

1 HTML5 and CSS3

LISTS AND HYPERLINKS

2 Lists

- HTML offers authors several mechanisms for specifying lists of information
- All lists must contain one or more list elements
- Lists may contain:
 - Unordered information (a bulleted list)
 - Ordered information (a numbered list)
 - Description (list of terms and definitions)

3 Unordered Lists—Page 1

- Creates a list of items (list items) that are non-sequential
- By default a bulleted list
- Format:
 - ``
 - `content`
 - `content`
 - ...
 - ``

4 Unordered Lists—Page 2

- Example:

```
<p>Unordered lists</p>
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

5 Try It Out

- Add an unordered list to the document

6 Ordered Lists—Page 1

- Creates a list of items (list items) that are sequential
- By default a numbered list
- Format:
 - ``
 - `content`
 - `content`
 - ...
 - ``

7 **Ordered Lists—Page 2**

- Example:

```
<p>Ordered lists</p>
<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

8 **Try It Out**

- Add an ordered list to the document

9 **Nested Lists—Page 1**

- A sub-list at some point within a list
- Adds an additional level of indentation
- For unordered lists the browser usually uses a different bullet symbol at each level

10 **Nested Lists—Page 2**

- Example:

```
<p>Nested lists</p>
<ul>
  <li>Coffee</li>
  <li>Tea
    <ul>
      <li>Black tea</li>
      <li>Green tea</li>
    </ul>
  </li>
  <li>Milk</li>
</ul>
```

11 **Try It Out**

- Add a nested list to the document

12 **Nested Lists—Page 3**

- Example including double spacing:

```
○ <ul>
  <li>Coffee</li>
  <li>Tea<br>&nbsp;
    <ul>
      <li>Black tea</li>
      <li>Green tea<br>&nbsp;</li>
```

```

        </ul>
    </li>
    <li>Milk</li>
</ul>

```

13 Description Lists—Page 1

- A list of terms followed by descriptions, e.g. definitions
- By default browsers indent the descriptions
- Format:

```

O <dl>
    <dt>term1</dt>
    <dd>description1</dd>
    <dt>term2</dt>
    <dd>description2</dd>
    ...
</dl>

```

14 Description Lists—Page 2

- Example:

```

<p>Description lists</p>
<dl>
    <dt>Coffee</dt>
    <dd>Black hot drink</dd>
    <dt>Milk</dt>
    <dd>White cold drink</dd>
</dl>

```

15 Try It Out

- Add a description list to the document

16 The type Attribute—Page 1

- The type attribute changes the default bullet for an unordered list or number style for an ordered list
- For *unordered* lists the options are disk (●), circle (○) or square (■)
 - The type attribute is *deprecated* for unordered lists
- For *ordered* lists the options are numbered which is the default (1, 2, 3, ...), uppercase letters (A, B, C, ...), lowercase letters (a, b, c, ...), upper case roman numbers (I, II, III, ...) and lowercase roman numbers (i, ii, iii, ...)

17 The type Attribute—Page 2

- Format for unordered list:


```

<ul type = "disk | circle | square">
    <li>content</li>
    <li>content</li>

```

```
...
</ul>
```

18 The type Attribute—Page 3

- Example for unordered list:

```
<p>Unordered lists with type attribute</p>
<ul type = "square">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

19 Try It Out

- Add an unordered list with type attribute to the document

20 The type Attribute—Page 4

- Format for ordered list:

```
<ol type = "1 | A | a | I | i">
  <li>content</li>
  <li>content</li>
  ...
</ol>
```

21 The type Attribute—Page 5

- Example for ordered list:

```
<p>Ordered lists with type attribute</p>
<ol type = "i">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

22 Try It Out

- Add an ordered list with type attribute to the document

23 The start Attribute—Page 1

- For an *ordered* list the start attribute begins the numbering at some value other than 1 (or A or I)
- Format:

```
○ <ol start = "number">
  <li>content</li>
  <li>content</li>
  ...
</ol>
```

- ✘ The *number* can be applied to letters (1=A, 2=B, etc.) or roman numbers (1=I, 2=II, etc.)

