

# HTML



# CSS



## HTML & CSS: LEVEL 1

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Week 2 -January 19, 2017

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# SESSION OVERVIEW

- Week 1 Review and questions
- Finish Week 1 - Images, Links, Organization, File Paths
- Web graphics overview
- Optimizing graphics and image formats
- Block vs. Inline Elements
- More HTML elements
- Introduction to CSS and styles



**REVIEW!**

# REVIEW: WEBPAGE COMPONENTS

- **HTML** structures and organizes **CONTENT**
- **CSS** stylizes the content and creates layout.
- **Javascript** adds interactivity.

# REVIEW: HTML DOCUMENTS

- `<!DOCTYPE html>` tells the browser it's serving an HTML file
- `<html>` tags wrap the whole document
- `<head>` tags wrap all of the metadata
- `<body>` tags wrap all of the content
- Most HTML elements have **opening and closing tags**, and some have **attributes**

# REVIEW: HTML CONTENT

- **Headings** create an header/outline: `<h1>... <h6>`
- **Paragraphs and lists** structure text: `<p>...<ul>...<ol>`

# IMAGES

```

```

- Images `<img>` do not have a closing tag.
- Images have two required **attributes**:
  - **src** is where the file lives (local or external)
  - **alt** is a description of the image (used for screen readers, search engines, etc.)

# LINKS

```
<a href="http://google.com">Google</a>
```

- Defines an anchor or link that creates a path to other pages or websites.
- Have a **required href** attribute that says where the link should send the user.
- Anything inside **<a>** tags are clickable.
- Can be text, an image, or any valid HTML.
- **target="\_blank"** -> opens link in a new tab.



# FILE ORGANIZATION

- HTML files (.html)
- CSS files (.css)
- Javascript files (.js)
- Image files (.png, .jpg, .gif, etc)

# FILE NAMING RULES

- NO spaces in filenames
- Capitalization matters (kittens.png is not the same as Kittens.png)
- Use only letters, numbers, hyphens (-) or underscores (\_)
- Always start with a letter for file names.
- Your homepage is always **index.html**
- Recommended to use lowercase and hyphens (**about-us.html**)

# FILE STRUCTURE

- On the web, folders are called **directories**. This is what dictates paths to resources such as html files, images, and CSS and Javascript files.
- HTML should usually go in the **main (root) directory**.
- Make **subdirectories** for media, CSS, and Javascript files.

# FILE PATHS

- On the web, all resources have a Universal Resource Locator (**URL**)
- **Absolute paths** are URLs that always goes to the same place (e.g.
- <http://google.com>
- <https://www.svcseattle.com/assets/images/logo.gif>
- If someone renames or deletes the file, your link will be broken.
- Helpful read: <http://www.coffeecup.com/help/articles/absolute-vs-relative-pathslinks/>

# FILE PATHS (RELATIVE)

- Relative paths are URLs that go to a resource in relation to what page you're on. (e.g **css/layout.css**)
- Resources “local” to you should all be relative paths. (your images, fonts, CSS and JS files)

`` image is in the same folder as this file

`` image is in a subfolder named “images”

`` image is in a superior folder named “images”

# QUESTIONS?



# WEB GRAPHICS



## WEB-READY IMAGES

- Minimize file sizes to help load times in browser.
- **Optimizes images for RGB displays** with correct **resolution** for browsers
- **Flattens** layers and removes metadata from graphics.



