Introduction to Internet Technology and Web Programming

Computer Science 103
Boston University
Vahid Azadeh-Ranjbar

These notes are based on the lecture notes provided by Professor Susan Worst.

Lecture 9-1

BU CS 103, Spring 2019

What will be Covered Today?

❖ Review from last lecture
❖ Some Announcements
➢ Buying a shared hosting from DreamHost (as a part of HW5)
➢ Final Project Review (as a part of HW5)
➢ Midterm Exam 2
❖ Working with XHTML
❖ Web Fonts vs. System Fonts
➢ Google Fonts & Icon Fots
❖ A demonstration for Lab 7 Assignment

Assignments

❖ New Assignments
➢ **HW 5** was posted today
✓Due next Monday at 6:00 pm.
❖ Deadlines
➢ **HW 4** due date was today at 6:00 pm
➢ **Lab 7 Assignment** due is Wednesday at 6:00 pm.
❖ Grades
✓ **Lab 6 Assignment** was posted on BB.
✓ **Lab 7 Challenge** was posted on BB.

Review from Last Lecture

When you see text like:

Author: Gu□r□n Gu□mundsd□ttir. Japanese Line Composition Rules (□ □ □ □ □ □ □ □ □ □ □). Copyright □ 2004-2007 W3C□ (MIT, ERCIM, Keio).

There is probably a problem with:

A. Compatibility between browsers
B. Compatibility between computers (Mac/PC/Linux)
C. Malware
D. Character encoding

The alphabet used by the English language is called the _____ alphabet.

A. British
B. English
C. Latin
D. Roman

Which character encoding will show all English words correctly?

A. ASCII
B. ISO-8859
C. UTF-8
D. A and B
E. B and C
F. A, B, and C

Which character encoding will show all Spanish words correctly?

A. ASCII
B. ISO-8859
C. UTF-8
D. A and B
E. B and C
F. A, B, and C

Which character encoding will show all Korean words correctly?

A. ASCII
B. ISO-8859
C. UTF-8
D. A and B
E. B and C
F. A, B, and C

The ISO-8859 and Windows 1252 character encodings are essentially the same.

A. True
B. False

According to W3Techs, what % of web pages today use UTF-8?

A. Less than 25%
B. 25-50%
C. 50-75%
D. 75-99%
E. 100%

Some Announcements

1- Buying a shared hosting from DreamHost (As part of HW5)

1. Choose a domain name.
2. Register a domain name and purchase web hosting. You will use these for the rest of CS 103 assignments as well as your final project.
3. Secure your web space by setting the version of PHP and getting a security certificate.
4. Install WordPress on the website you purchased.
5. Wait for your new domain name to propagate throughout the Internet. This process can take up to 48 hours.
6. Update your WordPress software if an update is available. For security reasons, you should always keep your WordPress up to date.
7. Make a new post to the WordPress blog you just created.

2- Final Project Review (as part of HW5)

❖ As a part of Homework 5 you are supposed to review the Final project requirements on the BlackBoard:

❖ And let me know any questions you have

❖ To be presented during lecture on Monday, April 29 and Wednesday, May 1.

❖ To be submitted for grading by Wednesday, May 1 at 11:59 pm.

3- Midterm Exam 2 on Wednesday April 10

❖ What's on Midterm Exam 2?

➤ From lecture 4-2 to lecture 9-2 (**lecture 9-2 wont be in the exam**)

CSS	**Font stacks**
Block-level and inline elements	**Div and span tags**
Class and ID attributes	**Definition of "usability"**
Visual hierarchy	**Approaches to mobile**
Character encoding	**Styling hyperlinks**

Spelling and definition of "accessibility"

Writing good link text Designing for low vision

Plus...

CSS Templates: XHTML

❖ Some templates on free template sites are written in XHTML 1.0, an older version of HTML.

❖ How can you tell? Check the DOCTYPE declaration.

DOCTYPE declaration	Version of HTML
<!DOCTYPE html>	HTML 5
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict// EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">	XHTML 1.0 Strict
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/ xhtml1-transitional.dtd">	XHTML 1.0 Transitional

Working in XHTML

❖ <img> tags must be enclosed in a "wrapper" element (usually a paragraph)

❖ For standalone tags, we need to add a "/" before the closing right angle bracket

➢ <link rel="stylesheet" type="text/css" href="lab1.css" />

➢

❖ Use the W3C HTML validator to find and fix HTML errors:

➢ https://validator.w3.org/

Web Fonts vs. System Fonts

Web Fonts

❖ Developed out of frustration with the limitations of system fonts
❖ Limitations of system fonts:
  ➢ Can only use fonts that are commonly installed on people's computers. (There are many fonts that are not widely installed on computers.)
  ➢ No way to use new fonts that you have created.
  ➢ User experience depends on the computer users are using.
❖ Web fonts ensure that everyone sees the same type
❖ Browser downloads the font and temporarily installs it (in the browser) while loading a web page.

Sources of Web Fonts

❖ Paid services
  ➢ Adobe Typekit – sometimes included in a Creative Cloud subscription
  ➢ Fonts.com
  ➢ Monotype
❖ Free services
  ➢ Google Fonts: https://developers.google.com/fonts/
❖ Host it yourself
  ➢ Must have a license from the type designer that allows you to make the font available for download. Avoid this option unless you're sure of what you are doing.

Using Google Fonts

❖ See the Google Fonts Getting Started Guide https://developers.google.com/fonts/docs/getting_started

1. Explore the Google fonts and find one that you like.
2. Add a second <link> tag to your HTML page. The href attribute will point to a CSS file on the Google website.
3. Use the name of the font-family in your CSS. (Make sure to use a font stack)
4. Lets try …

   https://fonts.google.com/

System Fonts vs. Web Fonts

❖ SYSTEM FONTS
  ➢ Advantages:
    ✓ User does not need to download them
    ✓ They do not slow down the page
  ➢ Disadvantages
    ✓ Limited choices
    ✓ Inconsistent user experience
❖ WEB FONTS
  ➢ Advantages
    ✓ More choices & consistent user experience
  ➢ Disadvantages
    ✓ Decreases performance because user must load extra files
    ✓ Makes site dependent on Google or other provider

Icon Fonts

❖ Many templates use icon fonts for social media links and other small, standard pictures.

❖ These fonts are made by **Font Awesome**; you will often see a font-awesome CSS file in templates

❖ List of icons: http://fontawesome.io/icons/

❖ Drawback: Extra work is required to make them accessible to screen readers.

❖ See for example: http://fontawesome.io/accessibility/

Icon Fonts: how to use

1. Copy the link tag from: https://fontawesome.com/start and paste it in the <head> of your html
2. Go to the icon lists to find out what do you need https://fontawesome.com/icons?d=gallery
3. Configure size and color of font awesomes:

   Size: https://fontawesome.com/how-to-use/on-the-web/styling/sizing-icons

   color: https://fontawesome.com/how-to-use/on-the-web/referencing-icons/basic-use#with-your-styling

❖ Lets create a navigation bar in the footer by Icon Fonts

A demonstration for Lab 7 Assignment

https://templated.co
https://html5up.net/