```
<a href="about.html">About</a>
```

- Attributes give the tag information about itself
- The kind of data is specified
- The value for that piece of data is in quotes

  Multiple attributes are written with spaces in between

HTML Tags

```
<a href="url">
```

- href: the URL to redirect the user to
- Is an inline element

HTML Tags

<em>, <strong>

- Denotes text with emphasis
- <strong> is usually rendered as **bold**
- <em> is usually rendered as *italic*
- Are inline elements

HTML Common Mistakes

Tags must be closed in the reverse order they're opened

```
<p>Some text <em>with emphasis</p></em>
```

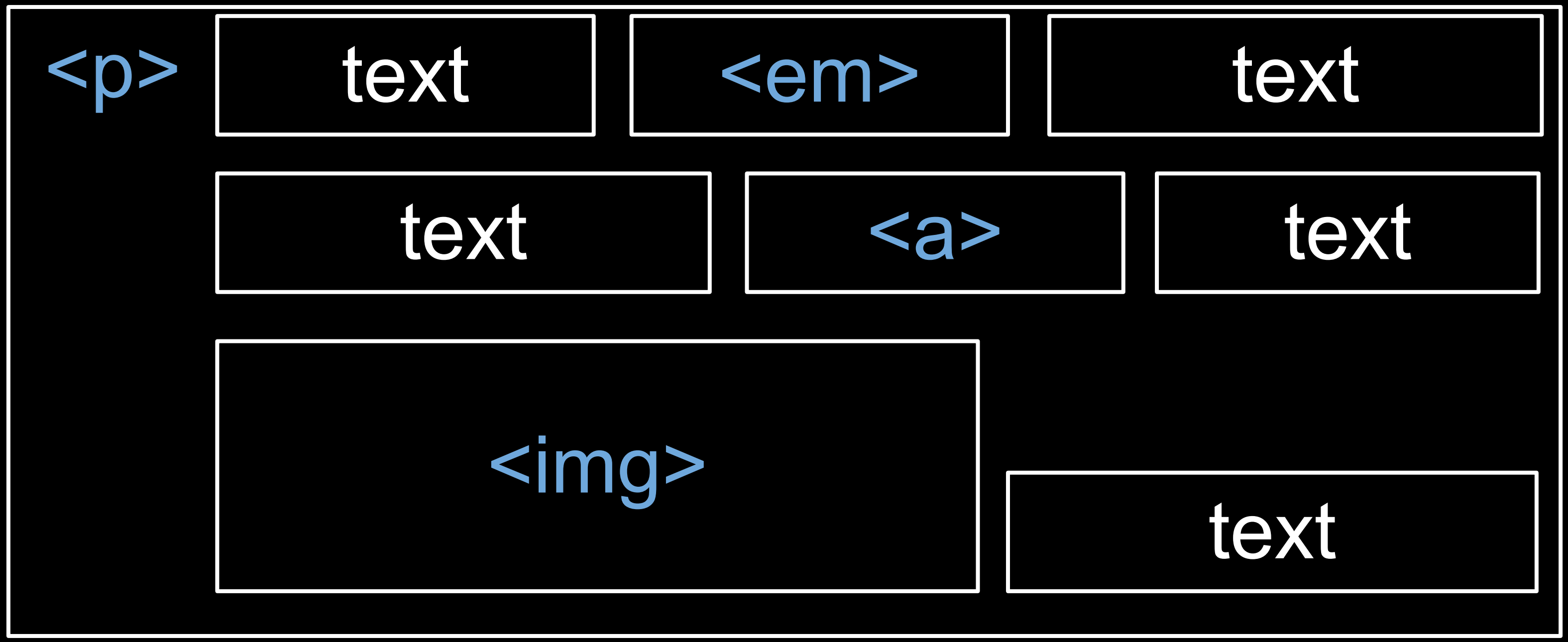
HTML Debugging

- Browsers will sometimes render bad HTML correctly
- Don't rely on this behavior
- You can check the validity HTML at validator.w3.org

HTML Block vs Inline

- Block elements are given a whole horizontal chunk of the page for their elements
- Inline elements are only as big as their inner content

HTML Block vs Inline



<p>

text

<em>

text

text

<a>

text

<img>

text

HTML Tag Syntax

```
<img src="cat.png" alt="my cat Mittens" />
```

- Self closing tags don't have any inner HTML

HTML Tags

```
<img src="url" alt="text" />
```

- src: the URL of the image file to use (required)
- alt: the text to display in place of the image if it can't be downloaded (required)
- width, height: the dimensions of the image, in pixels (optional)
- Inline element