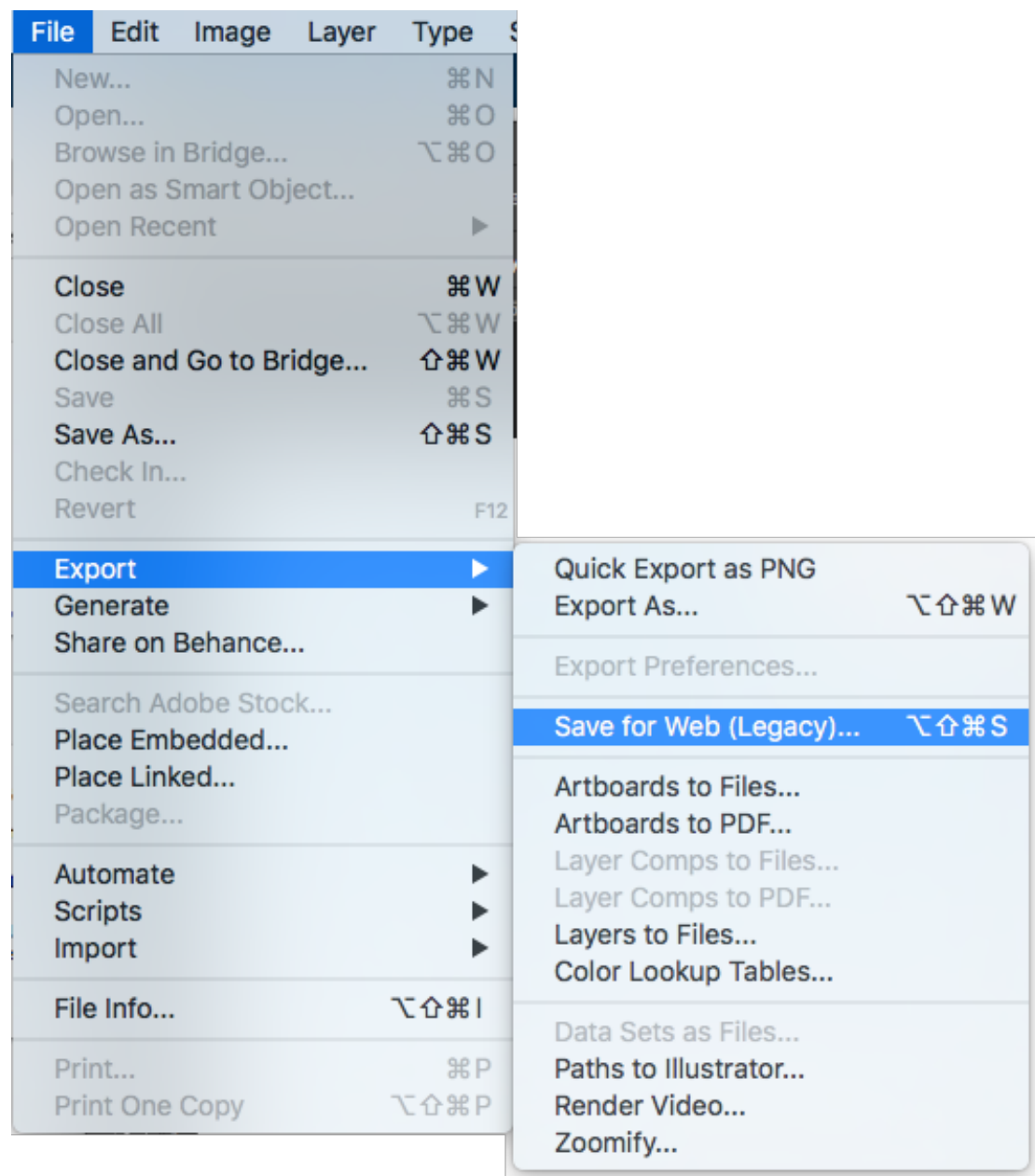


## WEB IMAGE TYPES

- **JPG or JPEG (Joint Photographic Experts Group)**  
is traditional for photos. Millions of colors, no transparency, no animation.
- **GIF (Graphics Interchange Format)** – 256 colors, can be animated, has transparency.
- **PNG 24 (Portable Network Graphic)** – Millions of colors, full alpha transparency, no animation.



