ITMD-461
CLASS 5
FEBRUARY 10, 2015

TONIGHT'S AGENDA

- Any HTML Form Questions
- Class Server and SFTP Use
- Review Basic HTML & Layout
- Introduction to CSS
- Readings & Assignments

QUESTIONS ON FORMS?

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CLASS SERVER & SFTP / SSH

SSH

- **Secure Shell (SSH)**
- **Cryptographic based protocol for securely communicating data between two systems.**
- **Designed as a replacement for Telnet**
- **Can be used to secure any service but most commonly used as a command line shell interface to a remote host.**
  - SCP – Secure Copy, tunneling, remote login, and more
- **Most common on Unix-like OS**
- **Can be secured with passwords or public/private keys**
- **Default port is 22**
- **http://en.wikipedia.org/wiki/Secure_Shell**

SFTP

- SSH File Transfer Protocol or Secure File Transfer Protocol
- Extension of the Secure Shell Protocol (SSH) for secure file transfer capabilities.
- It is not just FTP over a SSH connection. Completely new protocol designed by the Internet Engineering Task Force (IETF).
- Transfers files over a secure channel that is setup when the client authenticates to the server.
- Default port is 22
- Many commercial and free applications available on all OS
- http://en.wikipedia.org/wiki/SSH_File_Transfer_Protocol

CLASS SERVER & SFTP / SSH

- **Use SFTP, SSH, or SCP to access (port 22)**
  - libertyville.rice.iit.edu
- **Your user account is your IIT user name**
- **Password will be emailed to you**
  - You password is case sensitive
- **Your page will be:**
  - http://libertyville.rice.iit.edu/username
- **If you enter an incorrect password 10 time you will be blocked and must contact me to be unlocked**
  - You will have to send me the ip address you were blocked from – Google what's my ip

COMMON APPLICATIONS

SFTP

- **Filezilla (Free - all platforms) - https://filezilla-project.org/**
  - http://kb.mediatemple.net/questions/880/Using+FileZilla+for+FTP%7B47%7DSFTP#gs
  - https://it.unh.edu/sftp/filezilla.html
- **Cyberduck (Free – Win/Mac) - https://cyberduck.io/**
- **WinSCP (Free – Win) - http://winscp.net**
- **Transmit ($ - Mac only) - http://panic.com/Transmit/**
- **FireFTP (Free – Firefox Addon) - https://addons.mozilla.org/en-US/firefox/addon/fireftp/**
- **PSFTP & PSCP (Free – Win) - http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html**

SSH

- **Terminal (All Unix-like including Mac OS)**
- **PuTTY (Free – Win) - http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html**

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HTML REVIEW & BASIC LAYOUT CONSIDERATIONS

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CSS INTRODUCTIONS

CSS INTRO

Advantages of CSS

- **Precise control of visual appearance and layout**
- **Saves work – allows you to change something in one place and have it effect elements in multiple areas**
- **Allows you to markup you HTML semantically and keep presentation elements separate**
- **All browsers mostly support CSS 2, and some CSS 3**
- **CSS 3 support in browsers is growing. Some browsers require prefixes for some properties.**