HTML

Whitespace is Insignificant

- Multiple spaces will be collapsed into a single space
- New lines will be collapsed into a single space as well

HTML Tags

<ul>, <ol>, <li>

- <ul> = Unordered list, creates a bulleted list
- <ol> = Ordered list, creates a number list
- <li> = List item, denotes something in the list
- All are block elements

HTML Common Mistakes

Using unsupported tags

<blink> <marquee>

<b> <i> <u> <s> <strike>

<center> <font> <big> <small> <dir>

DON'T USE THESE TAGS

HTML Character Entities

- HTML uses the < and > characters to denote tags, so you can't use them in plain text
- If you want special characters like this, you need to use a "character entity"
- Syntax is &*entity-name*;

HTML Character Entities

Character	HTML Character Entity
< >	&lt; &gt;
Non-breaking space	&nbsp;
& "	&amp; &quot;
© π	&copy; &pi;
√ ∑ ≠	&radic; &sum; &ne;

Questions?

CSS

CSS

- CSS = Cascading Style Sheets
- Use to control the visual presentation of the content portray by HTML
- Uses *selectors* to choose what tags to style
- Provide a set of instructions on how to style the elements
- */* comment text */*

CSS

```
<link href="cats.css" type="text/css" rel="stylesheet" />
```

- Uses the CSS file on your HTML page
- Put inside the <head> tag of an HTML document

CSS Syntax

```
selector {
    property: value;
    another-property: some-other-value;
}
```

CSS Example

```css
p {
    color: purple;
    background-color: yellow;
}
```

CSS Properties

color

background-color

black, white, green, red, *etc*...

rgb(125, 24, 35)

#047F69

CSS Selectors

element-name

- Selects all tags of the given element name
- Only the name of the element is used, not the angle brackets

CSS Example

```
p { color: purple; background-color: yellow; }
```

- Sets all <p> tags to use purple text and have a yellow background
- Note: the selector just uses p, not <p>

CSS Properties

text-align

left

center

right

justify = texts fills up the whole width of the element, like a newspaper column

CSS Selectors

element-name other-element

Selects all of the tags of *other-element* that are inside an *element-name* tag

CSS Example

```
p a {
    color: green;
}
```

CSS Validator

- CSS has similar rules about bad code as HTML
- You can check that your CSS is valid at http://jigsaw.w3.org/css-validator/

CSS Properties

border-style

none, dotted, dashed, solid

border-color

any CSS color

border-width

any CSS length

Shortcut:

border: *width-value style-value color-value;*

CSS Units

- pt = points
- em = width of the letter "M"
- px = pixels
- % = percentage of the width of the current element

Box Model

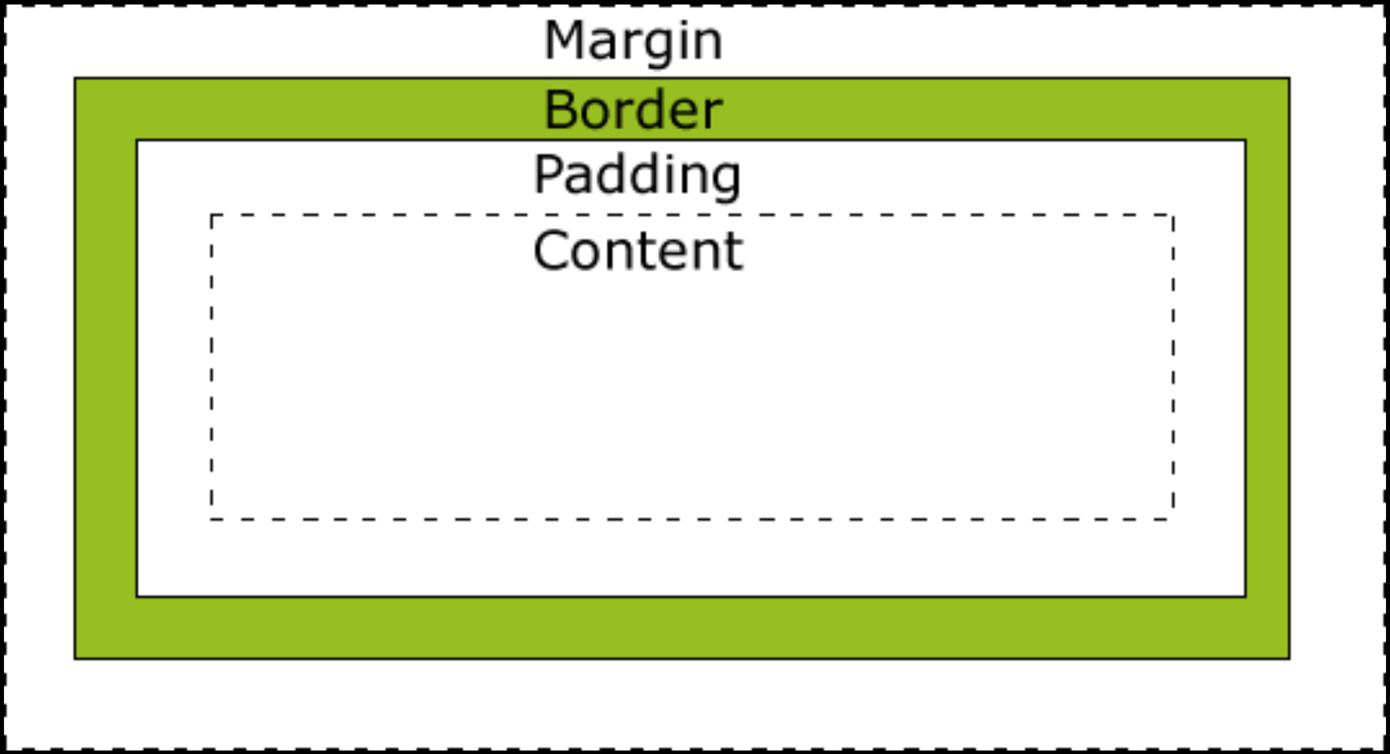
How to catch a cat:

1. Find an empty box
2. Wait...

Box Model

- All tags are rendered as a box
- The border property is rendered around the edge of the box
- The padding property is the distance between the border and the content **inside** the box
- The margin property is the distance between the border and the content **outside** the box

Box Model



CSS Properties

padding

padding-left padding-right

padding-top padding-bottom

Any CSS length

Shortcut for setting all at once:

padding: *top right bottom left*;

CSS Properties

margin
margin-left margin-right
margin-top margin-bottom
Any CSS length

Shortcut for setting all at once:
margin: *top right bottom left*;

FireBug / Chrome Dev Tools

FireBug is a FireFox extension that makes web development easier

Chrome comes packaged with a version of the tool

FireBug / Chrome Dev Tools

- Visualize the box model
- See the CSS used on individual elements
- Make changes to the CSS and see their results right away

FireBug / Chrome Dev Tools

On Chrome:

- Right click and choose "inspect element" to activate it

On FireFox:

- After installing the plugin, right click and choose "inspect element with FireBug" to activate it
- FireFox comes with different built-in dev tools, "inspect element" activates these

CSS Selectors

element-name, other-element

Selects BOTH all of the *element-name* tags and *other-element* tags

CSS Example

```
em, strong {
    font-family: "Arial", sans-serif;
}
```

CSS Properties

font-family

"Arial", "Times New Roman", *etc...*

sans-serif, serif, monospace, cursive

font-size

12pt, 8px, 1.2em

Web Safe Fonts

- People don't always have the same fonts installed on their computer
- You shouldn't rely on your site's viewers having a particular font
- Always specify several fonts in the order you'd prefer them, ending with a generic font

Back to HTML for a Second

<div>

<span>

- Don't have any *semantic* meaning
- Can be styled
- <div> is a block element
- <span> is an inline element

Back to HTML for a Second

id

class

- Attributes that can be used on all HTML tags
- Only 1 element on a page can have a particular ID
- Classes can be shared among multiple tags

CSS Selectors

#id

Selects the tag with the given id attribute

.class-name

Selects all tags with the given class attribute

CSS Example

```
#foo {
    border: 2px solid red;
}

.bar {
    padding: 2em;
}
```

CSS Properties

text-decoration

underline, line-through, overline, none

CSS Properties

font-weight

normal, bold, bolder, lighter

CSS Properties

font-style

italic, oblique, normal

CSS Defaults

- Some tags have default styling that has to be turned off explicitly
- <em> defaults font-style: italic;
- <strong> defaults font-weight: bold;
- <a> defaults text-decoration: underline;
- All of these can be turned off
- Tags are only supposed to denote *the meaning* of the content, **not** how that meaning is presented

Resources

HTML

http://www.w3schools.com/html/

http://validator.w3.org/

Resources

CSS

http://www.w3schools.com/css/

http://jigsaw.w3.org/css-validator/

Resources

Tools

https://getfirebug.com/

http://www.barebones.com/products/textwrangler/

http://notepad-plus-plus.org/

http://www.hackasaurus.org/en-US/goggles/