Introduction to Internet Technology and Web Programming

Computer Science 103
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These notes are based on the lecture notes provided by Professor Susan Worst.

Lecture 6-2

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What will be Covered Today?

❖ More about CSS
  ➢ CSS Layout
    o Two columns layout:
      ✓ Float property
      ✓ Clear Property
  ➢ Media Queries for responsive design
  ➢ Visual Hierarchy and CSS techniques

Assignments

❖ New Assignments
  ✓ **Lab 5 Challenge**
  ✓ **Lab 5 Assignment**

❖ Deadlines
  ✓ **Lab 4 Assignment:** due was today at 6pm.
  ✓ **HW 3:** due Monday March 4 at 6pm.
  ✓ **Lab 5 Challenge:** due tomorrow at midnight.
  ✓ **Lab 5 Assignment:** due Friday at midnight.
    ➢ **Special due date because of the midterm exam 1**

Continuing Web Layout

❖ In Lab 4, we have done a one-column CSS layout that utilized the document's **normal flow**

❖ Elements appear on the page, one on top of the other, in the order in which they appear on the HTML page.

<header>

<nav>

<div id="main_content">

<footer>

Example of one-column CSS layout

Next step

❖ What if you want more than one column?

❖ Two techniques are commonly used: **float** and **CSS positioning**

❖ In Lab 5 challenge, you are going to use float property to make a 2-column CSS layout.

The Float Property

❖ Setting the float property of a block-level element to "left" or "right" will ship the box containing the floated element to the left or right on the current line.

img {float: left;}
p {float: right;}

❖ Originally used with images, but can also be used to make columns.

The Clear Property

❖ Once you've started floating, how do you get it to stop?

❖ Setting the "clear" property to "right", "left", or "both" will cause the next element to appear below the floated element (instead of alongside it).

footer {clear: both;}

A Demonstration for Lab 5 Challenge

Lab 5 Assignment

❖**Media Queries** for making a responsive design
  ✓What if I want a one column layout for small screens and a two column layout for large screens

Technique: Media Queries

❖ Media queries invoke lines of CSS only if the browser meets certain criteria. Examples:

@media screen and (max-width: 768px) {

.... /* CSS placed here will be applied only if the screen is 768 px or **narrower** */ }

@media screen and (max-width: 520px) {

.... /* CSS placed here will be applied only if the screen is 520 px wide **or narrower** */ }

❖In the first query, **screen** is the "**media type**" **max-width** is the "**feature**" and **768px** is the "**value**"

Media Queries: Some Examples

https://codepen.io/azadeh83/pen/GYmBpv

https://www.w3schools.com/css/tryit.asp?filename=trycss_mediaqueries_fontsize

https://www.w3schools.com/css/tryit.asp?filename=trycss_mediaqueries_hide

Typical Uses of Media Queries

❖ Change font sizes
❖ Suppress navigation / show hamburger menu
❖ Hide search box
❖ Reduce number of columns in layout
❖ Push widgets and sidebars to the bottom of the page

Something from lab 4 & lab 5

❖ You are asked to do the following
 ➢ Your web page must demonstrate appropriate use of contrast, visual hierarchy, whitespace, and color.
 ➢ What does this mean?

First, we need to define usability

❖ Usability is "**making sure that something works well:** that a person of average or even below average ability and experience can use the thing—whether it's a Web site, a fighter jet, or a revolving door—without getting hopelessly frustrated."

—Steve Krug

Don't Make Me Think

Good Visual Design Promotes Usability

❖ The primary purposes of graphic design are to:

1. Create a clear visual hierarchy of contrast, so you can see at a glance what is important and what is peripheral
2. Define functional regions of the page
3. Group page elements that are related, so that you can see structure in the content

—"Visual Design," *Web Style Guide*

Elements of Visual Hierarchy

❖ The most important things are the most prominent
❖ Things that are related logically should also be related visually
❖ Things are "nested" visually to show what's part of what

–Steve Krug
Don't Make Me Think

Tools for Creating Visual Hierarchy

❖ How do we distinguish between important and unimportant, related and unrelated?

