

Csci 4131 Internet Programming
Spring 2024
Lecture 4
January 29th

Instructor: Dr. Dan Challou

Logistics – Csci 4131 Lecture 4, January 29th

- Last day to submit HW 1 – with Late Penalty is Tomorrow
- HW Programming Assignment 2 out, available in week 3 module on the Homepage of the class Canvas site (and in the assignments section). Due Saturday 2/13 at 11:59pm
- ***Weekly readings and exercises are in your zybook*** and additional readings, tutorials, programming homework due dates and exam dates are in item:
 - **Course Schedule: Weekly Class Readings and Tutorials, Exam Dates, and Programming Assignment Due Dates** in the Resources Module at the top of the Home Page on the class Canvas site

Currently working on the following zyBooks assignments, but feel free to work/read ahead!!!

HW1, HW2 Prep (Optional, Bonus) – Due 2/1

HW2 Prep, Part 1 (Optional, Bonus) – Due 2/3

HW2 Prep, Part 2 (Optional, Bonus) – Due 2/7

Zybooks Homework 3 (Required) - Due 2/4

Suggested (Optional): www.w3schools.com –

CSS Tutorial, JavaScript Tutorials:

<https://www.w3schools.com/css/default.asp>

<http://www.w3schools.com/js/>

Optional Reading, Sebesta Chapters 3,4

Questions?

Agenda

- Last Time:
 - Lists
 - Tables
 - Introduction to Forms
 - HTML input tag
 - URL Overview, HTTP Get and Post methods
 - Introduction to CSS
- Today:
 - Forms revisited – HTTP GET and POST
 - CSS revisited
 - Into to the DOM?

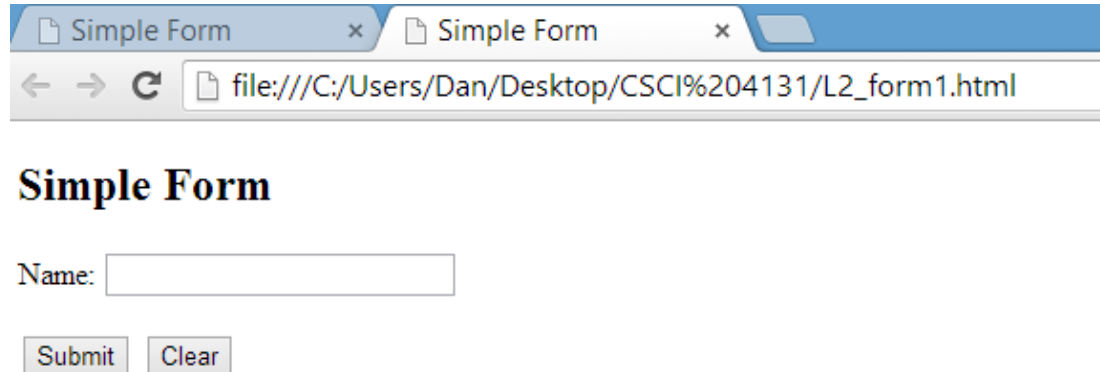
Recall, from last lecture (and homework exercises and tutorials) HTML Forms

- HTML5 provides **forms** for collecting information from users
- HTML forms enable you to do some syntactic validation on the client side before sending the information collected from the user to the server side (your zybook, and <http://www.w3schools.com/> for more details)
- A form typically has a collection of input fields that can be submitted for further processing

Recall, Input Types

- A form is typically used to gather input from users.
- HTML 5 provides many different types of input tags for gathering the data from the user
 - https://www.w3schools.com/tags/tag_input.asp
- When a user submits a form (usually by clicking on the Submit button – implemented by a Submit input tag), the browser gathers the data entered into the form, packages it into an HTTP request method (either a GET or POST) and send the message it off to its destination (specified in the action field)

Review Lecture 3, Exercise 1 – Add an email input type and URL input type to the Simple Form



The screenshot shows a web browser with two tabs, both titled 'Simple Form'. The address bar displays the file path: `file:///C:/Users/Dan/Desktop/CSCI%204131/L2_form1.html`. Below the browser window, the form is titled 'Simple Form' in a bold serif font. It contains a text input field labeled 'Name:'. Below the input field are two buttons: 'Submit' and 'Clear'.

Add an email input type, and a URL input type to the Simple Form above.

An answer: [L3 Exercise3 Ans](#)

and lets take a look at actions with the GET and POST methods

Questions?

One more thing to note about forms...

Hidden Fields

- A form with hidden fields

On To Style

Hopefully, you have a good handle on the basics of structuring a web page) !

On to the second of the 4 components of a Web Page:

1. Structure (HTML)
2. **Style (Cascading Style Sheets- (CSS))**
3. Behavior (JavaScript – to change – e.g. - add, delete, update web page structure, style)
4. DOM (the data structure behind each web page)

Methods for Adding Style (CSS) to HTML 5 documents

- **Inline** – applied via the HTML style attribute to a particular element
- **Embedded** – use HTML style tag:
`<style> </style>` in the `<head>` section of the HTML document. Define styles for particular elements, and classes that can be applied to elements in between the style start and end tag
- **Separate File (External Style File)** that is included in HTML (separates structure and content from presentation)
Use the HTML `<link>` tag to include a style file

CSS Inline

- The style attribute
- `<p style ="font-size:32px;color:red;text-align:center"> Here is a paragraph
 with a line break </p>`

[css inline ex.html](#)

Embedded CSS using HTML Style Tag

https://www.w3schools.com/html/html_css.asp

Source: http://www.w3schools.com/tags/tag_style.asp

Including the CSS properties from an External StyleSheet

```
<head>
```

```
<link rel="stylesheet" type="text/css" href="style.css">
```

```
</head>
```


What can you style with CSS???

