

CMSC335

Web Application Development with JavaScript



CSSII

Department of Computer Science

University of MD, College Park

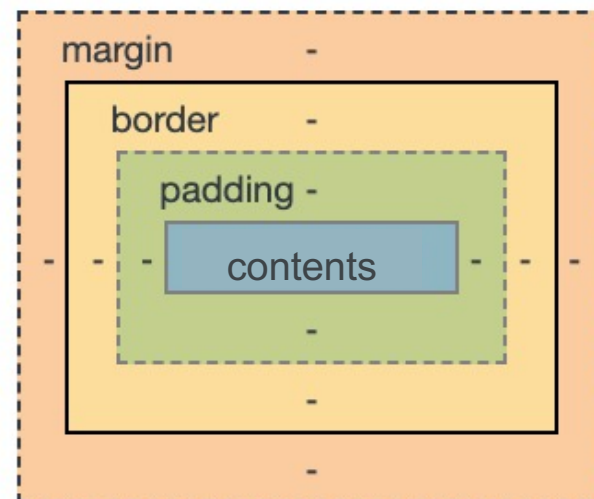
Slides material developed by Ilchul Yoon, Nelson Padua-Perez

Lorem Ipsum

- Lorem ipsum – place holder text that serves to fill a space without actually saying anything
- Main reason for its use is so people don't focus on the text
- It is rooted in Latin
- Comes from sections 1.10.32 and 1.10.33 of "de Finibus Bonorum et Malorum" (The Extremes of Good and Evil) by Cicero
- Reference: <https://www.lipsum.com/>
 - You can generate lorem ipsum lists, paragraphs, etc. using previous site
- Use `<html lang="zxx">`

Box Model

- CSS box model:
 - Box around an HTML element with the following components: margin, border, padding, content
- Allow us to define space between different elements
- Four sections can be identified:
 - **Contents**: what lies in the middle of the box (text, image, etc.)
 - **Padding**: surrounds the content
 - **Border**: surrounds the padding and represents the box border
 - **Margin**: surrounds the border



Box Model (Padding/Margin)

- You can adjust individual padding/margin properties by using:
 - padding-bottom, padding-left, padding-top, padding-right
 - margin-bottom, margin-left, margin-top, margin-right
- The margins, borders, paddings, and background properties of block elements (e.g., body, p, etc.) are not passed to their child block-level elements
 - i.e., not inherited
- **Example:** BoxModel.html, BoxModel.css

Shorthand Property

- Groups the definition of common properties acting on the same theme
 - We want to avoid repeated writing of similar style property names
- Allows you to specify several properties by using only one
 - If you don't specify, one of the properties a default value will be used
- Commonly used shorthand properties
 - background
 - font
 - list-style
 - margin
 - border
 - Padding
- **Example:** ShorthandProperties.html, ShorthandProperties.css

Background properties

- **background-color** - color
- **background-image** - location (url) of image
- **background-repeat** - how image repeats
 - Possible values for repetition
 - » no-repeat - one instance of the image
 - » repeat - tile
 - » repeat-y - repeats on the y-axis
 - » repeat-x - repeats on the x-axis
- **background-attachment** -
 - Indicates attachment of the image to the containing element
 - Possible values are:
 - » **scroll**: default value
 - » **fixed**: image will stay stationary as the scrolling takes place

Background (cont.)

- **background-position**
 - Possible values (some combinations are valid)
 - » top, bottom, center, left, right
- **background-size**
 - Possible values
 - » auto auto - retains the original size
 - » 000px 000px
 - » x% y%
 - » contain | cover | ...
- Background images can be used in elements other than body (e.g., div)
- There is a shorthand property for backgrounds
 - **background: lightblue url("campusBldg.jpg") no-repeat fixed center;**
- **Examples:** Background.html, Background.css,
BackgroundStretch.html, BackgroundStretch.css

Responsive Design with Media Queries

- **What is a Media Query?**

- Media query is a CSS technique introduced in CSS3
- Uses the **@media** rule to include a block of CSS rule only if a certain condition is true

- **Example:**

```
@media only screen and (max-width: 600px) {  
  body {  
    background-color: lightblue;  
  }  
}
```

- Sets the background color only if the browser window is 600px or smaller

- **Reference:**

- https://www.w3schools.com/css/css_rwd_mediaqueries.asp

- **Example:** MediaQuery.html, MediaQuery.css

Generic Font Families

- **serif**
 - Line or stroke added to letter or symbol –
 - **Examples:** Times New Roman, Georgia
- **sans-serif**
 - No serif
 - **Examples:** Verdana, Arial
- **monospace** –
 - **Example:** Courier New, Consolas
- **cursive** - *Lucida Handwriting*
- **Fantasy** - Comic Sans MS, ...
- See the effect using the **Background.html** example

Options for Choosing Fonts

- Specify a particular font
 - **font-family: arial;**
 - Works if the font is available on user's machine
- Specify a generic family
 - **font-family: serif;**
 - Choices include: serif, sans-serif, monospace, cursive, fantasy
- Specify a list of fonts
 - Will be attempted in order
 - **font-family: foobar, arial, sans-serif;**

Using Google Fonts

- Google supports a set of nice fonts anyone can link in HTML docs
- <https://fonts.google.com/>
- Choose fonts and put a link in HTML
- Use the fonts with “font-family” CSS property
- **Example:** GoogleFont.html, GoogleFont.css

Wrap-up

- After this class, students should be able to:
 - Explain CSS box model and use padding, margin, and border for HTML elements
 - Use shorthand properties (e.g., border instead of border-width, border-style, etc)
 - Use CSS properties related to background setting
 - Use different fonts (or font-families) for HTML documents
 - Know how to include and use Google font in HTML documents