



IE 4727 Web Application Design

HTML 5 Basics

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HTML 5 Basics

1 What is HTML ?

2 Objective

3 HTML Elements

4 Summary

What is HTML ?



- HTML
 - Hyper Text Markup Language

Hypertext includes:
text, images, audio,
video, animation, etc.

Hello HTML



Google Chrome



safari



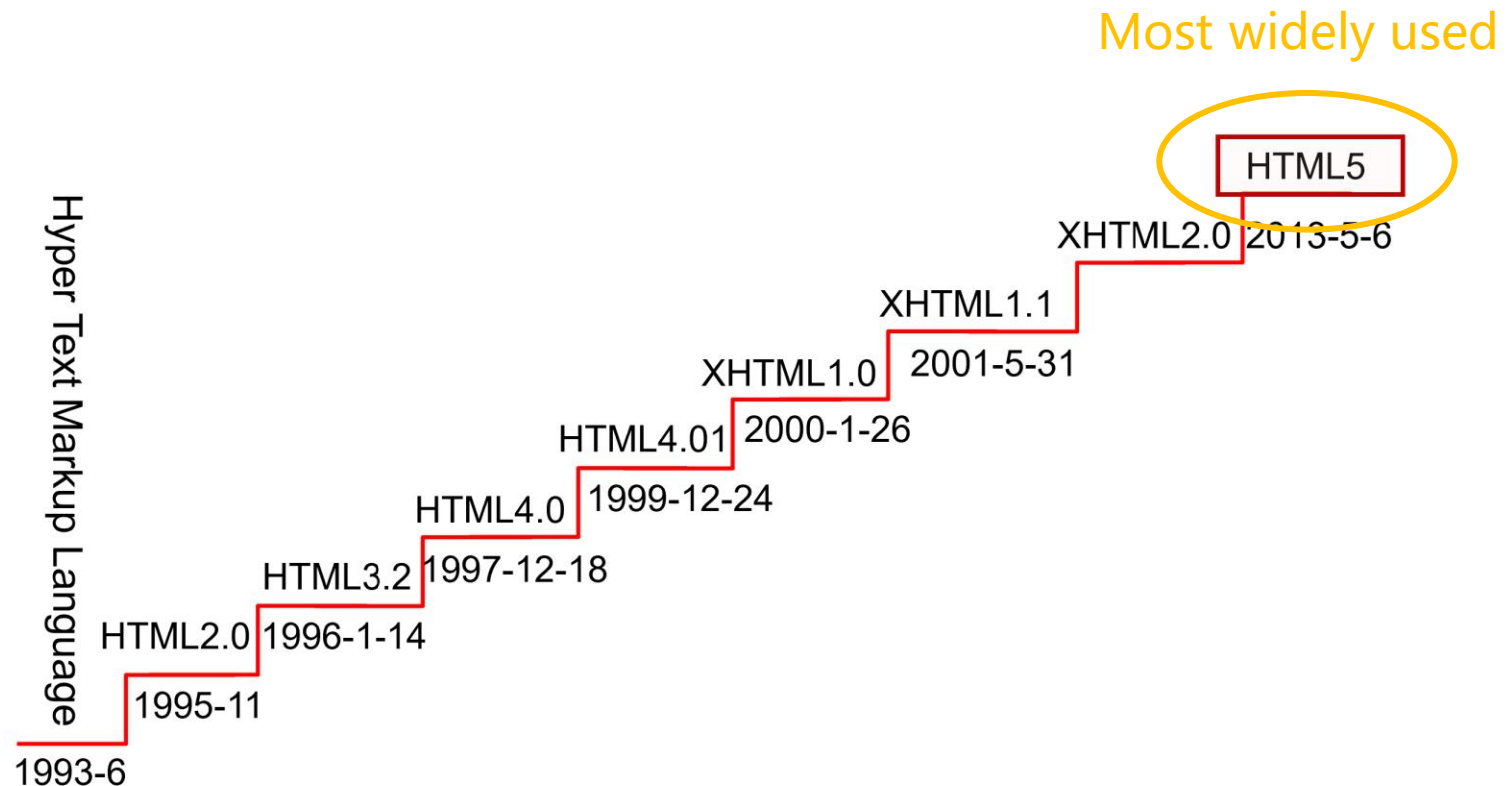
Firefox



Internet Explorer

```
</head>
<body>
  <h3>Hello HTML</h3>
  
  <hr/>
  <video src="../v.swf"></video>
</body>
</html>
```