- Virtually any HTML element, and any property
 - Font
 - Visibility
 - Font-size
 - Color
 - Background
 - Add animation
 - Reaction to events
- And, the box that wraps around every HTML element (margin, border, padding, content)
 - https://www.w3schools.com/css/css_boxmodel.asp

Units of measure for a Webpage

- <https://www.w3.org/Style/Examples/007/units.en.html>
- https://www.w3schools.com/cssref/css_units.asp

Units of Measure - Example

- [measure_ex.html](#)

CSS Rule Sets That Select by Element, Type, Id, and Class

`/* Element Type ID and Class Selector Examples */`

`/* All Elements */`

`* {margin: .5em; 1em;}`

`/*Elements by Type */`

`h1{ font-family: Arial, sans-serif, serif;}`

`/*One Element by ID */`

`#main{`

`border: 2px solid red;`

`padding: 1em;`

`}`

`/* Elements by Class */`

`.blue {color: blue;}`

`.right {text-align: right;}`

Example

```
<head>
  <meta charset = "utf-8">
  <title>Element Type ID and Class</title>

  <!-- this begins the style sheet section -->
  <link rel="stylesheet" type="text/css" href="mystyle4.css">

</head>
<body>
  <header>
    <h1> This Week At The University of Minnesota</h1>
  </header>

  <section id="main">
    <h1>Events</h1>

    <p class="blue">Music, Sports, and lots more, just check the event calendars!
    </p>

    <p class="blue right">
      There is another week of classes...
    </p>
  </section>
</body>
```

Can code multiple selectors in your embedded css or external style file

```
h2 {color: green;}
```

```
/* Multiple Selectors */  
h3,h4 { color: maroon;}
```

```
/* All elements with href attributes */  
*[href] { font-size: 95%;}
```

```
/* All <a> elements with href attributes */  
a[href] {font-family: Arial, sans-serif;}
```

```
<!DOCTYPE html>
<!-- External style sheets. -->
<html>
  <head>
    <meta charset = "utf-8">
    <title>Multiple Selectors</title>
    <!-- this begins the style sheet section -->
    <link rel="stylesheet" type="text/css" href="mystyle5.css">
  </head>
  <body>
    <header>
      <h1> This Week At The University of Minnesota</h1>
    </header>

    <section id="main">
      <h1>Events</h1>
      <p class="blue">Music, Sports, and lots more, just check the event calendars!
      </p>
      <p class="blue right">
        There are another 12 weeks of classes...
      </p>
    </section>
    <h2> Here are some examples of multiple selectors, etc. </h2>
    <h3> The quick brown fox </h3>
    <h4> jumped over the lazy dog </h4>
    <a href = "http://www.google.com">Click here for Google</a>

  </body>
</html>
```

[Multiple selectors_ex.html](#)

A CSS File for Styling the BOX

`/* A CSS Style file for formatting "the box" around some block elements */`

```
body {
```

```
  border: 3px dotted black;  
  margin: 10px;  
}
```

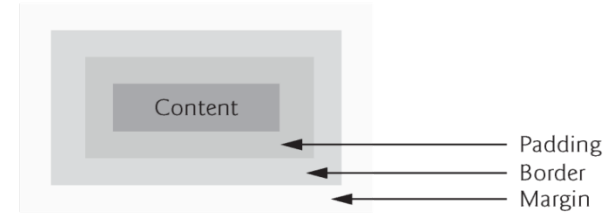


Fig. 4.13 | Box model for block-level elements.

```
section{
```

```
  border: 2px solid black;  
  width: 500px;  
  margin: 20px;           /* all four sides */  
  padding: 10px; /* all four sides */  
}
```

```
h1,p {
```

```
  border: 1px dashed black;  
  padding: 10px;  
}
```

```
h1{
```

```
  margin: .5em 0 .25em; /* .5em top, 0 right and left, .25em bottom */  
  padding-left: 15px;
```

```
}
```

```
p{
```

```
  margin: 0; /* all four sides */  
  padding-left: 15px;
```

```
}
```

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HTML File That Uses our CSS Block Element Style File

```
<!DOCTYPE html>

<!-- Box Model Example -->
<html>
  <head>
    <meta charset = "utf-8">
    <title>Box Model Example</title>

    <!-- this begins the style sheet section -->
    <link rel="stylesheet" type="text/css" href="mystyle8.css">

  </head>
  <body>
    <section>
      <h1>The University of Minnesota</h1>
      <p>Educating the Leaders of Tomorrow for over 100 years.
        There is always something happening at the U!</p>
    </section>

  </body>
</html>
```

[Box example](#)

Drawbacks of our Approach?

- Not Responsive Web Design
 - https://www.w3schools.com/html/html_responsive.asp

NO EXERCISE TODAY!!!

- Do not submit anything for the Lecture 4 exercise

Next time

- CSS Revisited
- Introduction to:
 - The DOM
 - JavaScript
 - Event Handling