

`<html>` and CSS

an Introduction

HyperText Markup Language

The problem: using only text characters, how do we add formatting, e.g. emphasis?

This class is an Introduction to HTML and CSS.

HyperText Markup Language

Using all caps?

This class is an INTRODUCTION TO HTML
AND CSS.

Or additional characters?

This class is an *Introduction to HTML and
CSS*.

HyperText Markup Language

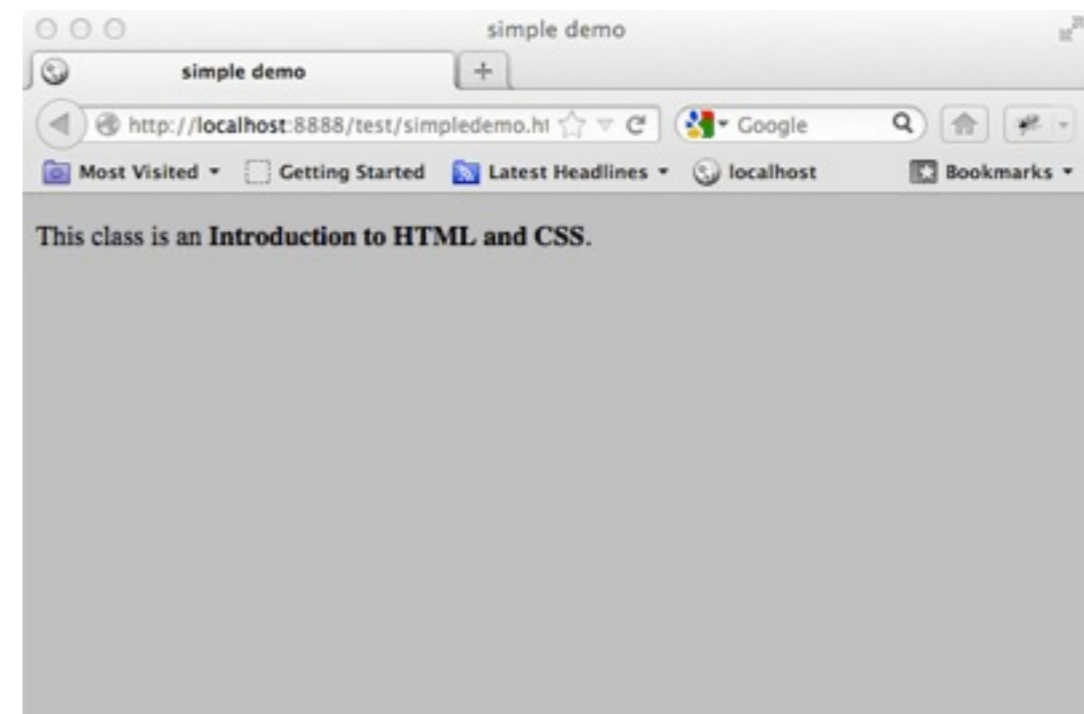
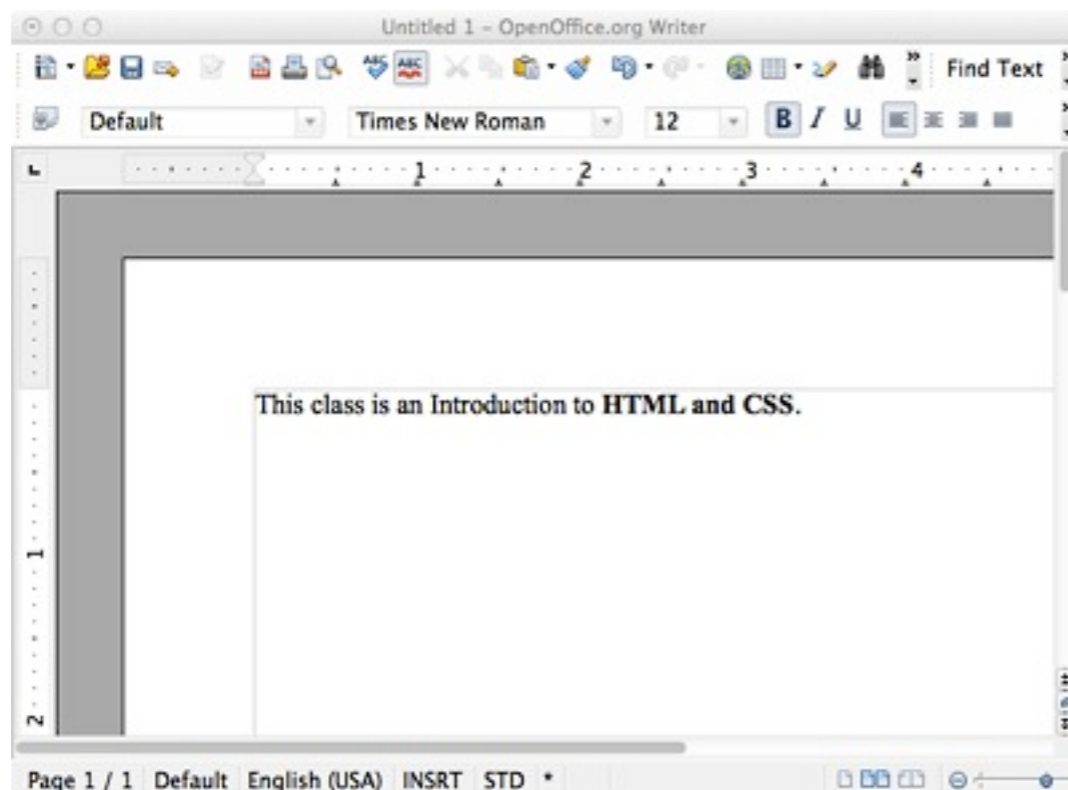
We want simple formatting and a way to display it:

This class is an **Introduction to HTML
and CSS.**

HyperText Markup Language

This requires two elements: a way to indicate the formatting and a client to display it.

