

Lecture # 3 to 6

Course: Web Development

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HTML lists

Types

- ▶ Ordered
- ▶ Unordered
- ▶ Description list

Ordered list

1. Ordered
2. Unordered
3. Definition list

unordered list

- Ordered
- Unordered
- Definition list

A Description List

Coffee

- black hot drink

Milk

- white cold drink

HTML Lists

► Unordered HTML List

- An unordered list starts with the `` tag. Each list item starts with the `` tag.
- The list items will be marked with bullets (small black circles) by default:

► Example

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

Unordered List - Choose List Item Marker

- The CSS list-style-type property is used to define the style of the list item marker:

Value	Description
disc	Sets the list item marker to a bullet (default)
circle	Sets the list item marker to a circle
square	Sets the list item marker to a square
none	The list items will not be marked

HTML Lists

► Ordered HTML List

- An ordered list starts with the `` tag. Each list item starts with the `` tag.
- The list items will be marked with numbers by default:

► Example

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

Ordered HTML List - The Type Attribute

- The type attribute of the tag, defines the type of the list item marker:

Type	Description
type="1"	The list items will be numbered with numbers (default)
type="A"	The list items will be numbered with uppercase letters
type="a"	The list items will be numbered with lowercase letters
type="I"	The list items will be numbered with uppercase roman numbers
type="i"	The list items will be numbered with lowercase roman numbers

HTML Description Lists

- ▶ HTML also supports description lists.
- ▶ A description list is a list of terms, with a description of each term.
- ▶ The `<dl>` tag defines the description list, the `<dt>` tag defines the term (name), and the `<dd>` tag describes each term:
- ▶ Example

```
<dl>
```

```
  <dt>Coffee</dt>
```

```
  <dd>- black hot drink</dd>
```

```
  <dt>Milk</dt>
```

```
  <dd>- white cold drink</dd>
```

```
</dl>
```

Nested HTML Lists

- ▶ List can be nested (lists inside lists):
- ▶ Example

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


HTML Tables

```
<table style="width:100%">
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
</table>
```

Name	Roll	Email
Abc	123	abc@gmail.com
Def	456	def@gmail.com

HTML Colors

- ▶ HTML colors are specified using predefined color names, or RGB, HEX, HSL, RGBA, HSLA values.
- ▶ Color Names
 - ▶ In HTML, a color can be specified by using a color name:
 - ▶ Tomato
 - ▶ Orange
 - ▶ DodgerBlue
 - ▶ MediumSeaGreen
 - ▶ Gray
 - ▶ SlateBlue
 - ▶ Violet
 - ▶ LightGray

Background Color

- ▶ You can set the background color for HTML elements:

Example

- ▶ `<h1 style="background-color:DodgerBlue;">Hello World</h1>`
`<p style="background-color:Tomato;">Lorem ipsum...</p>`

Text Color

► You can set the color of text:

► Example

```
<h1 style="color:Tomato;">Hello World</h1>
```

```
<p style="color:DodgerBlue;">Lorem ipsum...</p>
```

```
<p style="color:MediumSeaGreen;">Ut wisi enim...</p>
```

HEX Value(Hexadecimal)

► **#rrggbb**

- Where rr (red), gg (green) and bb (blue) are hexadecimal values between 00 and ff (same as decimal 0-255).

RGBA Value

- ▶ RGBA color values are an extension of RGB color values with an alpha channel - which specifies the opacity for a color.
 - ▶ An RGBA color value is specified with:
 - ▶ `rgba(red, green, blue, alpha)`
- ▶ The alpha parameter is a number between 0.0 (fully transparent) and 1.0 (not transparent at all):

HTML color picker

- ▶ https://www.w3schools.com/colors/colors_picker.asp

Styling HTML with CSS

- ▶ CSS stands for Cascading Style Sheets.
- ▶ CSS describes how HTML elements are to be displayed on screen, paper, or in other media.
- ▶ CSS saves a lot of work. It can control the layout of multiple web pages all at once.
- ▶ CSS can be added to HTML elements in 3 ways:
 - ▶ **Inline** - by using the style attribute in HTML elements
 - ▶ **Internal** - by using a <style> element in the <head> section
 - ▶ **External** - by using an external CSS file

Inline CSS

- ▶ An inline CSS is used to apply a unique style to a single HTML element.
- ▶ An inline CSS uses the style attribute of an HTML element.
- ▶ Example `<h1 style="color:blue;">This is a Blue Heading</h1>`

Internal CSS

- ▶ An internal CSS is used to define a style for a single HTML page.
- ▶ An internal CSS is defined in the <head> section of an HTML page, within a <style> element.