HTML Development



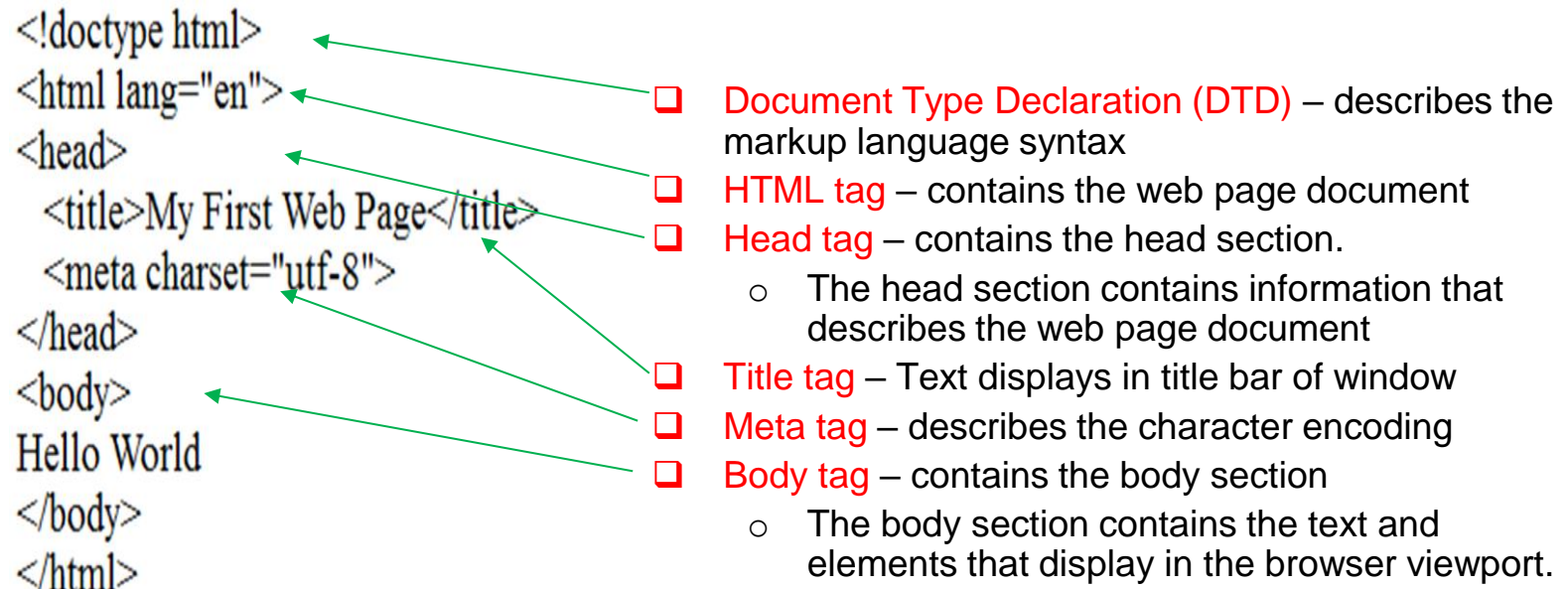
❖ Student's task: Check the compatibility of web browsers by visiting <http://html5test.com>. Try in Google Chrome, Opera, Safari, Firefox and Edge (or Internet Explorer).

Objectives



- To create a basic webpage using HTML5.
- To format text information using text-related tags.
- To display data using ordered lists, unordered lists and definition lists in HTML.
- To display images with text, and create hyperlinks
- To use anchor links, and function links.

Anatomy of a Web Page



Your First HTML5 Webpage



- Type the following in an editor (VS Code) and save it as “**First Webpage.html**”, under the “**IE4727**” folder in your **web server**.
- Visit your website and view this file in the web browser.

```
1 <!doctype html>
2 <html lang="en">
3 <head>
4   <title>My First Web Page</title>
5   <meta charset="utf-8">
6 </head>
7 <body>
8   Hello World
9 </body>
10 </html>
```

HTML Elements – Basic Elements 01



- The HTML5 elements are often known as **Tags**, tags are in **pair**.
- The **heading elements**: `<h1><h6>`
e.g. `<h1>.... </h1>`
`<h2>...</h2>`
 - Used for headings of sections
- **Paragraph element** `<p>` tag:
`<p> ...paragraph goes here... </p>`
 - Groups sentences and sections of text together.
 - Configures a blank line above and below the paragraph

Exercise 1: <h1>...<h6>, <p>



- Type the codes in the editor and save it as `<html_ex01.html>` in the web folder.
- Visit your website and view this file in the web browser.

