

BASICS OF WEB DESIGN

Chapter 8
More on Links, Layout, and Mobile
Key Concepts

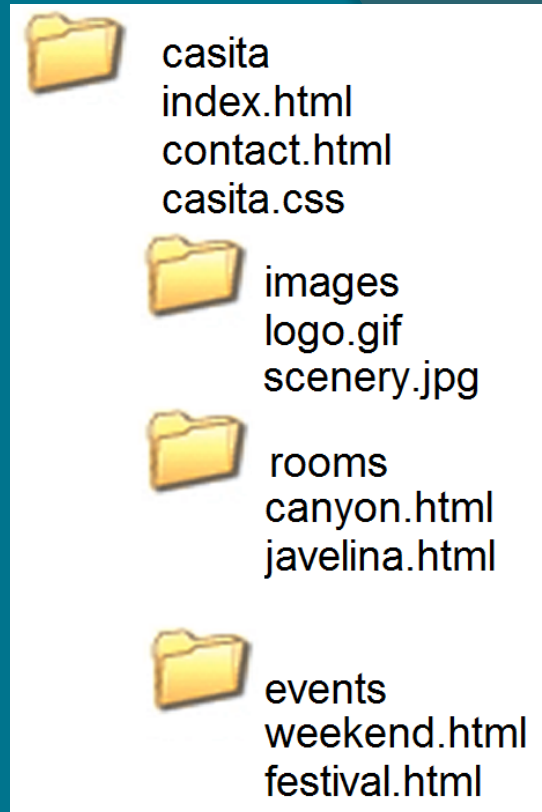
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Learning Outcomes

- Code relative hyperlinks to web pages in folders within a website
- Configure a hyperlink to a named fragment internal to a web page
- Configure images with captions using the HTML5 figure and figcaption elements
- Configure a collection of images to float across a web page
- Configure web pages with new HTML5 section, hgroup, article, aside, and time elements
- Apply techniques to ensure backward compatibility with older browsers.
- Configure web pages for printing with CSS
- Describe mobile web design best practices
- Configure web pages for mobile display using the viewport meta tag
- Apply responsive web design techniques with CSS3 media queries and flexible images

More on Relative Linking

Relative links from the
canyon.html page in
the rooms folder



`Javelina`

`Home`

`Weekend Events`

Linking to Fragment Identifiers

- A link to a part of a web page
- Also called named fragments, fragment ids
- Two components:
 1. The element that identifies the named fragment of a Web page. This requires the id attribute.