Example

```
► <!DOCTYPE html>
  <html>
  <head>
  <style>
  body {background-color: powderblue;}
  h1  {color: blue;}
  p   {color: red;}
  </style>
  </head>
  <body>

  <h1>This is a heading</h1>
  <p>This is a paragraph.</p>

  </body>
  </html>
```

External CSS

- ▶ An external style sheet is used to define the style for many HTML pages
- ▶ To use an external style sheet, add a link to it in the <head> section of the HTML page.

Example

```
► <!DOCTYPE html>  
<html>  
<head>  
  <link rel="stylesheet" href="styles.css">  
</head>  
<body>  
  
  <h1>This is a heading</h1>  
  <p>This is a paragraph.</p>  
  
</body>  
</html>
```

styles.css File

```
► body {  
    background-color: powderblue;  
}  
h1 {  
    color: blue;  
}  
p {  
    color: red;  
}
```

The id Attribute

- ▶ `<p id="p01">I am different</p>`
- ▶

```
#p01 {  
  color: blue;  
}
```
- ▶ **Note** The id of an element should be unique within a page

The class Attribute

- ▶ To define a style for a special type of elements, add a class attribute to the element:

- ▶ `<p class="error">I am different</p>`

- ▶ `.error {
 color: red;
}`

- ▶ Note

- ▶ an ID can be used to identify one element, whereas a class can be used to identify more than one.

CSS Border

- ▶ The CSS border property defines a border around an HTML element:

- ▶ Example

```
p {  
    border: 1px solid powderblue;  
}
```

Border Color

► You can set the color of borders:

► Example

► `<h1 style="border:2px solid Tomato;">Hello World</h1>`
`<h1 style="border:2px solid DodgerBlue;">Hello`
`World</h1>`
`<h1 style="border:2px solid Violet;">Hello World</h1>`

HTML Tables

- ▶ Colspan (Attribute)
- ▶ Rowspan (Attribute)
- ▶ Border collapse
- ▶ border-spacing
- ▶ <caption>

HTML rowspan Attribute

Name	Age	
Arun	24	
Priya	25	

State of Health	Fasting Value		After Eating
	Minimum	Maximum	2 hours after eating
Healthy	70	100	Less than 140
Pre-Diabetes	101	126	140 to 200
Diabetes	More than 126	N/A	More than 200

Colspan and RowSpan

NAme	Age	I am rowspan 3
I am col span 2		
Priya	5	

HTML Tables

- ▶ Table caption
 - ▶ `<caption>Monthly savings</caption>`
- ▶ Vertical align (top, bottom, center)
- ▶ More styles:
 - ▶

```
#t01 tr:nth-child(even) {  
    background-color: #eee;  
}  
#t01 tr:nth-child(odd) {  
    background-color: #fff;  
}  
#t01 th {  
    color: white;  
    background-color: black;  
}
```

A Special Style for One Table

```
►table#t01 {  
    width: 100%;  
    background-color: #f1f1c1;  
}
```


Thead ,tfoot, tbody

- ▶ `thead {color:green;}`
- ▶ `tbody {color:blue;}`
- ▶ `tfoot {color:red;}`

CSS Padding

- ▶ The CSS padding property defines a padding (space) between the text and the border:

- ▶ Example

```
p {  
    border: 1px solid powderblue;  
    padding: 30px;  
}
```

CSS Margin

- ▶ The CSS margin property defines a margin (space) outside the border:

```
p {  
  border: 1px solid powderblue;  
  margin: 50px;  
}
```

Images

- ▶ Images with links
- ▶ Image in another folder
- ▶ Image float
- ▶ Animated images
- ▶ Background image
 - ▶ `<body style="background-image:url('bg1.jpg')">`

HTML Block and Inline Elements

- ▶ Every HTML element has a default display value depending on what type of element it is. The default display value for most elements is block or inline.