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <title>Paragraph Example</title>
5  <meta charset="utf-8">
6  </head>
7  <body>
8  <h1>Heading Level 1</h1>
9  <p>This is a sample paragraph. Heading tags can
10     help to make your pages more accessible and usable.
11     It is good coding practice to use heading tags to
12     outline the structure of your web page content.
13 </p>
14 <h2>Heading Level 2</h2>
15 <h3>Heading Level 3</h3>
16 <h4>Heading Level 4</h4>
17 <h5>Heading Level 5</h5>
18 <h6>Heading Level 6</h6>
19 </body>
20 </html>
```

HTML Elements – Basic Elements 02



- Line **Break element** `
` tag:
 - Stand-alone tag, called a void element in HTML5
*...text goes here
*
This starts on a new line....
 - Causes the next element or text to display on a new line
- **Horizontal Rule element** `<hr>`
 - Stand-alone tag
 - Configures a horizontal line on the page
- The **Blockquote element** `<blockquote>`
 - Indents a block of text for special emphasis
`<blockquote>` *...text goes here...* `</blockquote>`

Exercise 2:



- Modify the codes for exercise 1 in the editor and save it as `<html_ex02.html>` in the web folder.
- Visit your website and view the file in the web browser.

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Line Break Example</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 <h1>Heading Level 1</h1>
9 <p>This is a sample paragraph.
10   <br> Heading tags can help to make your pages more accessible and usable.
11   It is good coding practice to use heading tags to outline the structure
12   of your web page content.
13 </p>
14 <h2>Heading Level 2</h2>
15 <h3>Heading Level 3</h3>
16 <h4>Heading Level 4</h4>
17 <h5>Heading Level 5</h5>
18 <h6>Heading Level 6</h6>
19 </body>
20 </html>
```

Exercise 3: <hr>



- Modify the codes for exercise 2 in the editor and save it as **<html_ex03.html>** in the web folder.
- Visit your website and view the file in the web browser.

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Line Break Example</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 <h1>Heading Level 1</h1>
9 <p>This is a sample paragraph.
10   <br> Heading tags can help to make your pages more accessible and usable.
11   It is good coding practice to use heading tags to outline the structure
12   of your web page content.
13 </p>
14 <hr>
15 <h2>Heading Level 2</h2>
16 <h3>Heading Level 3</h3>
17 <h4>Heading Level 4</h4>
18 <h5>Heading Level 5</h5>
19 <h6>Heading Level 6</h6>
20 </body>
21 </html>
```

Exercise 4: <blockquote>



- Modify the codes for exercise 3 in the editor and save it as `<html_ex04.html>` in the web folder.
- Visit your website and view the file in the web browser.

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Blockquote Example</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 <h1>The Power of the Web</h1>
9 <p>According to Tim Berners-Lee, the inventor of the World Wide Web,
10 |   at http://www.w3.org/WAI/:
11 </p>
12 <blockquote>
13 The power of the Web is in its universality.
14 Access by everyone regardless of disability is
15 an essential aspect.
16 </blockquote>
17 </body>
18 </html>
```




- Display inline with the text
- Common Phrase Elements:
 - `` this will be displayed in bold``
Text is displayed in bold font
 - `` This is important ``
To cause text to "stand out" from surrounding text. Usually bold.
 - `` Please note ``
To cause text to be emphasized in relation to other text on the page. Usually italics.

Exercise 5: ,



- Modify the codes for exercise 4 in the editor and save it as `<html_ex05.html>` in the web folder.
- Visit your website and view the file in the web browser.