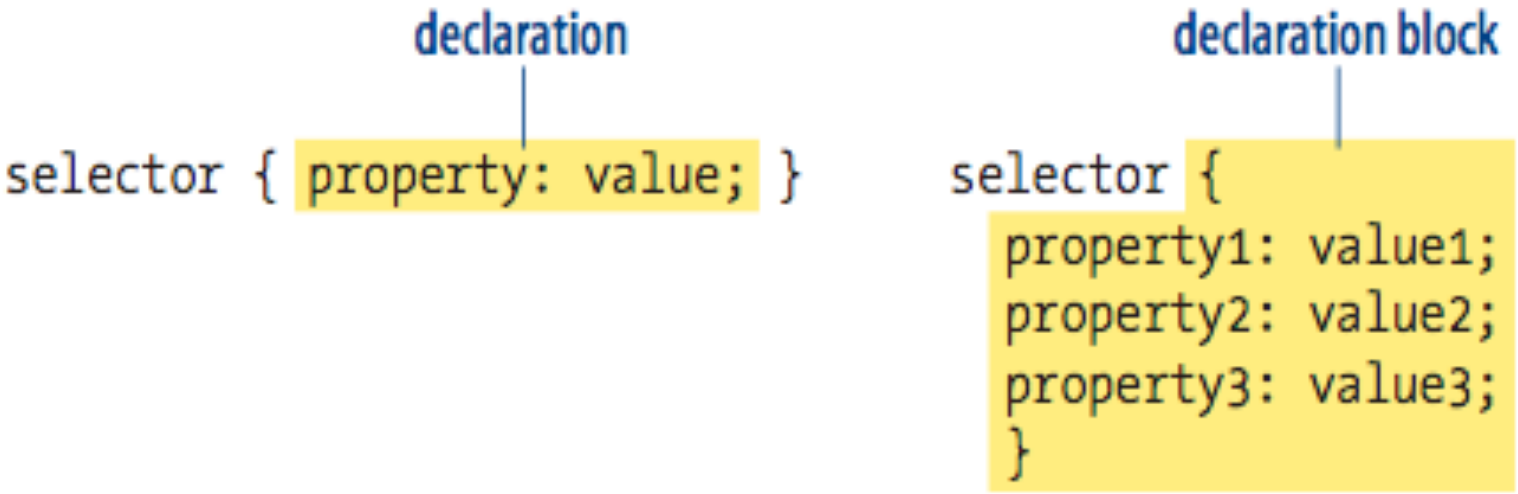
Disadvantages

- **None major**
- **Minor one, some browser inconsistencies, don't expect things to look exactly the same in all browsers. It will be real close but sometimes things will be slightly different.**

CSS INTRO

- **Cascading Style Sheets (CSS)**
- **Made up of selectors and rules that define the visual style of elements**
- **CSS provides the rules to aesthetically style your webpage**
  - Change fonts and the way text looks, colors
  - Width, height, background colors and images
  - Positioning
  - Lines and space between elements
- **Rules cascade**
  - An algorithm defining how to combine properties
  - Ones defined later override or build upon earlier ones
  - More specific ones override earlier ones
  - https://developer.mozilla.org/en-US/docs/Web/CSS/Cascade

ANATOMY OF A CSS RULE



CSS INTRO

- **First Start with well formed HTML markup**
  - After we talk about introductory CSS concepts we will discuss CSS layout and planning your website using mockups to guide you in HTML markup
- **Next determine what style rules need to be written and what elements need to be targeted**
  - CSS rules are targeted with elements, ids, and classes at their most basic form by selectors.
- **Attach your styles to your document in one way**
  - Inline, external, or embedded
- **This in addition to the order you define them will determine some of the specificity**