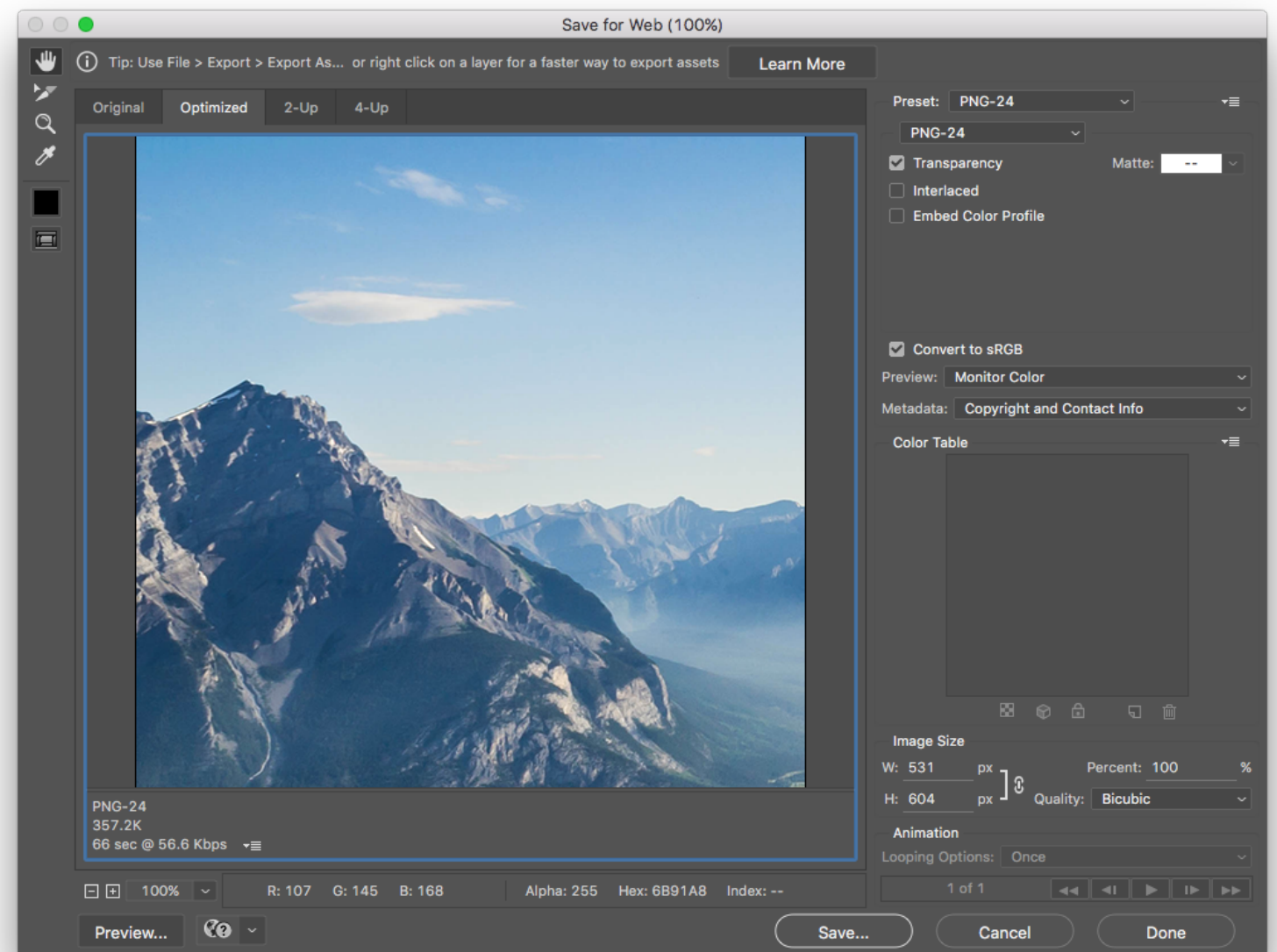
# “SAVE FOR WEB” IN ADOBE CS



- Adobe products have a **“Save for Web...”** or **“Save for Web and Devices...”** option.
- Similar products have this option as well.

# “SAVE FOR WEB” IN ADOBE CS

- Click **File > Export > Save for Web...** (or **Export As**)
- Choose a format (**JPEG**, **PNG 24**, or **GIF**)
- Adjust image size to max size display
- Save to your images directory.



## SOME “GOTCHAS”

- Best practice to work in 72 PPI in graphic editor programs. (keeps file sizes down)
- Always work in **RGB** n working with graphics for the web. **CMYK** is for print.
- Make your designers stick to these rules!
- Graphics for **Retina devices** need to be saved out at 2X their “normal” size.

- Saving for Web in Adobe Photoshop
- Saving for Web in Adobe Illustrator



# BLOCK VS. INLINE ELEMENTS

<https://www.impressivewebs.com/difference-block-inline-css/>

# <> BLOCK & INLINE ELEMENTS

## Block-level elements

- If no width is set, will expand naturally to fill its parent container
- If no height is set, will expand naturally to fit its child elements (assuming they are not floated or positioned)
- Can have margins and/or padding
- By default, will be placed below previous elements in the markup (assuming no floats or positioning on surrounding elements)
- Ignores the vertical-align property

# <> BLOCK & INLINE ELEMENTS

## Block-level elements we've learned:

- Headings (<h1>, <h2>, etc)
- Paragraphs (<p>)
- Lists (<ul>, <ol>)
- List items (<li>)



