

# Intro to HTML / CSS

Rachel Starry

Ursinus College, Tech Play Day

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# What is HTML?

- \* HTML = **H**yper **T**ext **M**arkup **L**anguage
- \* HTML is the standard language for creating web pages.

HTML Version	Year
HTML	1991
HTML 2.0	1995
HTML 3.2	1997
HTML 4.01	1999
HTML5	2014

# Hyper Text Markup Language

- \* “HyperText” uses hyperlinks: these allow you to jump around in a text, permitting non-linear reading.
- \* Linear reading (novels) vs. non-linear reading (web pages)

Main page  
Contents  
Featured content  
Current events  
Random article  
Donate to Wikipedia  
Wikipedia store

Interaction

Help  
About Wikipedia  
Community portal  
Recent changes  
Contact page

Tools

What links here  
Related changes  
Upload file  
Special pages  
Permanent link  
Page information  
Wikidata item  
Cite this page

Print/export

Create a book  
Download as PDF  
Printable version

In other projects

Wikimedia Commons

Languages

تۆرکجه  
Français  
日本語

Edit links

**Ursinus College** is a private, independent, coeducational, liberal arts college located in Collegeville, Pennsylvania.

Founded in 1869, Ursinus sits on a 170-acre campus approximately 25 miles from Center City Philadelphia. Ursinus is one of the eleven Centennial Conference schools, a Phi Beta Kappa college, and is a member of the Thomas J. Watson Fellowship list, Project Pericles, Project DEEP, the Bonner Leader Program, and the Annapolis Group. The college is also home to the Philip and Muriel Berman Museum of Art.<sup>[5]</sup>

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**History** [ edit ]

**19th Century** [ edit ]

1867: Members of the German Reformed Church begin plans to establish a college where "young men could be liberally educated under the benign influence of Christianity." These founders were hoping to establish an alternative to the seminary at Mercersburg, Pennsylvania, a school they believed was increasingly heretical to traditional Reformed faith.

1869: The college is granted a charter by the Legislature of Pennsylvania to begin operations in its current location on the grounds of Todd's School (founded 1832) and the adjacent Freeland Seminary (founded 1848). Dr. John Henry Augustus Bomberger, for whom the campus' signature Romanesque building is named (see *Gallery*, below), is its first president until his death in 1890. Bomberger proposed naming the college after Zacharias Ursinus, a 16th-century German theologian and an

**Ursinus College**



**Collegeville** is a borough in Montgomery County, Pennsylvania, a suburb of Philadelphia on the Perkiomen Creek. Collegeville was incorporated in 1896. It is the location of Ursinus College, opened in 1869. The population was 5,089 at the 2010 ce



<b>Location</b>	<span>Collegeville, PA, USA</span> <div><div><div><span></span><div><div><span><span></span></span></div><div><div>40.1934°N 75.4559°W</div></div></div></div><div></div></div></div>
<b>Campus</b>	Suburban 170 acres (0.69 <span> </span> km <sup>2</sup> ) <sup>[3]</sup>
<b>Colors</b>	Red, Old Gold, and Black <sup>[4]</sup> <div><span><span> </span></span><span><span> </span></span><span><span> </span></span></div>
<b>Athletics</b>	25 Varsity Teams <sup>[2]</sup> <div>Centennial Conference</div> NCAA Division III
<b>Nickname</b>	Ursinus Bears
<b>Website</b>	<span>Official website</span> <span><span></span></span>

# Hyper Text Markup Language

- \* Your web browser interprets HTML documents to render text, images, etc. into multi-media web pages, using markup syntax.
- \* Markup allows you to include metadata (data about data) in your document.