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

2. The anchor tag that links to the named fragment of a Web page. This uses the href attribute.

`Back to Top`

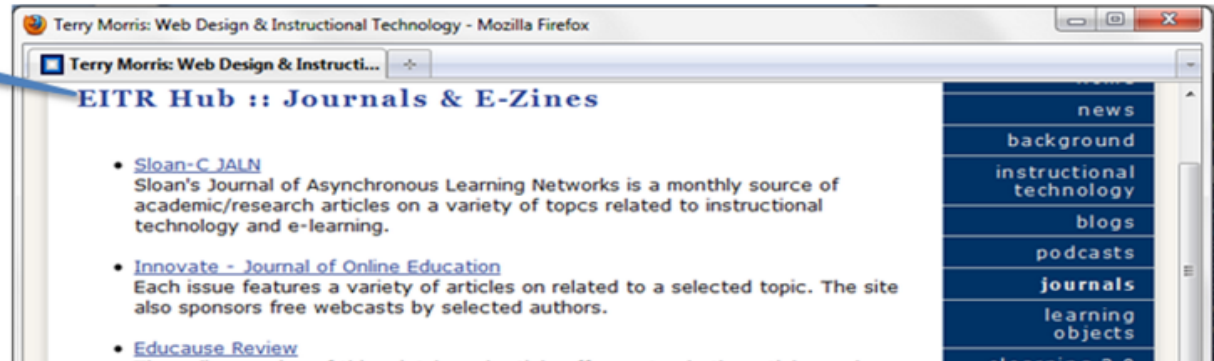
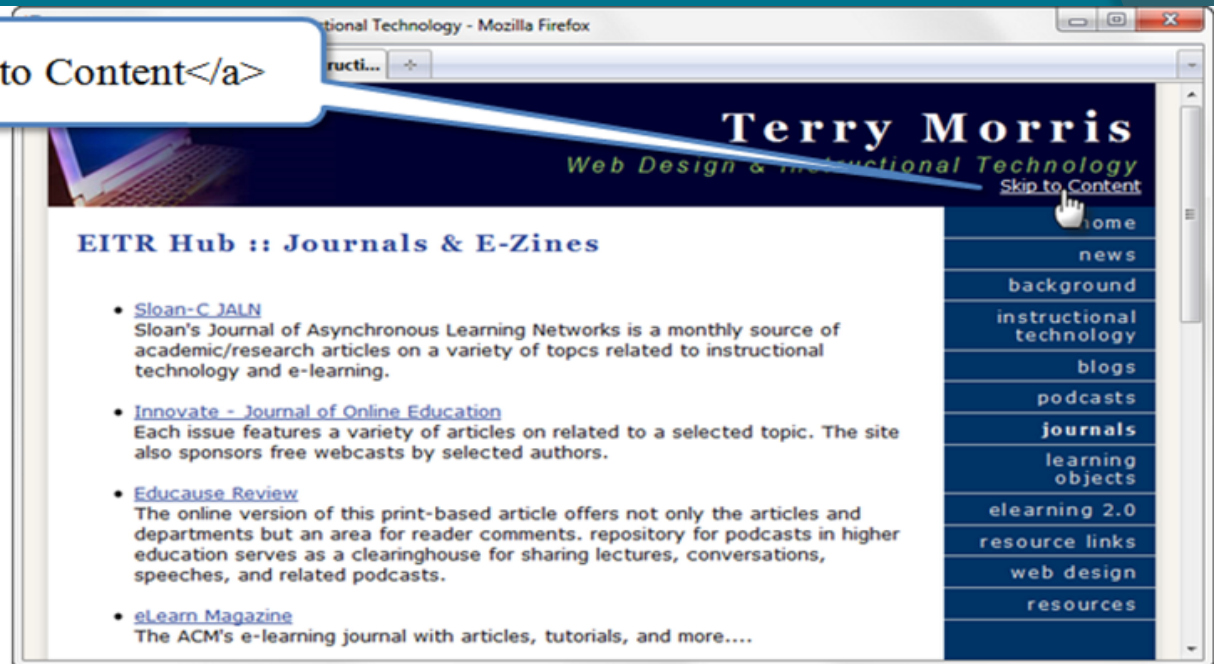
Note the use of the # in the anchor tag!

Skip to Content

```
<a href="#content" >Skip to Content</a>
```

When the user activates the "Skip to Content" link, the browser shifts the display.

```
<h2 id="content">
```



HTML5 Structural Elements

- Header Element
- Hgroup Element
- Nav Element
- Footer Element

Example:

<header>

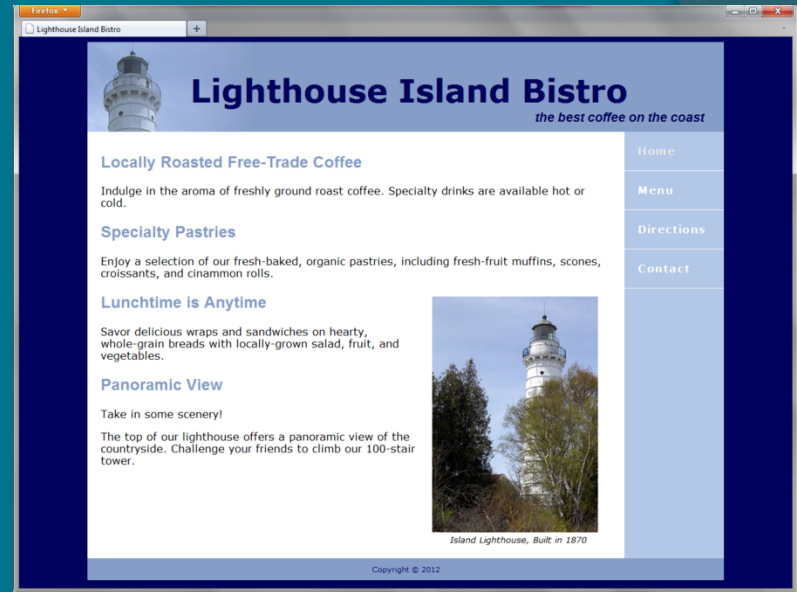
<hgroup>

<h1>Lighthouse Island Bistro</h1>

<h2>the best coffee on the coast</h2>

</hgroup>

</header>



HTML5 Figure and Figcaption Elements

<figure>

<figcaption>

Island Lighthouse, Built in 1870

</figcaption>

</figure>



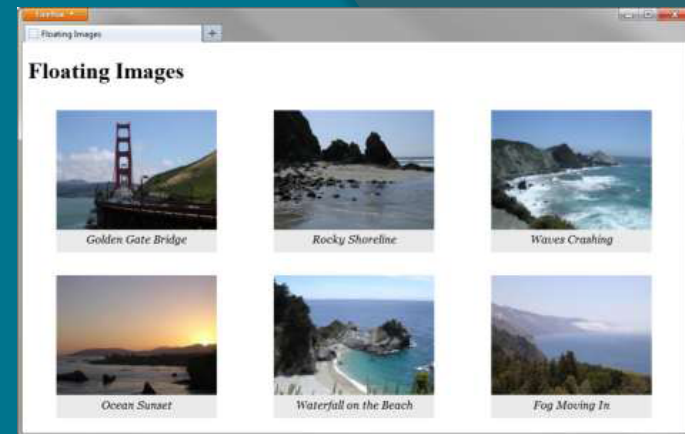
Floating Images

HTML:

```
<figure>  
    
  <figcaption>Golden Gate Bridge</figcaption>  
</figure>
```

CSS

```
figure { float: left; width: 230px; padding-bottom: 10px;  
  background-color: #EAEAEA; }  
figcaption { text-align: center; font-style: italic;  
  font-family: Georgia, serif; }
```



More HTML5 Elements

- Hgroup Element

- groups heading level tags

- Section Element

- indicates a portion or “section” of a document, like a chapter or topic

- Article Element

- indicates an independent entry, like a blog posting, that can stand on its own

- Aside Element

- indicates a sidebar or other tangential content

- Time Element

- represents a date or time



HTML5 Compatibility with Older Browsers

◎ CSS

```
header, hgroup, nav, footer, section, article,  
figure, figcaption, aside { display: block; }
```

◎ HTML5 Shim (aka HTML5 Shiv)

```
<!--[if lt IE 9]>  
<script src=" http://html5shim.googlecode.com/svn/trunk/html5.js">  
</script>  
<![endif]-->
```

CSS Styling for Print

- Create an external style sheet with the configurations for browser display.
- Create a second external style sheet with the configurations for printing.
- Connect both of the external style sheets to the web page using two **<link>** elements.

```
<link rel="stylesheet" href="lighthouse.css" media="screen">  
<link rel="stylesheet" href="lighthouseprint.css" media="print">
```

Print Styling Best Practices

◉ Hide non-essential content

Example:

```
nav { display: none; }
```

◉ Configure font size and color for printing

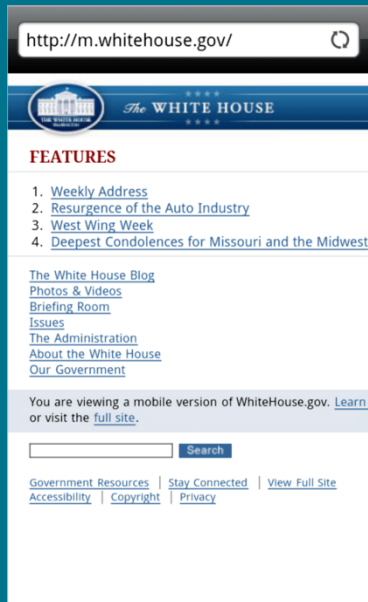
- Use pt font sizes, use dark text color

◉ Control page breaks

Example:

```
.newpage { page-break-before: always; }
```

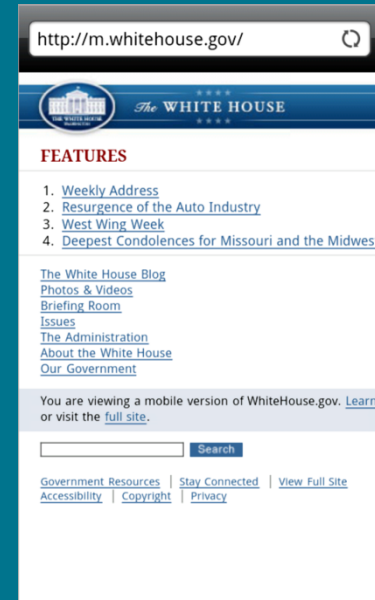
Mobile Web Design Best Practices



- ## Three Approaches to Mobile Web:
- Develop a new mobile site with a .mobi TLD
 - Create a separate website hosted within your current domain targeted for mobile users
 - Use CSS to configure your current website for display on both mobile and desktop devices