Block-level Elements

- ▶ A block-level element always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can).
- ▶ The `<div>` element is a block-level element.
- ▶ Example
 - ▶ `<div>Hello</div>`
`<div>World</div>`

Inline Elements

- ▶ An inline element does not start on a new line and only takes up as much width as necessary.
- ▶ This is an inline `` element inside a paragraph.

The <div> Element

- ▶ The <div> element is often used as a container for other HTML elements.
- ▶ The <div> element has no required attributes, but style, class and id are common.
- ▶ When used together with CSS, the <div> element can be used to style blocks of content:

Example

```
<div style="background-color:black;color:white;padding:40px;margin:30px;">
  <h2>London</h2>
  <p>London is the capital city of England. It is the most populous city in the
  United Kingdom, with a metropolitan area of over 13 million inhabitants.</p>
  <p>Standing on the River Thames, London has been a major settlement for two
  millennia, its history going back to its founding by the Romans, who named it
  Londinium.</p>
</div>
```

The `` Element

- ▶ The `` element is often used as a container for some text.
- ▶ The `` element has no required attributes, but `style`, `class` and `id` are common.
- ▶ When used together with CSS, the `` element can be used to style parts of the text:

Example

```
<h1>My <span style="color:red">Important</span> Heading</h1>
```

HTML Grouping Tags

- ▶ `<div>` Defines a section in a document (block-level)
- ▶ `` Defines a section in a document (inline)

HTML <iframe> Tag

```
<iframe src="URL"></iframe>
```

- ▶ The <iframe> tag specifies an inline frame.
- ▶ An iframe is used to display a web page within a web page.
- ▶ An inline frame is used to embed another document within the current HTML document.
- ▶ The **IFrame HTML** element is often used to insert content from another source, such as an advertisement, into a Web page.
- ▶ Example
 - ▶ You can set Height and width
- ▶ `<iframe src="demo.html" height="200" width="300"></iframe>`

Iframe

- ▶ Iframe - Remove the Border

- ▶ `<iframe src="demo_iframe.htm" style="border:none;"></iframe>`

- ▶ With CSS, you can also change the size, style and color of the iframe's border:

- ▶ `<iframe src="demo_iframe.htm" style="border:2px solid grey;"></iframe>`

Html Links

- ▶ HTML Link Colors
- ▶ By default, a link will appear like this (in all browsers):
 - ▶ An unvisited link is underlined and blue
 - ▶ A visited link is underlined and purple
 - ▶ An active link is underlined and red

Html Links cont...

- ▶ You can change the default colors, by using styles:

```
▶ <style>
a:link {
    color: green;
    background-color: transparent;
    text-decoration: none;
}
a:visited {
    color: pink;
    background-color: transparent;
    text-decoration: none;
}
a:hover {
    color: red;
    background-color: transparent;
    text-decoration: underline;
}
a:active {
    color: yellow;
    background-color: transparent;
    text-decoration: underline;
}
</style>
```


HTML Links - Image as Link

```
<a href="link.com">
```

```
<img src="" alt="HTML tutorial" style="width:42px;height:42px;border:0;">
```

```
</a>
```

Add title to the link

- ▶ The title attribute specifies extra information about an element. The information is most often shown as a tooltip text when the mouse moves over the element.
- ▶ `Visit Cz`

HTML Links - Create a Bookmark

- ▶ `<h2 id="C4">Chapter 4</h2>`
- ▶ `Jump to Chapter 4`

HTML Links - The target Attribute

- ▶ The **target** attribute specifies where to open the linked document.
- ▶ The target attribute can have one of the following values:
 - ▶ `_blank` - Opens the linked document in a new window or tab
 - ▶ `_self` - Opens the linked document in the same window/tab as it was clicked (this is default)

HTML File Paths

1. A file path describes the location of a file in a web site's folder structure.
2. File paths are used when linking to external files like:
 1. Web pages
 2. Images
 3. Style Sheets
 4. JavaScripts