24 **The start Attribute—Page 2**

- Example:

```
<p>Ordered lists with start and type attributes</p>
<ol type = "a" start = "5">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

- ✘ For a lowercase alphabetic list, start = 5 will be lowercase letter "e"

25 **Try It Out**

- Add an ordered list with a start attribute to the document

26 **The list-style-type CSS Property—Page 1**

- The list-style-type property is the CSS (and preferred) alternative to the type attribute
- Provides several more options for both unordered and ordered lists

27 **The list-style-type CSS Property—Page 2**

- Options for the markers include:
 - disc—a filled circle (the default for unordered lists)
 - circle—an unfilled circle (for unordered lists)
 - decimal-leading-zero—number with leading zeros for single digit numbers (01, 02, 03, ...)
 - lower-alpha—lowercase alphabetic (a, b, c, ...)
 - lower-greek—lowercase Greek letters
 - lower-latin—lowercase alphabetic (a, b, c, ...)
 - lower-roman—lowercase roman numerals (i, ii, iii, ...)

28 **The list-style-type CSS Property—Page 3**

- Options for the markers include (*con.*):
 - none—no marker is shown
 - square—a filled square (for unordered lists)
 - upper-alpha—uppercase alphabetic (A, B, C, ...)
 - upper-latin—uppercase alphabetic (A, B, C, ...)
 - upper-roman—uppercase roman numerals (I, II, III, ...)

29 **The list-style-type CSS Property—Page 4**

- Format for unordered list:


```
<ul style = "list-style-type: disk | circle | square | none">
  <li>content</li>
  <li>content</li>
```

```
...
</ul>
```

30 **The list-style-type CSS Property—Page 5**

- Example for unordered list:

```
<p>Unordered lists with list-style-type property</p>
<ul style = "list-style-type: circle">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

31 **Try It Out**

- Add an unordered list with list-style-type property to the document

32 **The list-style-type CSS Property—Page 6**

- Format for ordered list:

```
<ol style = "list-style-type: decimal-leading-zero | lower-alpha | lower-greek | lower-
latin | lower-roman | upper-alpha | upper-latin | upper-roman | none">
  <li>content</li>
  <li>content</li>
...
</ol>
```

33 **The list-style-type CSS Property—Page 7**

- Example for ordered list:

```
<p>Ordered lists with list-style-type property</p>
<ol style = "list-style-type: upper-alpha">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

34 **Try It Out**

- Add an ordered list with list-style-type property to the document

35 **The list-style-image CSS Property—Page 1**

- The list-style-type property is a CSS property that substitutes a small image for the bullet in unordered lists
- Format:

```
O<ul style = "list-style-image: url('cup.png')">
  <li>content</li>
  <li>content</li>
...
```

```
</ul>
```

36 **The list-style-image CSS Property—Page 2**

- Example:

```
<p>Unordered lists with list-style-image property</p>
<ul style = "list-style-image: url('cup.png')">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

37 **Horizontal Lists—Page 1**

- The list items `` in an (usually) unordered list can be displayed *horizontally* instead of vertically
- Set the value of the float property to left
- Format:
 - float: left

38 **Horizontal Lists—Page 2**

- Example (page 1):

```
<head>
...
<style>
  .horizontal li
  {
    float: left
  }
</style>
</head>
```

39 **Horizontal Lists—Page 3**

- Example (page 2):

```
<p>Horizontally displayed unordered lists</p>
<ul class = "horizontal">
  <li> <a href="">Coffee</a> </li>
  <li> <a href="">Tea</a> </li>
  <li> <a href="">Milk</a> </li>
</ul>
```

40 **Horizontal Lists—Page 4**

- Example (page 3):

```
<style>
  .horizontal
```

```

    {
      list-style-type: none;
      margin: 0;
      overflow: hidden;
      background-color: #333333;
    }

    .horizontal li
    {
      float: left;
    }

```

41 **Horizontal Lists—Page 5**

- Example (page 4):

```

...
.horizontal li
{
  float: left;
}
.horizontal li a
{
  display: block;
  color: white;
  text-align: center;
  padding: 16px;
  text-decoration: none;
}
</style>

```

42 **Navigation Links**

- Users may click on a hyperlink in a Web document that links to any of the following:
 - Another Web page which may be:
 - ✦ An intrasite (the same website as the current page)
 - ✦ An intersite (another website)
 - An intrapage hyperlink which is a link to another location on the same Web page
 - Some links are used to launch the user's e-mail program and send a message to a named address

43 **Try It Out**

- Add your name and the date to the existing Web documents

44 **The Navigation List**

- HTML5 introduced the nav structural element for marking up navigation lists
- Format:
 - `<nav>`
list of navigation links
`</nav>`

45 Try It Out

- Create the navigation list

46 Hypertext Links

- The anchor tag creates a link to a reference, e.g. a Web address, e-mail or some other resource
- Format:
 - `content`
 - The href attribute names the Web address, email, etc.
- Example:
 - `Suffolk County Community College`
 - Renders as:
 - ✦ [Suffolk County Community College](http://www.sunysuffolk.edu)