ADDING CSS TO YOUR PAGE

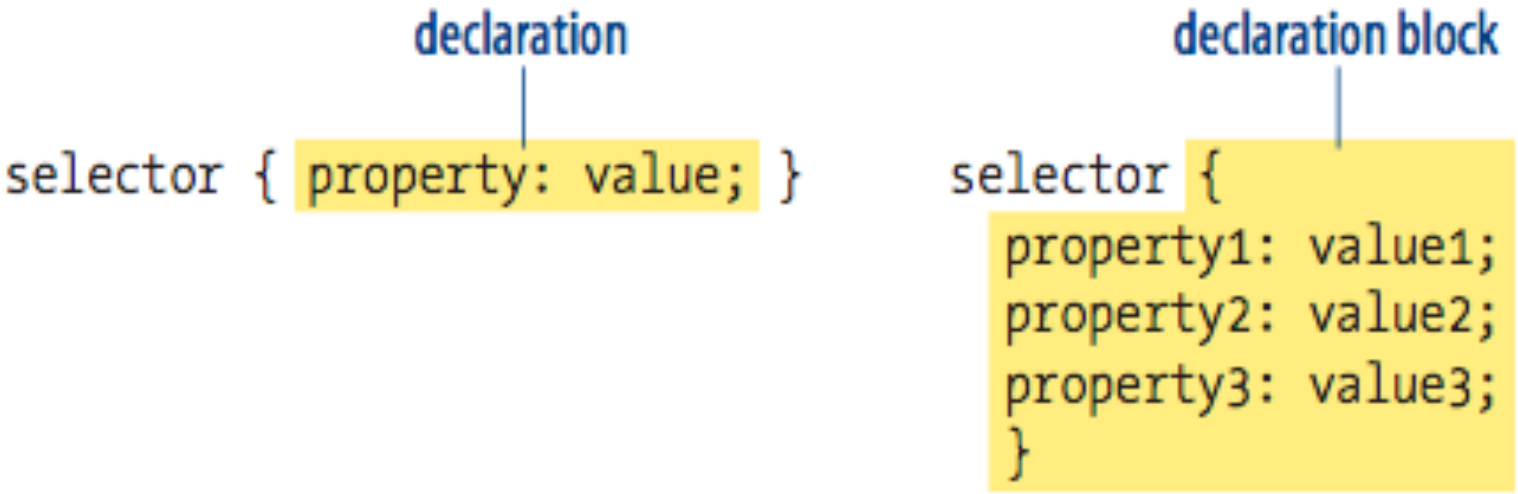
Three main methods

- **External Style Sheet**
  - Text document with a .css extension
  - CSS File is linked to the HTML document in the head section
  - <link rel="stylesheet" type="text/css" href="style.css" />
  - Preferred way, separates presentation in another file
- **Embedded Styles in Page**
  - Styles go in head section between <style></style> tags
- **Inline Styles**
  - Styles go in the element tag in the style attribute
  -

CSS PROPERTIES

- **Different Properties take different value types**
- **Measurement values should have NO SPACE between number and value, 3px not 3 px**
  - %, px, em are the most common but there are more
- **Properties with color values – Common Methods**
  - Hex RGB Hexadecimal values, #34D2FF, #4D2
  - RGB, rgb(red, green, blue), 8bit 0-255, rgb(100,210,255)
  - Predefined Color Names, 147 named colors
  - Other methods supported in modern browsers
    - RGBA, HSL, HSLA – alpha value is a decimal 0 – 1
- **Properties that take a URL need the value to be wrapped in functional notation url()**
- **Reference the course book and api documentation to see what values a given property will accept.**
- **https://developer.mozilla.org/en-US/docs/Web/CSS/Reference**

ANATOMY OF A CSS RULE AGAIN



CSS CONCEPTS

- **Inheritance**
  - Some properties inherit their settings from their parent element
  - Mostly styles that effect text
- **Parents & Children**
  - Elements nested inside other elements are said to be children of that element.
  - The element that a given element is nested inside is its parent.
- **It is very important that you understand the way your HTML is structured and how each of your elements are nested within each other to be successful writing complex CSS rules.**

CSS CASCADE & SPECIFICITY

- **Style passes down (cascades) until a rule with more weight overrides a previous style**
- **First goes by style sheet hierarchy**
- **Then goes by order defined in the style sheets**
- **If there is a conflict it resolves with a point system**
  - Creators developed a point system
  - inline is 1000, id is 100, class is 10, element is 1
- **See Charts on next two slides**
- https://developer.mozilla.org/en-US/docs/Web/CSS/Cascade
- https://developer.mozilla.org/en-US/docs/Web/CSS/Specificity
- http://css-tricks.com/specifics-on-css-specificity/
- http://www.smashingmagazine.com/2007/07/27/css-specificity-things-you-should-know/
- http://code.tutsplus.com/tutorials/quick-tip-understanding-css-specificity--net-10963