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Blockquote Example</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 <h1>The Power of the Web</h1>
9 <p>According to Tim Berners-Lee, the inventor of the World Wide Web,
10 | at http://www.w3.org/WAI/
11 </p>
12 <blockquote>
13 The power of the Web is in its universality.
14 <em>Access by everyone</em>
15 | regardless of <strong>disability </strong> is an essential aspect.
16 </blockquote>
17 </body>
18 </html>
```



- **Unordered List: **
 - Contains the unordered list
- **List Item Element: **
 - Contains an item in the list

```
<ul>
```

```
<li>Blue</li>
```

```
<li>Teal</li>
```

```
<li>Red</li>
```

```
</ul>
```

My Favorite Colors

- Blue
- Teal
- Red

Exercise 6: ,



- Type the codes in the editor and save it as `<html_ex06.html>` in the webfolder.
- Visit your website and view this file in the web browser.

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <title>Heading and List</title>
5  <meta charset="utf-8">
6  </head>
7  <body>
8  <h1>My Favorite Colors</h1>
9  <ul>
10     <li>Blue</li>
11     <li>Teal</li>
12     <li>Red</li>
13 </ul>
14 </body>
15 </html>
```

HTML Elements – List Basics 02



➤ Ordered List

- Conveys information in an ordered fashion

➤ Ordered List Element: ``

- Contains the ordered list
- type attribute determines numbering scheme of list
- default is **numerals**

```
<ol>  
  <li>Apply to school</li>  
  <li>Register for course</li>  
  <li>Pay tuition</li>  
  <li>Attend course</li>  
</ol>
```

1. Apply to school
2. Register for course
3. Pay tuition
4. Attend course

Exercise 7:



- Modify the codes in Ex. 6 in the editor and save it as `<html_ex07.html>` in the webfolder.
- Visit your website and click on this file.

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <title>Heading and List</title>
5  <meta charset="utf-8">
6  </head>
7  <body>
8  <h1>My Favorite Colors</h1>
9  <ol>
10     <li>Blue</li>
11     <li>Teal</li>
12     <li>Red</li>
13 </ol>
14
15
16 </body>
17 </html>
```



Exercise 8: <ol type = ...>

- Modify the codes for ex. 7 in the editor and save it as `<html_ex08.html>` in the webfolder.
- Visit your website and view this file in the web browser.

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <title>Heading and List</title>
5  <meta charset="utf-8">
6  </head>
7  <body>
8  <h1>My Favorite Colors</h1>
9  <ol type="A">
10     <li>Blue</li>
11     <li>Teal</li>
12     <li>Red</li>
13 </ol>
```

Exercise 8: <ol type = ...>



- Try out other types of list by adding to <html_ex08.html> file, using:

type = "a"

type = "I"

type = "i"

start = "6"

- To display the different types of list:

My Favorite Colors

A. Blue
B. Teal
C. Red

C. Blue
D. Teal
E. Red

I. Blue
II. Teal
III. Red

vi. Blue
vii. Teal
viii. Red

6. Blue
7. Teal
8. Red

HTML Elements – Description List



- New name for HTML5, called a **Definition List** in previous versions of HTML and XHTML.
- Uses:
 - Display a list of terms and descriptions
 - Display a list of FAQ and answers
- The **Description List element: <dl>** tag
 - Contains the definition list
- The **dt Element: <dt>** tag
 - Contains a term or name
 - Configures a line break above and below the text
- The **dd Element: <dd>** tag
 - Contains a definition or description, Indents the text

Exercise 9: <dl>,<dt>,<dd>



- Type the codes in the editor and save it as `<html_ex09.html>` in the web folder.

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <title>Description List</title>
5  <meta charset="utf-8">
6  </head>
7  <body>
8  <h1>Sample Description List</h1>
9  <dl>
10   <dt>TCP</dt>
11   <dd>Transmission Control Protocol is a method (protocol)
12       used along with the Internet Protocol (IP) to send data
13       in the form of message units, called packets, between computers
14       over the Internet.</dd>
15   <dt>IP</dt>
16   <dd>Internet Protocol is the method or protocol by which data is sent
17       from one computer to another on the Internet. Each computer on the
18       Internet is uniquely identified by an IP address.</dd>
19   <dt>FTP</dt>
20   <dd>File Transfer Protocol is a protocol used to
21       exchange files between computers on the Internet. </dd>
22   <dt>HTTP</dt>
23   <dd>Hypertext Transfer Protocol is the protocol used for
24       exchanging text, graphic images, sound, video, and other multimedia
25       files on the Web.</dd>
26 </dl>
27 </body>
28 </html>
```


Special Entity Characters and Ex. 10



- © Copyright 2020 My Company. All rights reserved.

`©` Copyright 2020 My Company. All rights reserved.






- Display special characters such as quotes, copyright symbol, etc.

<u>Character</u>	<u>Code</u>
©	<code>&copy</code>
<	<code>&lt</code>
>	<code>&gt</code>
&	<code>&amp</code>
"	<code>&quot</code>
[space]	<code>&nbsp</code> /* no-break space */

- Try to type these in a text paragraph in your exercise files to see how they look like. Save the file as `<html_ex10.html>` . View the file in the web browser.

HTML Elements - Image tag



- ``
-  `src` **img path**
-  `alt` **Alternative names for imgs**
-  `title` **tooltip**
-  `width` **Img width**
-  `height` **Img height**

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Image Tag</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 
10 </body>
11 </html>
```

- Down picture and Type the codes in the editor and save it as **<image tag.html>** in the web folder.

