

CSC435: Web Programming

Lecture 2: HTML basics

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Outline

- Introduction & Basic Syntax
- Elements and attributes
- Headings, Text, and Text Formatting
- Links
- Images
- Forms
- Lists
- Tables

What is HTML?

- HTML allows you to describe the content of a website.
 - Headers
 - Paragraphs
 - Images
 - Hyperlinks
- HTML also allows you to specify relationships between elements and group them using classes and div tag.

HTML Syntax

- HTML revolves around tag
- Opening and closing tags

`<tag> content <tag>`

Example:

bold a word

`content`, will bold the word “content”

`<u>text </u>` underline the text

Paragraph tags

`<p> more content </p>`

Defines a paragraph, the browser will automatically create a new line.

HTML basic document structure

```
<!DOCTYPE html>
<html>
<head>
This is Bei's page
</head>
<body>
  <h1 class = "intro">Header1</h1>
  <h2>Header2</h2>
  <h3>Header3</h3>
  <p> This is a paragraph</p>
</body>
</html>
```

Pause: a word on Sublime Text 2

- Tutorial on sublime text 2:

<https://tutsplus.com/lesson/hello-2/>

- Useful keys:

Open new file: **Command + N**

Save file: **Command + S**

The Command Palette: **Shift + Command + P**

Multiple Cursor: Put cursor in the word and **Command + D**

Multiple selection: **Ctrl + Command + G**

Toggle the side bar: **Command + K + B**

Set user settings: **Command + ,** to open up Preference

Instant file changing: Goto Anything: **Command + P**

Basic web page

- Open your text editor and choose Syntax as html, type the following:

```
<!DOCTYPE html>  
<html>  
<body>  
<h1> Write sth here</h1>  
<p> Write something here. </p>  
</body>  
</html>
```

- Save the file as a myfirst.html
- Open my .html file using Firefox browser or any other default browser
- Just click the file

HTML Elements

- Element is a pair of tags and the content between them.
`<p>content </p>` is a paragraph element.
- Elements can have empty content and be closed in start tag.
`
` defines a new line.

HTML Attributes

- HTML elements can have attributes.
- Attributes provide additional information about an element.
- Attribute are always specified in the **start tag**
- Attribute come in name/value pair like:
name="value"
- Example:
I am from <a href="<http://www.american.edu>"> American University in Washington, DC.

Class and Ids

- IDs are unique names that identify elements.
- Classes are names that identify a group of elements.
- Example:
- `<p id="paragraph_1"> ...</p>`
- `<h3 class="small_headings">... </h3>`

Class and Ids: Use JavaScript to modify the HTML element

```
<html>
<head>
<script>
function displayResult()
{
document.getElementById("myHeader").innerHTML="Have a nice day!";
}
</script>
</head>

<body>

<h1 id="myHeader">Hello World!</h1>
<button onclick="displayResult()">Change text</button>

</body>
</html>
```

Style Attributes: redundant with CSS

For quick and dirty:

```
<h1 style="color:blue; text-align:center"> This is a header  
</h1>
```

```
<p style="color:green"> This is a paragraph </p>
```

Use `` to group in-line element in a document.

```
<p>This is a <span style="color:red">red</span>  
balloon</p>
```

Quiz

- What will happen if you forgot the closing tag of `` in the following paragraph:

I am from `` American University in Washington, DC.

Headings and Paragraphs

- Heading tag: h1, h2, h3, h4, h5, h6
- Comments `<!--comments-->`
- Paragraphs `<p>`
- White space ` `
- New lines `
`
- Formatting text, underlined, emphasized, bold, big size, small size, etc.
- For complete information about tags, see http://www.w3schools.com/tags/ref_byfunc.asp

Exercise

Generate a page that looks like the following:

Capital Coffee Beverages

House Blend, \$1.49

A smooth, mild blend of coffees from Mexico, Bolivia and Guatemala.

Mocha Coffee Latte, \$2.35

Espresso, Steamed milk and Cocoa Syrup

Chai Tea Latte

Spicy Masala Chai Syrup and Steamed Milk

Images

- Image tag ``
- Provide a url to the src attribute if the image is online.
- It will automatically look at the image in the same folder as the .html
- Images can also have attributes such as sizes.

```

```


Capital Coffee Beverages

House Blend, \$1.49



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Espresso, Steamed milk and Cocoa Syrup

Chai Tea Latte, \$2.65



Spicy Masala Chai Syrup and Steamed Milk

My trip this summer



Links

- Using `<a>` tag
- Put the URL in the href attribute
`Name of the link`
- Between the `<a>`, it can be anything from texts to images.

Exercise

- Make the following images clickable and bring it to the Wikipedia pages of these three cities. (tip: using `<p>`)

My trip this summer



Quiz

- What will happen if you removing <http://> in the URL you give to the href, For example:
new york times

Answer

- What will happen if you removing <http://> in the URL you give to the href, For example:
`new york times`

It will not link to the page. You need <http://>, HTML assumes anything without `http://` a file.

Divs

- A `<div></div>` tag is use to group HTML documents.
- The `<div>` tag is used to group block-elements to format them with CSS.
- Let's look at a real website and notice how the texts are organized
<http://www.nytimes.com>

Nested Divs

- `<div>` can be nested to organize the content. For each `<div>` one can specify the style of the content.

```
<div style="color:green">
```

```
<p>Write something here.</p>
```

```
<div style="color:red"></div>
```

```
</div>
```


Exercise

- Can you make the following page using nested `<div>`?

My trip this summer

Paris



Berlin



Vienna



Lists

- Lists are nested tags. Close the inner the tags before you close the outer ones.

There are two types of lists: ordered lists and unordered lists.

Unordered list ` `

Ordered list `<ol type="A">`

- <http://mashable.com/> use lists in navigation bar
- <http://culturedcode.com/things/> put lists inside a gigantic div

Tables

- A table is defined with `<table>` tag.
- A table is divided into rows with the `<tr>` tag.
- Each row is divided into data cells with the `<td>` tag, `td` stands for table data.
- `<td>` holds the content of a data cell.
- `<td>` can contain text, images, links, other tables.
- `<th>` defines the header of the table. HTML will create a new column of the table.
- `<table border =“1”>`

Tables with cell padding

Cell padding create space inside a table cell

Exercise

Using <table> tag, create a page like this. Don't forget cell padding.

My trip this summer

Paris



Berlin



Vienna



Useful Tags

- h1,h2, Headings
- p Paragraphs
- ol “Ordered list” (1.2.3., I.II.III., a.b.c.)
- ul “Unordered” list (bullet points)
- li List item, use without ol ur ul
- a “Anchor” tags, used for links
- Img Insert images

Homework & Exercises

Homework will be out by the end of tonight. It is due Monday, 27th.

You should finish the exercise on code academy on HTML basics by next Thursday.

Finish tracks 1-6. Here is a link:

<http://www.codecademy.com/tracks/web>