Mobile Web Limitations

- ⦿ Small Screen Size
- ⦿ Low bandwidth
- ⦿ Limited fonts
- ⦿ Limited color
- ⦿ Awkward controls
- ⦿ Limited processor and memory
- ⦿ Cost per kilobyte



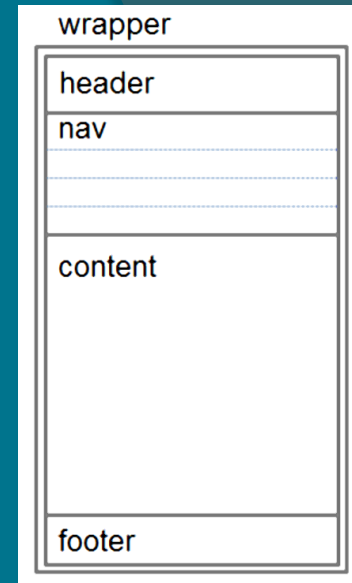
Design Techniques for Mobile Web

- One column design
- Avoid floats, tables, frames
- Descriptive page title
- Descriptive heading tags
- Optimize images
- Descriptive alt text for images
- Eliminate unneeded images
- Navigation in lists
- Provide “Skip to Content” hyperlink
- Provide “Back to Top” hyperlink

*Notice the overlap between these techniques
and designing to provide for accessibility?*

Design Techniques for Mobile Web

- Single column design
- Avoid floats, tables, frames
- Descriptive page title
- Descriptive headings
- Optimize images
- Descriptive alt text for images
- Eliminate unneeded images
- Navigation in lists
- Em or percentage font size units
- Common font typefaces
- Good contrast between text and background colors
- Provide “Skip to Content” hyperlink
- Provide “Back to Top” hyperlink



Notice the overlap between these techniques and designing to provide for accessibility?

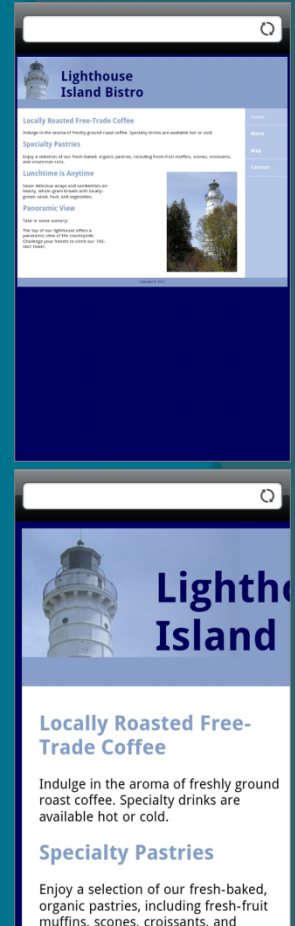
Viewport Meta Tag

Default action for most mobile devices is to zoom out and scale the web page

◉ Viewport Meta Tag

- Created as an Apple extension to configure display on mobile devices
- Configures width and initial scale of browser viewport

```
<meta name="viewport"
content="width=device-width, initial-scale=1.0">
```



Telephone & Text Message Hyperlinks

○ Telephone Scheme

```
<a href="tel:888-555-5555">Call 888-555-5555</a>
```

Many mobile browsers will initiate a phone call when the hyperlink is clicked.

○ SMS Scheme

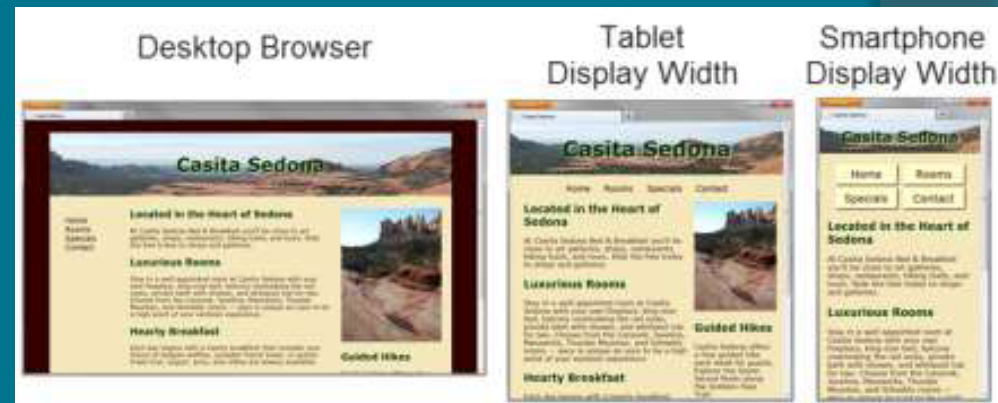
```
<a href="sms:888-555-5555">Text 888-555-5555</a>
```