# Hyper Text Markup Language

- \* Markup documents use **tags** to define elements within a text, and to give those elements special attributes.
- \* In HTML documents, opening and closing tags turn elements and attributes on and off.

this...                      <b>HELLO WORLD!</b>

displays like this...    **HELLO WORLD!**

# HTML Markup Tags

## \* Tags for document definition and organization.

<code>&lt;!DOCTYPE html&gt;</code>	tells the browser it will be reading an HTML file
<code>&lt;html&gt;&lt;/html&gt;</code>	turns HTML on and off
<code>&lt;head&gt;&lt;/head&gt;</code>	defines the section of the document that contains metadata (data about data)
<code>&lt;title&gt;&lt;/title&gt;</code>	use in the “HEAD” section to define the title of the document
<code>&lt;body&gt;&lt;/body&gt;</code>	defines the section of the document with visible text/media content
<code>&lt;p&gt;&lt;/p&gt;</code>	defines individual paragraphs within the “BODY” section

# Your First HTML Document

Choose your favorite text editor or try this one: [www.sublimetext.com](http://www.sublimetext.com)

```
<!DOCTYPE html>
<html>
  <head>
    <title>My first HTML page</title>
  </head>
  <body>
    <p>This is where we put content.</p>
  </body>
</html>
```



# More HTML Markup Tags

- \* Tags for text formatting and headings.

<code>&lt;b&gt;text&lt;/b&gt;</code>	turns on/off bolding
<code>&lt;i&gt;text&lt;/i&gt;</code>	turns on/off italics
<code>&lt;h1&gt;text&lt;/h1&gt;</code>	Heading level 1
<code>&lt;h2&gt;text&lt;/h2&gt;</code>	Heading level 2
...	...
<code>&lt;h6&gt;text&lt;/h6&gt;</code>	Heading level 6

- \* **TASK:** Add a heading (H1) to the body of your document. Then add two sentences to your paragraph tag: bold the first sentence and italicize the second sentence.

# HTML Tags with Attributes

- \* Two important tags that require attributes:
  - \* `<a></a>` -- (anchor) defines hyperlinks  
Example: `<a href="www.google.com">Click here.</a>`
  - \* `<img>` -- inserts an image; does not have a closing tag!  
Example: ``
- \* **TASK:** Add a new paragraph to the body of your document. To this add a sentence with a hyperlink to any website, followed by an image from <https://commons.wikimedia.org>. (Access an image's URL by right-clicking and selecting "Copy image address," then paste the URL into your HTML document.)

# Hyperlinks & Images

- \* Both hyperlink and image tags can be expanded with additional attributes.

```
<a href="www.google.com" title="Description of link">Click here.</a>
```

```

```

- \* **TASK:** Add a title to your hyperlink and one or more size attributes to your image. How does your image change when you define one or more size attributes? What might be a drawback of using these?
- \* **Bonus:** Images can be wrapped in anchor tags, just like text! Try adding an 'alt' attribute to your image and wrapping it in `<a>...</a>`. What happens when you hover over the image now?

# Tables in HTML

```
<table align="center" border="1" cellpadding="0">  
(header row) { <tr>  
                  <th>Column A</th>  
                  <th>Column B</th>  
                  <th>Column C</th>  
                </tr>  
(row 1) { <tr>  
            <td>Cell 1</td>  
            <td>Cell 2</td>  
            <td>Cell 3</td>  
          </tr>  
(row 2) { <tr>  
            <td>Cell 4</td>  
            <td>Cell 5</td>  
            <td>Cell 6</td>  
          </tr>  
</table>
```

Column A	Column B	Column C
Cell 1	Cell 2	Cell 3
Cell 4	Cell 5	Cell 6

# Tables in HTML

- \* **TASK:** Try to replicate the table below. Hint: play around with the attribute values to see how they change the appearance and layout of the table! Make sure to save your .html file when you've finished.

Column A	Column B	Column C	Column D	Column E
Cell 1	Cell 2	Cell 3	Cell 4	Cell 5
Cell 6	Cell 7	Cell 8	Cell 9	Cell 10
Cell 11	Cell 12	Cell 13	Cell 14	Cell 15

Required table elements:

```
<table align="..." border="..." cellpadding="..."></table>
```

```
<tr></tr>
```

```
<th></th>
```

```
<td></td>
```

# Quick Intro to CSS

- \* CSS = **C**ascading **S**tyle **S**heets
- \* While HTML describes ***what*** elements to render on a web page, CSS determines ***how*** those elements appear – often called the “look and feel” of a page.

