Unit 5 – Accessibility

Objectives	Explore accessibility issues and consider implications of web design on diverse audiences.
Required Reading	- Chapter 2 - Website Design Principles, Sklar, p. 29 - Lesson 17 - Designing for the Real World, Lemay p. 533 - Lesson 18 - Putting Your Site Online, Lemay p. 587-588 - Creating Accessibility Web Sites http://vision.unco.edu/AccessibleDesign/index.htm - Leveling the Road Ahead: Guidelines for the Creation of WWW Pages Accessible to Blind and Visually Handicapped Users http://www.rit.edu/~easi/itd/itdv02n4/article6.htm - Web Accessibility http://www-03.ibm.com/able/guidelines/web/accessweb.html - Fix Your Site With the Right DOCTYPE http://www.alistapart.com/stories/doctype/ - Recommended DTDs to use in your Web document http://www.w3.org/QA/2002/04/valid-dtd-list.html - HTML <meta> tag http://www.w3schools.com/tags/tag_meta.asp - Meta Tags http://www.htmldog.com/guides/htmlintermediate/metatags/
Supplemental Reading	Adaptive Computing Technology Center http://iatservices.missouri.edu/adaptive/
Assignment	In this assignment, you need to make your Assignment Page and mini_project_1.html page XHTML-compliant and accessible. Make sure that these two pages pass validation using http://validator.w3.org/. **Read mini project 2 for details** Participate in the Topic 1 Discussion Forum: Validation **Mini Project 2 and Topic 1 Discussion will be due on June 29th at 11:45 pm**.

I. Important Concepts

1. What is DOCTYPE?

DOCTYPE is used to specify the HTML version used in the document so web browsers would know how to handle the page. According to XHTML specifications, a document declaration is required.

There are three different DOCTYPEs: **strict**, **transitional**, and **frameset.** Each of them meets certain needs. A strict DOCTYPE should be used when the code is clean, which means no depreciated tag is used, and can combine with CSS. The transitional one is the most commonly used DOCTYPE. It is useful when the user's browser does not support CSS. Use a frameset DOCTYPE when you use frames. For further discussion of DOCTYPE statements, see the readings above.

Please note the DOCTYPE statement that used in this class is:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

2. What is a meta tag?

A <meta> tag is an html element that provides meta-information about your page. Meta tags are mainly used in two ways. The first type is to **declare information about the site to the browser** (<meta http-equiv="name" content="content" />). The most commonly used element in this type is content-type to set the language of the page. Other useful elements are refresh, expires, and set-cookie. They are used to control the browser's behavior. The second type is **used by search engines to help them rank the search results** (<meta name="name" content="content" />). In this case, the most useful elements- resource, keywords, description, distribution, copyright, and author- can be used in a meta tag.

Unfortunately, some web developers use some keywords that don't reflect the content of the page in order to be ranked higher and be placed on the top in the search results. Therefore, some modern search engines ignore the meta tags. Although it is not required to use meta tags on web pages, it's good practice to have the first type of meta tag to identify the character set of the page so it will get validated by the W3C validator.

When validated your page, you might get a message "**No Character Encoding Found! Falling back to UTF-8**", what does it mean? Well, an HTML document should be served with its character encoding. You can use the common encoding such as "**iso-8859-1**" (Western Europe and North America) or "**utf-8**" (it is universal, but not commonly used in legacy documents). **Use "utf-8" if you are not sure what kind of encoding that you need to use.**

At this point, you might feel a little overwhelmed with all these information. Below is an example of adding a meta tag to your page. Note that it should be placed in the head section of the HTML document. Please refer to the reading above for the detail explanations:

```
<head>
        <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
        <title>put your title here</title>
</head>
```

3. What is HTMLValidator?

You may not bother to make your page XHTML-compliant. Later you may find your site appearing inconsistently across the web browsers. That's why you should take the necessary steps **NOW** to make sure that the HTML code on your web site follows the XHTML specifications. So what is HTML validation? This is the process to analyze an HTML document in comparison to standard HTML rules, for identifying errors and non-standard codes. You can check the html validation of your web page by entering your URL at: http://validator.w3.org/

For example, I have these codes on my page:

```
---------------------------------------------------------------------------------------------------------
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html>
    <head>
    <title></title>
    </head>
 <body>

    <p>This is an example of Mini Project 2 assignment. In this assignment, you need to
        validate:</p>
            <ul>
```

```
            <li>Your assignment page</li>
            <li>Your Mini Project 1 assignment</li>

 </html>
```

Then, I validate my page on: http://validator.w3.org/, and here are the messages that I received:

This page is **not** Valid XHTML 1.0 Transitional. Below are the results of checking this document for XML well-formedness and validity.