HTML Elements – Anchor Element and Ex. 11



- Inline-level element
- Specifies a hyperlink reference ([href](#)) to a file
- Text between the `<a>` and `` is displayed on the web page.
 - href Attribute: indicates the file name or URL, Web page document, photo, pdf, etc.

- Type these in your editor. Save the file as `<html_ex11.html>`.
- View the file in the web browser

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Anchor Example</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 <a href="http://webdevbasics.net">Basics of Web Design Textbook Companion</a>
9 </body>
10 </html>
```

Exercise 12: block anchor



- Try to type these in your editor to see how they look like. Save the file as `<html_ex12.html>`.
- View the file in the web browser

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Block Anchor</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 <a href="http://www.w3.org/TR/html-markup">
9 <h1>HTML5 Reference</h1>
10 <p>Bookmark this site for a handy HTML5 reference.</p>
11 </a>
12
13 </body>
14 </html>
```

Hyperlinks



➤ Absolute link

- Link to other websites

```
<a href="http://yahoo.com">Yahoo</a>
```

➤ Relative link

- Link to pages on your own site
- Relative to the current page

```
<a href="index.html">Home</a>
```

More examples:

From collas.html,

```
<a href="shampoo.html">Shampoo</a>
```

```
<a href="../index.html">Home</a>
```

```
<a href="../services/daycare.html">Dog Daycare </a>
```

```
<a href="contact.html">Contact Us</a>
```



groomer

index.html

contact.html



images



products

collars.html

shampoo.html



services

bathing.html

daycare.html

More on Hyperlinks



➤ Opening a Link in a New Browser Window

- The target attribute on the anchor element opens a link in a **new browser window** or **new browser tab**.

```
<a href="http://yahoo.com" target="_blank">Yahoo!</a>
```

➤ Email Hyperlinks

- Automatically launch the default mail program configured for the browser
- If no browser default is configured, a message is displayed

```
<a href="mailto:me@hotmail.com">me@hotmail.com</a>
```

HTML Elements – Structural Elements 01



- **Header Element**

`<header> </header>`

Contains the web page document's headings

- **Nav Element**

`<nav> </nav>`

Contains web page documents main navigation

- **Footer Element**

`<footer> </footer>`

Contains the web page document's footer

header

nav

div

footer

- <div>

Part 4

</div>

Linking to Fragment Identifiers



- A link to a part of a web page
- Also called **named fragments, fragment ids**
- Two components:
 - The element that identifies the named fragment of a Web page. This requires the id attribute.
`<div id="top"> </div>`
 - The anchor tag that links to the named fragment of a Web page. This uses the href attribute.
`Back to Top`

Exercise 13



- Try to type these in a text paragraph in your exercise files to see how they look like. Save the file as `<html_ex13.html>`.
- View the file in the web browser.

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Trillium Media Design</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 <header>
9   <h1>Trillium Media Design</h1>
10 </header>
11 <nav>
12   <b>Home &nbsp; Services &nbsp; Contact</b>
13 </nav>
14 <div>
15   <h2>New Media and Web Design</h2>
16   <p>Trillium Media Design will bring your company's
17     Web presence to the next level. We offer a comprehensive range of services.</p>
18   <h2>Meeting Your Business Needs</h2>
19   <p>Our expert designers are creative and eager to work with you.</p>
20 </div>
21 <footer>
22   <small><i>Copyright &copy; 2014 Your Name Here</i></small>
23 </footer>
24 </body>
25 </html>
```

Exercise 14: index. html