47 Try It Out

- Create hypertext links to other documents in the website

48 The "Id" Attribute

- The id attribute is used within many tags to mark (name) the location within a Web document
- This serves several purposes one of which is to allow the user to link (move) to that location in the document
- Format:
 - `<element id="name">content</element>`
- Example:
 - `<h1 id="TopOfPage">In the Beginning</h1>`
 - ✦ The id attribute does not create any visual content in the Web document

49 Try It Out

- Create the navigation list
- Add the id attributes including the top of the page

50 Linking to an Id

- An actual link to an id is similar to a hyperlink to another Web page
- The href attribute still is used within the anchor tag but the link is to the id element on the same page
- Format:
 - `content`

○The hash (#) symbol tells the browser that the link is to an id in the same document, *not* to another Web page

• Example:

○`To top of page`

51 **Try It Out**

• Create the interpage links

52 **Links to id's in Other Documents**

• Format:

○`content`

• Example:

○`Prof. Struck's Life Story`

53 **Try It Out**

- Mark the id's on another page
- Create the links to these entries

54 **Hyperlink on an Image**

• An object such as an image may *replace* the content in a hyperlink so the user can click on the object

• Format:

○``

• Example:

○`

`

55 **Try It Out**

• Link to an image

56 **Image Maps**

- Sometime a user may be able to click on different regions (called hotspots) within the same image
- Clicking on these different areas lets the user link to different Web resources
- The developer begins by defining the locations on the image
- This might require using a graphics software program to "map out" the different regions

57 **The Map Block**

• The map block defines the structure of areas on an image, each of which, when clicked, can link to a different Web resource

• Format:

○`<map name = "mapName">`

the individual areas are defined here

```
</map>
```

- Example:

```
<map name = "navigation">
```

```
...
```

```
</map>
```

58 The Area “Hotspots”—Page 1

- Within the map block individual area tags specify the separate regions on the image and each of the Web resources to which they link

- Format:

```
<area shape="shape" coords="coordinates" href="reference" alt="text" />
```

- ✦ The shape may be:

- rect—a rectangle with the x, y coordinates of the upper-left and lower-right corners

- circle—with center x and y coordinates, and the radius

- poly—a multi-sided polygon with the number of x, y corner coordinates as determined by the designer

59 The Area “Hotspots”—Page 2

- Example:

```
<map name="navigation">
```

```
  <area href="home.htm" shape="rect" coords="5, 5, 20, 25">
```

```
  <area href="interests.htm" shape="rect" coords="35, 5, 50, 25">
```

```
  <area href="search.htm" shape="rect" coords="65, 5, 80, 25">
```

```
</map>
```

60 Try It Out

- Create an image map

61 Applying an Image Map

- The image tag must contain a reference to the map name
- The value assigned to the usemap attribute is the designer assigned name that matches the name attribute value in the map tag

- The format is:

```

```

- ✦ The hash (#) symbol precedes the mapName

- Example:

```

```

62 Try It Out

- Apply the image map
- Add image maps to the other Web pages

63  **Linking to Resources on the Internet**

- Format:

○ `content`

- Example

○ `Prof. Struck's Homepage`

64  **Try It Out**

- Create links to sites on the Web

65  **Linking to an E-Mail Address**

- To create a hyperlink to an e-mail address, use the `mailto:` reference in the `href` attribute of the anchor tag
- Usually launches the user's e-mail software and addresses the message correctly
- Format:

○ `content`

- Example:

○ `Send an e-mail to Prof. Struck`

66  **Try It Out**

- Link to an e-mail address

67  **The "Target" Attribute of the Anchor Tag**

- The `target` attribute specifies where to open the linked resource (by default it opens the resource in the same window in which the previous page appeared)
- Format:

○ `content`

- ✖ The `target_type` could be a "named" window or a value known within the HTML language

- Example:

○ `SCCC Homepage`

- ✖ In this example `_blank` refers to a *new* window or tab

68  **Try It Out**

- Specify a link target

69  **Working with Meta Data—Page 1**

- The `meta` tag in the head section defines "metadata" information about the Web document itself for search engines to read and add to their indices

- Format:

○ `<meta name="text" content="text">`

- ✖ The name attribute values come from a predetermined list which indicate what type of data is stored, e.g.

○ `author`— document's author

- description—of the document
- keywords—list of keywords describing the document
- ✕The content is related to the type of data specified in the name attribute

70 **Working with Meta Data—Page 2**

- Examples:

- `<meta name="author" content="Prof. Struck">`
- `<meta name="description" content="Homepage of Prof. Struck at Suffolk County Community College">`
- `<meta name="keywords" content="HTML, Web pages">`

71 **Try It Out**

- Add metadata to the document