# <> BLOCK & INLINE ELEMENTS

## Block-level elements

**BLOCK ELEMENTS EXPAND NATURALLY** 



**AND NATURALLY DROP BELOW OTHER ELEMENTS** 



# <> BLOCK & INLINE ELEMENTS

## Inline elements

- Flows along with text content
- Will ignore top and bottom margin settings, but will apply left and right margins, and any padding
- Will ignore the width and height properties
- If floated left or right, will automatically become a block-level element, subject to all block characteristics
- Is subject to the vertical-align property

# <> BLOCK & INLINE ELEMENTS

## Inline elements we've learned:

- Links (<a>)
- Coming soon: **<span>**, **<b>**, **<em>**

# <> BLOCK & INLINE ELEMENTS

## Inline elements

### INLINE ELEMENTS FLOW WITH TEXT

PELLENTESSQUE HABITANT MORBI TRISTIQUE SENECTUS  
ET NETUS ET MALESUADA FAMES AC TURPIS EGESTAS.  
VESTIBULUM **INLINE ELEMENT** VITAE, ULTRICIES  
EGET, TEMPOR SIT AMET, ANTE. DONEC EU LIBERO SIT  
AMET QUAM EGESTAS SEMPER. AENEAN ULTRICIES MI  
VITAE EST. MAURIS PLACERAT ELEIFEND LEO.

# <> BLOCK & INLINE ELEMENTS

## “Inline-block” elements

- Inline/Block hybrid.
- Take up width and height like block-level elements.
- Flow with content around them.
- Can have margin and padding.
- Elements we know: **<img>** elements.

<html>

# (MORE) HTML ELEMENTS

# <DIV> ELEMENTS

<div></div>

- <div> elements are generic **block elements**.
- Used to create **sections or groups** in HTML for layout.
- Can be used wrappers for other elements (including other divs!) for creating complex layouts.
- Have height and width
- **Building blocks of HTML layouts!**

# <DIV> LAYOUT EXAMPLE

```
<div id="header"></div>
```

```
<div id="nav"></div>
```

```
<div id="section"></div>
```

```
<div id="footer"></div>
```



# <SPAN> ELEMENTS

<span></span>

- <span> elements are generic **inline elements**.
- Can **nest inside** other block or inline elements.
- Used to **style unique inline content** or **content inside block elements**.
- Flow with content around them.

## <> MORE INLINE ELEMENTS

- **em** elements are used to show *emphasis*. (like italic).
- **strong** elements are used to show **importance in context** (like bold)

<p>"Oh, great. Someone ate <em>my only clean socks</em>." </p>

<p>"Was it <strong>the cat</strong>?"</p>

<p>"No, it was <strong>the dog</strong>."</p>

**CSS**



**CSS**

# CASCADING STYLE SHEETS

- Language for specifying how documents are presented to users
- We can override the browser's default presentation styles with our own.
- Provides consistent and scalable ways to **style single elements, single pages, or entire websites.**
- **Separates look and feel from content/markup.**

# CASCADING STYLE SHEETS: FAIR WARNING

- There is **A LOT** you can do with CSS.
- We won't get anywhere close to covering everything.
- We will practice the basics before getting into advanced topics.
- We will cover **common CSS** for text styles, colors, positioning, layout, and a couple of extras.

# WHY USE CSS?

- Helps you avoid duplication by keeping styles in one place (one external stylesheet).
- Makes style maintenance easier.
- Allows you to make a site-wide change in one place.
  - e.g. update the font for the whole site in one line of code!

# ANATOMY OF A CSS RULE

```
selector {property: value;}
```

- **Selector** is the **thing** you want to style.
- **Property** is the **aspect/attribute** you want to style.
- **Value** is how you want to style it.
- **Values** always end in semicolons ( ; )

```
p {font-size: 14px; color: blue;}
```

# EXAMPLE CSS RULE

```
p {font-size: 14px;}
```

- **Selector** is the **p**. (<p> in the HTML)
- **Property** is the **font-size**.
- **Value** is **30px** (30 pixels high).
- All paragraph tags will have a font size of 14px.



# CSS COMMENTS

```
<style>
  /* I am a CSS comment! */

  h1 { /* I am also a CSS comment */
    color: #ff0000;
  }
</style>
```

- Just like HTML, CSS can have **comments**.

