

Web Workshop

I : Basics

HTML - CSS



ACM AUTH
Student Chapter

You can create your own Web site.

HTML and CSS

HTML describes content

Hyper**T**ext **M**arkup **L**anguage

CSS describes styling

Cascading **S**tyle**S**heets

HTML Tags

HTML tags are keywords surrounded by angle brackets

`<html>`

HTML tags normally come in pairs `` and ``

Start/Opening tags `<date>`

End/Closing tags `</date>`

Element

`<tagname>content</tagname>`

HTML Tag Hierarchy

<a>

 <c>

 </c>

 <d /> SelfClosing tag /* Depends on HTML version */

HTML Tag Attributes

Always specified in the start tag

```
<book id="1" title="Databases">
```

Simplest HTML Editor

Step 1: Start Notepad

Step 2: Type your HTML code into your Notepad

Step 3: Save As .html

Step 4: Run the HTML file in your Browser

Professional HTML Editors

Adobe Dreamweaver

Microsoft Expression Web

CoffeeCup HTML Editor

Open Source

KompoZer

W3C Amaya

Basic Web Page Structure

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta content="text/html; charset=utf-8"
http-equiv="Content-Type">
<title>my first page</title>
</head>
<body>
This is my <strong>first</strong> page.
</body>
</html>
```

Basic HTML Tags

`<!DOCTYPE ...>` so that browser behaves correctly

`<html>` is about the whole web page

`<head>` contains metadata for search engines (except Google)

`<title>` refers to the title

`<body>` contains all content

HTML Comment Tag

```
<!-- These are my comments -->
```

HTML Paragraph

`<p>`This is a paragraph`</p>`

Multiple spaces are ignored.

`
`

Line break without starting a new paragraph

`<hr>`

Creates a horizontal line

`<h1>` to `<h6>`

Headings from the most important to the least

HTML Formatting Tags

``This text is bold``

``This text is strong``

`<i>`This text is italic`</i>`

``This text is emphasized``

All major browsers render strong as bold and em as italics.

HTML Links

```
<a href="http://www.google.com/">Visit Google!</a>
```

href attribute indicates the link's destination and can be:

absolute “<http://www.youtube.com>”

relative “/names”

element id “#names”

HTML Images

```

```

src points to the location where the image is stored.

alt specifies an alternate text for an image, if the image cannot be displayed.

height and width attributes are used to specify the height and width of an image.

HTML Tables

Tables are defined with the `<table>` tag.

A table is divided into rows (with the `<tr>` tag), and each row is divided into data cells (with the `<td>` tag).

A `<td>` tag can contain content.

HTML Tables

lab 1	programming
lab 3	web development

```
<table>
  <tr>
    <td>lab 1</td>
    <td>programming</td>
  </tr>
  <tr>
    <td>lab 3</td>
    <td>web development</td>
  </tr>
</table>
```

HTML Lists

```
<ul>  
<li>Coffee</li>  
<li>Milk</li>  
</ul>
```

Unordered list

List items are marked with bullets.

```
<ol>  
<li>Coffee</li>  
<li>Milk</li>  
</ol>
```

Ordered list

List items are marked with numbers.

HTML Block and Inline Elements

Block level elements normally start (and end) with a new line when displayed in a browser. `<h1>` `<p>` `` `<table>`

Inline elements are normally displayed without starting a new line.
`` `<td>` `<a>` ``

`<div>` is a block level element used as a container for grouping other HTML elements. The browser will display a line break before and after it.

`` is an inline element used as a container for text.

5 min break to catch-up and ask questions

CSS

Styles define how to display HTML elements

Inline

```
<!DOCTYPE html>
<html>
  <body style="background-color:blue;">
  </body>
</html>
```

Internal

```
<head>
  <style type="text/css">
    body {background-color:yellow;}
  </style>
</head>
```

External

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

Simplest CSS Editor

Step 1: Start Notepad

Step 2: Type your CSS code into your Notepad

Step 3: Save As .css

Step 4: Give correct path of CSS file to link href

CSS Example