CSS Version	Year
CSS	1994
CSS2	1998
CSS3	1999

# Interactive Sandbox

- \* For an interactive HTML/CSS sandbox, go to <https://codepen.io> and select “Create -> New Pen”
- \* The CodePen sandbox allows you to experiment with HTML code and stand-alone CSS side-by-side. Make sure to save your work!

# 3 Ways to Use CSS

- \* Inline: by using the style attribute within individual HTML elements
- \* Internal: by using a `<style>` element in the `<head>` section of your document
- \* External: by using an external `.css` file



# Inline CSS

## \* Inline:

`<h1 style="color:blue;">This is a blue heading.</h1>`

↑  
↑      ↑  
(property) (value)  
↑  
(style attribute within the opening tag of an element)

# Internal CSS

```
<!DOCTYPE html>      (selector)  (declaration block = "property: value;")
<html>
  <head>
    <style>
      body      {background-color: lightblue;}
      h1        {color: white; font-size: 20px;}
      p         {color: black;}
    </style>
  </head>
  <body>
    <h1>This is a heading.</h1>
    <p>This is a paragraph.</p>
  </body>
</html>
```

# External CSS

- \* Recommended method: allows you to change the appearance of an entire web site by changing a single file. Include the following in the head section of your HTML document:

```
<head>  
    <link rel="stylesheet" href="styles.css">  
</head>
```

- \* Demo: [https://www.w3schools.com/css/css\\_intro.asp](https://www.w3schools.com/css/css_intro.asp)

# Example styles.css

(selector)



(declaration block)



```
body {  
    background-color: lightblue;  
}  
  
h1 {  
    color: white;  
    font-size: 20px;  
}  
  
p {  
    color: black;  
}
```

# Types of CSS Selectors

- \* 1. The element selector.
- \* Selects elements based on the element name – here all <p> elements will be center-aligned and red:

HTML

[ <p>This is a paragraph.</p>

CSS

[ p {text-align: center; color: red;}

# Types of CSS Selectors

- \* 2. The id selector. Syntax = hash (#) + unique id
- \* Selects elements based on a unique element id – here only the text in the element with the id “paragraph2” will be center-aligned and red:

HTML

[ <p id=“paragraph2”>This is a paragraph.</p>

CSS

[ #paragraph2 {text-align: center; color: red;}

# Types of CSS Selectors

- \* 3. The class selector. Syntax = period (.) + name of class
- \* Selects elements based on their class – here all text with the assigned class “city” will be center-aligned and red (regardless of what element type it is):

HTML

```
<h2 class="city">London</h2>  
<p>London is the capital of England.</p>  
  
<h2>Paris</h2>  
<p class="city">Paris is the capital of France.</p>
```

CSS

```
.city {text-align: center; color: red;}
```

# Types of CSS Selectors

- \* 3b. The class selector can specify that only certain HTML elements should be affected by a class style. Here only paragraphs of class “city” will be affected.

HTML

```
<h2 class="city">London</h2>  
<p>London is the capital of England.</p>  
  
<h2>Paris</h2>  
<p class="city">Paris is the capital of France.</p>
```

CSS

```
p.city {text-align: center; color: red;}
```



# Final Task

- \* Task: Copy the HTML table you created earlier into CodePen. Using CSS, can you replicate the table below?
- \* Hints: You can create classes for each style of cell. You can specify the text color with the “color” property and the cell color with the “background-color” property.

	A	B	C	D	E
1	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5
2	Cell 6	Cell 7	Cell 8	Cell 9	Cell 10
3	Cell 11	Cell 12	Cell 13	Cell 14	Cell 15
4	Cell 16	Cell 17	Cell 18	Cell 19	Cell 20

# Additional Resources

- \* HTML: <https://www.w3schools.com/Html/>
- \* CSS: <https://www.w3schools.com/css/default.asp>