CSS SPECIFICITY

CSS Selector Specificity - *Cheat Sheet*

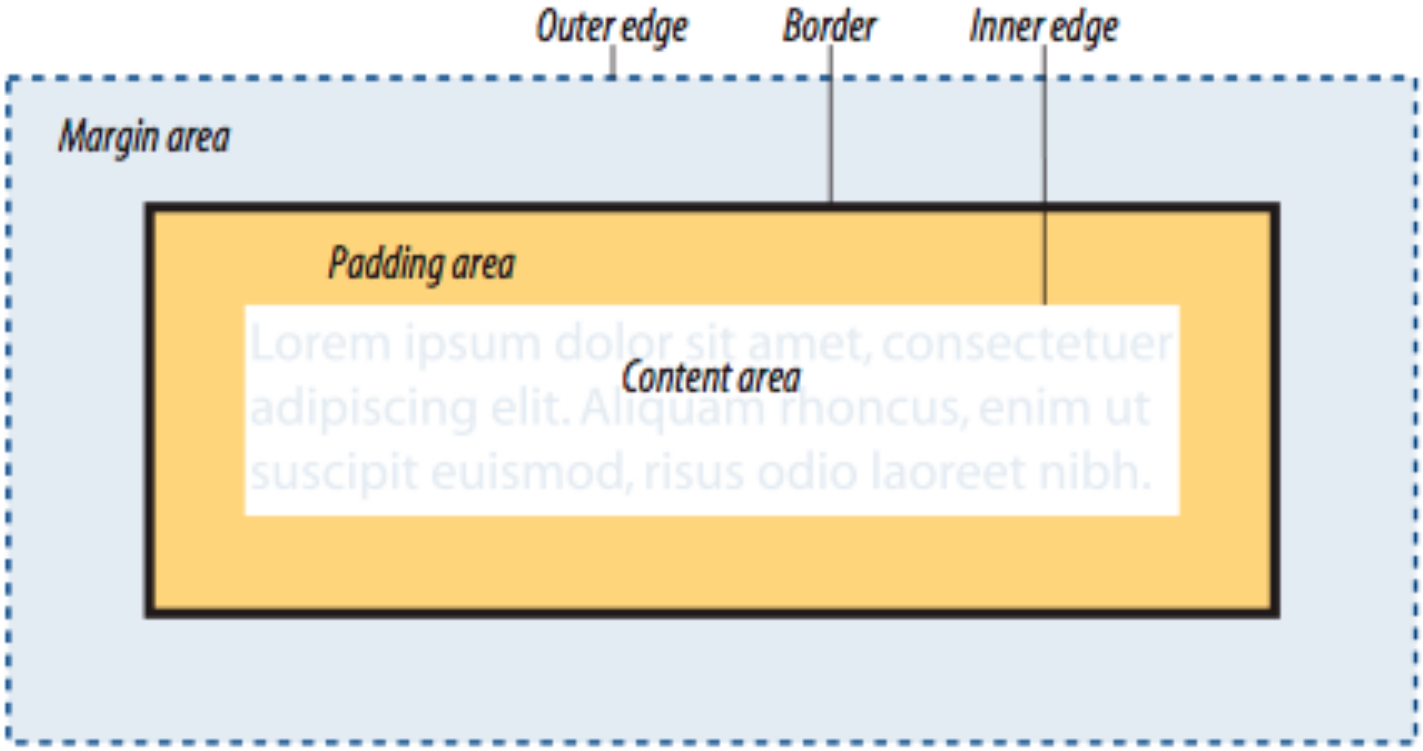
	*	id	classes	elements	**result***
	a	b	c	d	
li	0	0	0	1	1
.lorem	0	0	10	0	10
#ipsum	0	100	0	0	100
style = " "	1000	0	0	0	1000
ul li	0	0	0	2	2
ul ol + li	0	0	0	3	3
ul ol li.red	0	0	10	3	13
li:first-line	0	0	0	2	2
#ipsum li	0	100	0	1	101
a:link	0	0	10	1	11

Legend:

a=1000	style = " "	**Bigger* is more specific*
b=100	ID attributes	
c=10	Classes and pseudo-classes	
d=1	Elements and pseudo-elements	

CSS BOX MODEL

The Browser sees every element, block or inline, as a little rectangular box



CSS BOX MODEL

Standard CSS Box Model

- **This is the standard way the box model is calculated.**
- **CSS *box-sizing* property is:**
  - Not set
  - Set to content-box
- **Width of an element on screen is:**
  - *width* + *padding* + *border*
  - *width* property sets content area width
  - You must account for padding and borders when setting the width to get the exact size you want.
- **Supported in CSS 1**
- **https://developer.mozilla.org/en-US/docs/Web/CSS/box_model**
- **http://css-tricks.com/the-css-box-model/**

CSS BOX MODEL

New Border Box CSS Box Model

- **This is the new way the box model can be calculated.**
- **CSS *box-sizing* property is:**
  - Set to border-box
- **Width of an element on screen is:**
  - Whatever you set the width property to.
  - The browser will take the width of the padding and border out of the content area so your final box is the size you set.
- **CSS 3 Property that has fairly good browser support**
  - http://caniuse.com/#feat=css3-boxsizing
  - Even back to IE8
- **http://www.paulirish.com/2012/box-sizing-border-box-ftw/**
- **https://developer.mozilla.org/en-US/docs/Web/CSS/box-sizing**
- **http://css-tricks.com/box-sizing/**

CSS IN OUR BOOK

- Ch12 Text Styles
- Ch13 Colors
- Ch14 Box Model

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READINGS AND ASSIGNMENTS

READING & ASSIGNMENTS

Book

- **Start reading Part III, CSS. Try to get through Chapter 13.**

Assignment

- **Lab 4. All details are posted in blackboard. Due Feb 21 by 11:59pm Chicago Time**
- **Same due date as Lab 3. This is an easy one so there shouldn't be any problems.**