```
body
{
background-color:yellow;
}
h1
{
color:blue;
text-align:center;
}
p
{
font-family:"Times New Roman";
font-size:20px;
}
```

CSS Syntax

Selector

p

Declaration

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

Property

Value

CSS Comments

```
h1
{
/*This is another comment*/
font-family:arial;
}
```

CSS Id

The id selector is used to specify a style for a single, unique element and is defined with a "#".

This style rule

```
#para1  
{  
color:red;  
}
```

will be applied to the element

```
<p id="para1">some text</p>
```

CSS Class

The class selector is used to specify a style for a group of elements and is defined with a "."

This rule

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

will be applied to all elements with class="center"

while this

```
p.center {text-align:center;}
```

to all p elements with class="center"

CSS Colors

HEX value

"#ff0000"

RGB value

"rgb(255,0,0)"

a color name

"red"

CSS Size

with pixels

30px

with em

2.5em (1em=16px)

relative (percent)

50%

CSS Background

```
background-color:black;
```

```
background-image:url('art.gif');
```

```
background-repeat:no-repeat;  
repeat/repeat-x/repeat-y/no-repeat/inherit
```

```
background-position:right top;  
left/center/right top/center/bottom
```

```
background:black url('art.gif') no-repeat right top;
```

CSS Text

`color:#00ff00;`

`text-align:right;`

`left/right/center/justify/inherit`

`text-decoration:none;`

`none/underline/overline/line-through/inherit`

`text-transform:lowercase;`

`none/capitalize/uppercase/lowercase/inherit`

`text-indent:50px;`

CSS Font

```
font-family:"Times New Roman", serif;
```

```
font-style:italic;
```

```
normal/italic/oblique/inherit
```

```
font-size:40px;
```

```
font:italic 12px Georgia, serif;
```


CSS Styling Links

a normal, unvisited link

```
a:link {...}
```

a link the user has visited

```
a:visited {...}
```

a link when the user mouses over it

```
a:hover {...} /* must come after a:link and a:visited */
```

a link the moment it is clicked

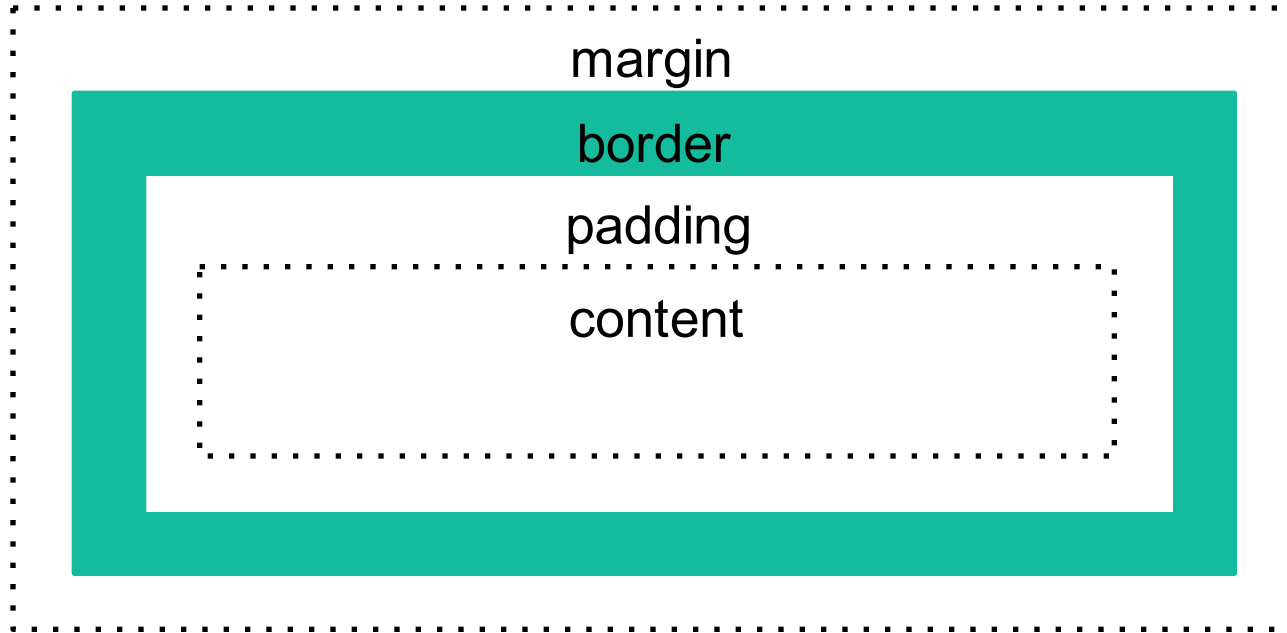
```
a:active {...} /* must come after a:hover */
```

CSS Width and Height