1. Error *Line 15 column 12*: **end tag for "ul" omitted, but OMITTAG NO was specified.**
   </html**>**
   You may have neglected to close an element, or perhaps you meant to "self-close" an element, that is, ending it with "/>" instead of ">".
   This error message means that I have neglected a closing “ul” tag

2. Info *Line 11 column 9*: start tag was here.
   <ul>
   This information reminds me that I have open “ul” tag that has not closed yet.
   Hint: All of the tags must be closed (either in pairs or self close)

3. Error *Line 15 column 12*: end tag for "body" omitted, but OMITTAG NO was specified.
   </html**>**
   This error message means that I have neglected a closing “body” tag.

4. Info *Line 7 column 6*: start tag was here.
   <body>
   This information reminds me that I have open body tag that has not closed yet.

So, here is the correction (note for the red color):

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html lang="en">
    <head>
    <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
        <title>Unit 4</title>
    </head>

<body>
    <p>This is an example of Mini Project 2 assignment. In this assignment, you need to
        validate:</p>
            <ul>
                    <li>Your assignment page</li>
                    <li>Your Mini Project 1 assignment</li>
             </ul>

</body>
</html>
```

4. **What does Website Accessibility mean?**

   Website accessibility is becoming increasingly important since right now the website has a wider audience. Individuals with disabilities access the web in several ways. They may use customized browser settings, such as font size, and color and screen resolution. They may also rely on assistive devices such as screen readers, text readers and voice-activated devices. However, if the HTML code used to build web pages is not appropriately optimized, these assistive technologies can become ineffective, and the website can become inaccessible. An accessible web page should at least:
   - provide **alternative text** descriptions for the images
   - provide **headers** for columns and rows in tables that contain data
   - have **high contrast** between background and text
   - meet Section 508 Standards

II. Other Resources

The following links provide information about a variety of disability issues and gives guidelines for creating sites to accommodate all users.

Designing Web Pages for Sight Impaired Users
If you are involved in making Web pages accessible for users with sight impairments, check out "Disabled Accessibility: The Pragmatic Approach," by Jakob Nielsen ("The Alertbox," June 13, 1999 issue). Nielsen includes a link to the W3 Web Content Accessibility Guidelines 1.0, the W3's prioritized list of design rules, and a very useful checklist for Web page designers.

Making Websites Accessible
Rey Junco, counselor in the Pennsylvania State University Office for Disability Services, visited the University of North Carolina at Chapel Hill campus this month. Using examples from UNC-CH Web pages, Junco gave a presentation on creating Websites that are readable and navigable by users with sight, hearing, or motor disabilities. He also provided a list of Websites that address guidelines and the laws that cover disability issues:

- **Watchfire WebXACT Home Page**
  Watchfire WebXACT is a program that checks Web pages for accessibility.
  http://webxact.watchfire.com/

- **W3C Web Content Guidelines Working Group**
  The goal of this group is to produce the Web Content Accessibility Guidelines.
  http://www.w3.org/WAI/GL/

- **The Assistive Technology Act of 1998**
  This act supports programs of grants to States to address the assistive technology needs of individuals with disabilities.
  http://www.mdtap.org/tt/1998.09/1b-art.html

- **The Workforce Investment Act of 1998**
  The act ensures that individuals with disabilities have access to and use of information and data that is comparable to the access to and use of the information and data by such members of the public who are not individuals with disabilities.
  http://www.usdoj.gov/crt/508/508law.html

- **Department of Justice Americans with Disabilities Act Home Page**
  http://www.usdoj.gov/crt/ada/adahom1.htm