# { } COMMON FONT PROPERTIES

- **font-size:** a number followed by a measurement of how tall the element's text is, usually in ems (**em**) or pixels (**px**).
- **font-family:** the name of a typeface.
- **font-style:** (**normal**, or **italic** are most common)
- **font-weight:** **bold** (can also be values of 100, 200, up to 900 depending on the typeface).
- **line-height:** a number followed by a measurement of how tall the element's line of is, usually in ems (em) or pixels (px) (similar to **leading** in typography)

# 🛠️ COLORS

- To set **text color**, the property is **color**.
- To set **background colors**, the property is **background-color**.
- Color **value** can be: **HEX**, **RGB**, or **RGBA**.
  - Hex: **#ffffff**
  - RGB: **rgb(245, 245, 245)**
  - RGBA: **rgba(245, 245, 245, 0.8)** – (0.8 represents alpha/opacity)

```
p {color: #222222;}
```

```
div {background-color: rgba(0,0,0,0.5);}
```

# { WIDTH & HEIGHT

- Block elements have width and height by default, which you can override.
- You can set width and height of images with HTML attributes:

```

```

- **But** it's recommended to use CSS:

```
img { width: 300px; height: 200px; }
```

```
img { width: 300px; height: auto; }
```

# { MULTIPLE SELECTORS & PROPERTIES

- You can add multiple selectors to a CSS rule.
- You can add multiple properties to a CSS rule.
- Example: style all ordered and unordered lists:

```
ul,  
ol {  
    font-size: 16px;  
    font-weight: bold;  
    color: #444444;  
}
```

# { CSS IN MULTIPLE PLACES

- **Inline styles** are applied to only a single element (best practice to avoid this if possible).
- **Internal styles** are added in the **<head>** of a page and style only that page. (what we've done so far)
- **External stylesheets** are called into multiple pages, and are declared in separate **.css** files. \*Best practice.

# { EXTERNAL STYLESHEETS

- Create a **new file** in your text editor.
- **Copy and paste** your styles from inside the `<style>...</style>` element your new file.
- Save your new files as **styles.css**, and save it in your **css** directory/folder.
- Remove the `<style></style>` tags from **index.html**

# { LINKING TO EXTERNAL STYLESHEET

```
<link href="css/styles.css" rel="stylesheet">
```

- Tells the browser to go find and load the CSS file.
- Goes inside the **<head>** element.
- Should go in every page that should load the styles.



# { THE “CASCADING” PART

The beauty of CSS is being able to create styles and then override them when you want to customize the look of your pages.

**There are three big rules for determining how styles get applied:**

- Styles are loaded from far to near.
- Styles are loaded from top to bottom.
- Children elements are more specific than parents.

# { STYLES “LOCATION”

Styles that are “closer” to the elements they style take precedence.

- Browser defaults
- External styles (in a **.css** file)
- Internal styles (in the **<head>**)
- Inline styles (on an element)

**Less  
Specific**



**Most  
Specific**

# { TOP TO BOTTOM

If the same property is styled multiple times for the same selector, **the last one sticks.**

```
p { color: #2f4251; }
```

```
ul{ color: #444444; }
```

```
/* some other stuff */
```

```
p { color: #daa645; } /* this one wins */
```

# { CHILDREN ARE SPECIFIC

Children elements usually **inherit** styles from their parents but can **override** parents with their own styles

```
body { color: #2f4251; } /* parent */  
p { color: #daa645; } /* child */
```

# { SELECTORS CAN BE MORE SPECIFIC

If one style is **more specific** than another, it takes precedence

```
p { color: #daa645; } /* all paragraphs */  
a { color: #e7c0c8; } /* links in general */  
p a { color: #c4fe46; } /* a nested in p */  
div p a { color: #a5dd5e; } /* a in p in div */
```

**{ WEB INSPECTOR (AGAIN!)**



**PRACTICE TIME!**

# ASSIGNMENT

- Create the first page of a car review website.
- Use at least 4 `<div>` tags to create a basic header, navigation, main section, and footer, and give them a background color.
- Place the included logo in the header div.
- Place the image in the main (2nd) div.
- Create a nav of **list** elements in the navigation div.
- Use at least one `<h1>`, `<h2>`, `<h3>` tag.
- Use an `<em>` and `<strong>` tag in your design.



# “HOMEWORK”

- Practice!
- Read MDN’s Introduction to CSS
  - [https://developer.mozilla.org/en-US/docs/Web/Guide/CSS/Getting started](https://developer.mozilla.org/en-US/docs/Web/Guide/CSS/Getting_started)

# WOW! THAT WAS A LOT!

- QUESTIONS?
- Email me at: [seanmarshallthompson@gmail.com](mailto:seanmarshallthompson@gmail.com)