Many mobile browsers will initiate a text message to the phone number when the hyperlink is clicked.



Responsive Web Design

- Term coined by Ethan Marcotte
- Progressively enhancing a web page for different viewing contexts
- Techniques:
 - Fluid Layout
 - CSS3 Media Queries
 - Flexible Images



CSS3 Media Queries

Media Query

- Determines the capability of the mobile device, such as screen resolution
- Directs the browser to styles configured specifically for those capabilities

Link Element Example:

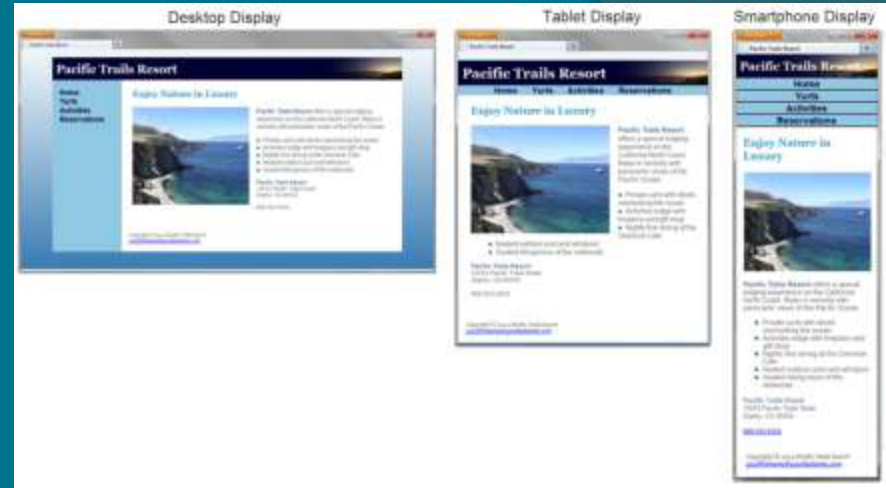
```
<link href="lighthousemobile.css"
      media="only screen and (max-device-width: 480px)">
```

CSS Example:

```
@media only screen and (max-width: 480px) {
    header { background-image: url(mobile.gif);
    }
}
```



Flexible Images



- Edit HTML:
remove height and width attributes
- CSS:

```
img { max-width: 100%;  
      height: auto; }
```

Testing Mobile Display Options

- Test with a mobile device
- Emulators
 - Opera Mobile Emulator
 - Mobilizer
 - Opera Mini Simulator
 - iPhone Emulator
- Test with a Desktop Browser
- Install an iOS or Android SDK



CSS Debugging Tips

- ◉ Manually check syntax errors
- ◉ Use W3C CSS Validator to check syntax errors
 - <http://jigsaw.w3.org/css-validator/>
- ◉ Configure temporary background colors
- ◉ Configure temporary borders
- ◉ Use CSS comments to find the unexpected
/* the browser ignores this code */
- ◉ Don't expect your pages to look exactly the same in all browsers!
- ◉ Be patient!

Summary

- This chapter expanded your CSS and HTML skillset.
- You coded relative hyperlinks to web pages in folders within a website.
- You coded a hyperlink to a named fragment internal to a web page.
- You configured images with captions using the HTML5 figure and figcaption elements.
- You configured a collection of images to float across a web page.
- You configured web pages with new HTML5 section, hgroup, article, aside, and time elements.
- You applied techniques to ensure backward compatibility with older browsers.
- You configured web pages for printing with CSS.
- You explored mobile web design best practices.
- You configured web pages for mobile display using the viewport meta tag.
- You applied responsive web design techniques with CSS3 media queries, fluid layouts, and flexible images.
- You explored techniques for testing the mobile display of a web page.