The client might be a word processor or a Web browser.



HyperText Markup Language

Formatting can be achieved with a markup language. For word processors one method is Rich Text Format.

...

```
{\title This class is an Introduction to HTML and CSS}{\author Richard S. Mitchell}{\operator Richard S. Mitchell}{\createm
\yr2012\mo11\dy29\hr15\min20}{\revtim\yr2012\mo11\dy29\hr15\min20}{\version2}{\edmins0}{\nofpages1}{\nofwords6}{\nofchars38}
{* \company }{\nofcharswsws46}{\vern8243}}\margl960\margr960\margt960\margb960 \widowctr\lftnbj\laenddoc\noxlattoyen\expshrt\noultr\lspc
\dntblnsbdb\nospaceforul\formshade\horzdoc\dgmargin\dghspace180\dgvspace180\dghorigin960\dgvorigin960\dghshow1\dgvshow1
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\s15\ql \li0\ri0\sl-240\slmult0\widctlpar\tqc\tx5160\tqr\tx10320\aspalpha\aspnum\faauto\adjustright\rin0\lin0\itap0
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\par }}{\footer \pard\plain \s16\ql \li0\ri0\sl-240\slmult0\widctlpar\tqc\tx5160\tqr\tx10320\aspalpha\aspnum\faauto\adjustright\rin0\lin0\itap0
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{* \pnseclvl5 \pndec \pnstart \pnindent720 \pnhang{\pntxtb ({\pntxta .})}}{* \pnseclvl6 \pnlcltr \pnstart \pnindent720 \pnhang{\pntxtb ({\pntxta .})}}{*
\pnseclvl7 \pnlcrm \pnstart \pnindent720 \pnhang{\pntxtb ({\pntxta .})}}{* \pnseclvl8
\pnlcltr \pnstart \pnindent720 \pnhang{\pntxtb ({\pntxta .})}}{* \pnseclvl9 \pnlcrm \pnstart \pnindent720 \pnhang{\pntxtb ({\pntxta .})}}\pard\plain \ql
\li0\ri0\widctlpar\aspalpha\aspnum\faauto\adjustright\rin0\lin0\itap0
\fs20\lang1033\langfe1033\cgrid\langnp1033\langfenp1033 {This class is an }{\b Introduction to HTML and CSS}{.
\par }}
```

HyperText Markup Language

Or we can use HTML and a Web browser:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <title>simple demo</title>
  </head>
  <body>
    <section>
      <p>
        This class is an <b>Introduction to HTML and CSS</b>.
      </p>
    </section>
  </body>
</html>
```

HyperText Markup Language

HTML adds formatting, layout, and metadata to a text using only 95 printable characters.

!	"	#	\$	%	&	'	()	*	+	,	-	.	/	
0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
P	Q	R	S	T	U	V	W	X	Y	Z	[\]	^	_
`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
p	q	r	s	t	u	v	w	x	y	z	{		}	~	

HTML Element Syntax

Tags start and end the markup of an element.

```
<title>simple demo</title>
```

Tag names are pre-defined and consist of chars 0-9A-Za-z.

```
<h1>...</h1>
```

Elements may contain other elements, character data, or comments—or they may be void, i.e. empty.

HTML Element Syntax

Start tags consist of

- a < char
- the tag name
- optional attribute(s) or attribute/value pair(s)
- if the element is void, a / char
- and a > char

```
<meta charset="utf-8" />
```

HTML Element Syntax

End tags consist of

- a < char
- a / char
- the tag name
- and a > char

</head>

HTML Attribute Syntax

Attributes affect the tag they appear in.

- attributes are pre-defined
- no duplicate attributes on a tag are allowed
- attribute values may or may not be pre-defined
- values may contain text and character references.

```
<html lang="en">
```

HTML Element Functions

- root element
- content metadata
- sections
- grouping content
- text-level semantics
- content edits
- embedded content
- tables
- forms
- interactive elements
- scripting

HTML Element Functions

Document type

```
<!DOCTYPE html>
```

Root element

```
<html lang="en">  
...  
</html>
```

Content metadata

```
<head>  
  <meta charset="utf-8" />  
  <title>simple demo</title>  
</head>
```

HTML Element Functions

Sections

```
<body>  
  <section>  
    ...  
  </section>  
</body>
```

Content grouping

```
<p>  
  This class is an ...  
</p>
```

Text-level semantics

```
<b>Introduction to HTML and CSS</b>.
```

HTML Element Functions

Content edits

```
<p>  
  This class is an <del>introduction</del>  
  <ins>introduction</ins> to HTML.  
</p>
```

Embedded content

```
  
  
<object type="application/x-shockwave-flash">  
  <param name="wmode" value="transparent">  
</object>
```


HTML Element Functions

Tables

```
<table>
  <tr>
    <td>
      This class is an introduction to HTML.
    </td>
  </tr>
</table>
```

Forms

```
<form action="rsp.php" method="post">
  <label for="first_name">First Name</label><br />
  <input id="first_name" type="text" name="first_name" />
  <input type="submit" value="Send" />
</form>
```