❖ Use **contrast** in:

✓ Typeface **(font-family)**

✓ Type style **(font-style, font-variant, font-weight, font-size …)**

✓ Type spacing **(letter-spacing, word-spacing …)**

✓ Color **(foreground & background colors)**

✓ Whitespace **(padding/margin)**

✓ **Placement on page**

Whitespace

❖ One tool for creating visual hierarchy

❖ Better name might be "empty space" – doesn't have to be white

❖ Helps user distinguish important areas

❖ Helps user perceive page structure

❖ Do this:

➤ An Event Apart: www.aneventapart.com

❖ Not this:

➤ Shop in Paradise: www.siphawaii.com

CSS for Styling Text

❖ CSS provides many ways to style text

❖ Some properties begin with "font"; others begin with "text"

CSS for Styling Text: Italic

❖ **font-style property**

➢ Used to make text italic

➢ Possible values

  ✔ Normal

  ✔ Italic

  ✔ oblique (not widely supported; avoid)

❖ Reference: CSS Fonts from W3Schools

  https://www.w3schools.com/css/css_font.asp

CSS for Styling Text: Bold

❖ **font-weight property**
- ➢ Used to make text bold
- ➢ Commonly used values
  - ✓ Normal
  - ✓ bold
- ➢ Less commonly used values (not widely supported)
  - ✓ Lighter
  - ✓ Bolder
  - ✓ A number between 100 and 900
❖ Reference: CSS Property: font-weight
  http://www.htmldog.com/references/css/proper,es/font-weight/

CSS for Styling Text: Small Caps

❖ **font-variant property**
- ➢ Small caps look like capital letters, but smaller
- ➢ Example: SMALL CAPS (as opposed to ALL CAPS or lowercase)
- ➢ Possible values:
  - ✓ normal: letters appear as typed
  - ✓ small-caps: letters appear in small caps

❖ Reference: CSS Fonts from W3Schools
  https://www.w3schools.com/css/css_font.asp

The Font Shorthand Property

❖ All properties beginning with "font" can be set in one rule using the font shorthand property
  ➢ font-family
  ➢ font-size
  ➢ font-weight
  ➢ font-style
  ➢ font-variant

p {
  font: small-caps italic bold 12px Georgia, serif;
}

CSS for Styling Text: Uppercase

❖ The **text-transform** property can change text to lowercase or uppercase regardless of how it was entered on the HTML page
  ➢ Possible values:
    ✓ uppercase
    ✓ lowercase
    ✓ capitalize – capitalizes the first letter of each word

❖ Reference: CSS Text from W3Schools
  https://www.w3schools.com/css/css_text.asp

CSS for Styling Text: Underline/Overline/Strikethrough

❖ **text-decoration property**
  ➢ Possible values:
    ✓ none – no underline, overline, or strikethrough
    ✓ underline
    ✓ overline
    ✓ line-through

❖ Reference: CSS Text from W3Schools
   https://www.w3schools.com/css/css_text.asp

CSS for Styling Text: Shadows

❖ **text-shadow property** adds shadows to text
  ➢ Requires four values, separated by a space:
    ✓ Horizontal offset – how far shadow goes to the right
    ✓ Vertical offset – how far shadow goes down
    ✓ Blur (optional)
    ✓ Color of the shadow
❖ Reference: 12 Fun CSS Text Shadows from Design Shack
https://designshack.net/articles/css/12-fun-css-text-shadows-you-can-copy-and-paste/

Review from Last Lecture

In CSS, the padding property specifies the amount of whitespace ………..

A. between letters
B. between words
C. inside the border of an element
D. outside the border of an element

Where is the link text in the code
google

A. http://www.google.com/
B. www.google.com
C. google
D. The entire line of code

A generic font family is:

A. A common font
B. A type of font
C. None of the above

Which of these is NOT a generic font family?

    A. Cursive
    B. Fantasy
    C. Monospace
☺ D. Script

When using the border-width shorthand property, in what order do you specify the borders?

    A. Bottom left right top
☺ B. Top right bottom left
    C. Top left bottom right
    D. Right left top bottom
    E. The order doesn't matter

When using the border shorthand property, in what order do you specify the properties?

A. Width style color
B. Color style width
C. Style color width
D. Order doesn't matter

what kind of selector is the symbol * (asterisk) used in CSS files?

A. Class selector
B. HTML element selector
C. ID selector
D. Universal selector

A particular value of the class attribute should be used just once per page.

    A. True

☺B. False

The same element can have both class and ID attributes.

☺A. True

    B. False

For Next Time

❖ Enjoy the lab tomorrow!