```
width:30%;  
max-width:300px;  
min-width:100px;
```

```
height:150px;  
max-height:300px;  
min-height:100px;
```

CSS Box Model



CSS Margin

Margin clears an area around the border.

```
margin-top:100px;
```

```
margin-bottom:100px;
```

```
margin-right:50px;
```

```
margin-left:50px;
```

or

```
margin:25px 50px 75px 100px;
```

```
margin:top right bottom left
```

```
margin:25px 50px 75px;
```

```
margin:top right+left bottom
```

```
margin:25px 50px;
```

```
margin: top+bottom right+left
```

```
margin:25px;
```

```
all four margins are 25px
```

CSS Border

A border that goes around the padding and content.

```
border-style:solid;  
none/dotted/dashed/solid/double/groove/  
ridge/inset/outset
```

```
border-width:5px;
```

```
border-color:#98bf21;
```

```
border:5px solid red;
```

```
border-top-style:dotted;  
border-right-style:solid;  
border-bottom-style:dotted;  
border-left-style:solid;
```

```
border-style:dotted solid double dashed;  
border-style:top right bottom left
```

```
border-style:dotted solid double;  
border-style:top right+left bottom
```

```
border-style:dotted solid;  
border-style: top+bottom right+left
```

```
border-style:dotted;  
all four borders are dotted
```

CSS Padding

Padding clears an area around the content (inside the border) of an element.

```
padding-top:100px;
```

```
padding-bottom:100px;
```

```
padding-right:50px;
```

```
padding-left:50px;
```

or

```
padding:25px 50px 75px 100px;
```

```
padding:top right bottom left
```

```
padding:25px 50px 75px;
```

```
padding:top right+left bottom
```

```
padding:25px 50px;
```

```
padding: top+bottom right+left
```

```
padding:25px;
```

```
all four paddings are 25px
```

CSS Position and Overflow

Position specifies the type of positioning for an element.

`position:fixed;`

`absolute/fixed/relative/static/inherit`

Overflow specifies what happens if content overflows an element's box.

`overflow:scroll;`

`auto/hidden/scroll/visible/inherit`

CSS Display and Visibility

`display:none` hides an element and it will not take up any space. The element will be hidden and the page will be displayed as if the element is not there.

```
h1.hidden {display:none;}
```

`visibility:hidden` hides an element, but it will still take up the same space as before. The element will be hidden, but still affect the layout.

```
h1.hidden {visibility:hidden;}
```


CSS Grouping

```
h1{color:green;}
```

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

```
p{color:green;}
```

can change to

```
h1,h2,p{color:green;}
```

CSS Nesting

This rule

```
.marked
```

```
{background-color:red;}
```

will be applied to all elements with class="marked".

This rule

```
.marked p
```

```
{color:white;}
```

will be applied to p elements within elements with class="marked".

Thank you!