```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Trillium Media Design</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 <header>
9   <h1>Trillium Media Design</h1>
10 </header>
11 <nav>
12   <b><a href="index.html">Home</a> &nbsp;  </b>
13   <a href="services.html">Services</a> &nbsp;  </a>
14   <a href="contact.html">Contact</a>
15 </b>
16 </nav>
17 <div>
18   <h2>New Media and Web Design</h2>
19   <p>Trillium Media Design will bring your company's Web presence to the next level.
20     We offer a comprehensive range of services.</p>
21   <h2>Meeting Your Business Needs</h2>
22   <p>Our expert designers are creative and eager to work with you.</p>
23 </div>
24 <footer>
25   <small><i>Copyright &copy; 2014 Your Name Here</i></small>
26 </footer>
27 </body>
28 </html>
```

Trillium Media Design

[Home](#) [Services](#) [Contact](#)

New Media and Web Design

Trillium Media Design will bring your company's Web presence to the next level. We offer a comprehensive range of services.

Meeting Your Business Needs

Our expert designers are creative and eager to work with you.

Copyright © 2014 Your Name Here

contact. html



Trillium Media Design

[Home](#) [Services](#) [Contact](#)

Contact Trillium Media Design Today

- E-mail: contact@trilliummediadesign.com
- Phone: 555-555-5555

Copyright © 2014 Your Name Here

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Trillium Media Design - Contact</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 <header>
9 <h1>Trillium Media Design</h1>
10 </header>
11 <nav>
12 <b><a href="index.html">Home</a> &nbsp;</b>
13 <b><a href="services.html">Services</a> &nbsp;</b>
14 <b><a href="contact.html">Contact</a> </b>
15 </nav>
16 <div>
17 <h2>Contact Trillium Media Design Today</h2>
18 <ul>
19 <li>E-mail: contact@trilliummediadesign.com</li>
20 <li>Phone: 555-555-5555</li>
21 </ul>
22 </div>
23 <footer>
24 <small><i>Copyright &copy; 2014 Your Name Here</i></small>
25 </footer>
26 </body>
27 </html>
```

services. html



```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Trillium Media Design - Services</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 <header>
9 | <h1>Trillium Media Design</h1>
10 </header>
11 <nav>
12 | <b><a href="index.html">Home</a> &nbsp;
13 | | <a href="services.html">Services</a> &nbsp;
14 | | <a href="contact.html">Contact</a>
15 | </b>
16 </nav>
17 <div>
18 | <h2>Our Services Meet Your Business Needs</h2>
19 | <dl>
20 | | <dt><strong>Website Design</strong></dt>
21 | | <dd>Whether your needs are large or small, Trillium can get you on the Web!</dd>
22 | | <dt><strong>E-Commerce Solutions</strong></dt>
23 | | <dd>Trillium offers quick entry into the e-commerce marketplace.</dd>
24 | | <dt><strong>Search Engine Optimization</strong></dt>
25 | | <dd>Most people find new sites using search engines. Trillium can get your website noticed.</dd>
26 | </dl>
27 </div>
28 <footer>
29 | <small><i>Copyright &copy; 2014 Your Name Here</i></small>
30 </footer>
31 </body>
32 </html>
```

Trillium Media Design

[Home](#) [Services](#) [Contact](#)

Our Services Meet Your Business Needs

Website Design

Whether your needs are large or small, Trillium can get you on the Web!

E-Commerce Solutions

Trillium offers quick entry into the e-commerce marketplace.

Search Engine Optimization

Most people find new sites using search engines. Trillium can get your website noticed.

Exercise 14



- Create a folder named **TMD**
- Type the HTML5 codes in the complete example and save them in the 3 respective files as shown in previous slides in the TMD folder.
- Try to navigate the pages.

+++++

- Copy all the files created for the exercises to the folder named **week01** in the webserver.
- These (and future) hands-on exercises will be used for Progress Assessments for the CA.
- Learn more about HTML5, visit: <http://www.w3schools.com/>

Summary



HTML 5 Basics

- Anatomy of a web page
- HTML 5 Basic Elements (Tags)
 - Heading `<h1>....<h6>`
 - Paragraph `<p></p>`
 - Line Break `
`
 - Horizontal Rule `<hr>`
 - Blockquote `<blockquote>`
 - Phrase elements:
`;;.`
- List Basics
 - Unordered list ``
 - Ordered list ``
 - List item element ``
 - Description lists `<dl>,<dt>,<dd>`
- Image tags
 - ``
- Anchor element `<a>`
 - Absolute link
 - Relative link
 - Email hyperlinks
- HTML 5 structural elements
 - Header `<header></header>`
 - Nav `<nav></nav>`
 - Div `<div></div>`
 - Footer `<footer></footer>`



Thanks



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