Absolute File Paths

►

Relative File Paths

A relative file path points to a file relative to the current page

- ▶ In this example, the file path points to a file located at the current folder:
 - ▶ ``
- ▶ In this example, the file path points to a file in the images folder located in the current folder:
 - ▶ ``
- ▶ In this example, the file path points to a file in the images folder located at the root of the current web:
 - ▶ ``
- ▶ In this example, the file path points to a file in the images folder located in the folder one level above the current folder:
 - ▶ ``

Best Practice

- ▶ It is best practice to use relative file paths.
- ▶ When using relative file paths, your web pages will not be bound to your current base URL.
- ▶ All links will work on your own computer (localhost) as well as on your current public domain and your future public domains.

The HTML <head> Element

- ▶ The <head> element is a container for metadata (data about data) and is placed between the <html> tag and the <body> tag.
- ▶ <html>
 - ▶ <head>
 - ▶ </head>
 - ▶ </html>
- ▶ HTML metadata is data about the HTML document.
- ▶ Metadata is not displayed.
- ▶ Metadata typically define the document title, character set, styles, links, scripts, and other meta information.

Meta data tags

- ▶ <title>
- ▶ <style>
- ▶ <meta>
- ▶ <link>
- ▶ <script>

The HTML <title> Element

- ▶ The <title> element:
 - ▶ defines a title in the browser tab
 - ▶ provides a title for the page when it is added to favorites
 - ▶ displays a title for the page in search engine results

The HTML <style> Element

- The <style> element is used to define style information for a single HTML page:

```
<style>
```

```
  body {background-color: powderblue;}
```

```
  h1 {color: red;}
```

```
  p {color: blue;}
```

```
</style>
```

The HTML <link> Element

► Style

- The <link> element is used to link to external style sheets:

- `<link rel="stylesheet" href="mystyle.css">`

► Favicon

- `<link rel="icon" href="demo_icon.gif" type="image/gif" >`

The HTML <meta> Element

- ▶ The <meta> element is used to specify which character set is used, page description, keywords, author, and other metadata.
- ▶ Metadata is used by browsers (how to display content), by search engines (keywords)

The HTML `<meta>` Element

- ▶ Define the character set used:
 - ▶ `<meta charset="UTF-8">`
- ▶ Define a description of your web page:
 - ▶ `<meta name="description" content="Free Web tutorials">`
- ▶ Define keywords for search engines:
 - ▶ `<meta name="keywords" content="HTML, CSS, XML, JavaScript">`
- ▶ Define the author of a page:
 - ▶ `<meta name="author" content="John Doe">`
- ▶ Refresh document every 30 seconds:
 - ▶ `<meta http-equiv="refresh" content="30">`

Example of <meta> tags:

- ▶ `<meta charset="UTF-8">`
- ▶ `<meta name="author" content="Computer Zila">`
- ▶ `<meta name="title" content="The ProTec Professional Training Centre">`
- ▶ `<meta name="description" content="The ProTec Professional Training Institute is the computer education academy in Karachi, which makes you pro! We offer web development, web designing, graphic designing, desktop application development, mobile application development courses in Naval Colony Karachi, Learn HTML, CSS, Bootstrap, JQuery, Ajax, Java, C#, ASP .Net, SQL, MySQL, SQLite, Wordpress, Codeigniter and many career driven courses">`
- ▶ `<meta name="keywords" content="ProTec, Training, Academy, Institute, Professional Centre, Computer, Courses">`

Setting The Viewport

- ▶ HTML5 introduced a method to let web designers take control over the viewport, through the `<meta>` tag.
- ▶ The viewport is the user's visible area of a web page. It varies with the device and will be smaller on a mobile phone than on a computer screen.
- ▶ `<meta name="viewport" content="width=device-width, initial-scale=1.0">`

Setting The Viewport

- ▶ A <meta> viewport element gives the browser instructions on how to control the page's dimensions and scaling.
- ▶ The width=device-width part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).
- ▶ The initial-scale=1.0 part sets the initial zoom level when the page is first loaded by the browser.

Omitting <html>, <head> and <body>?

- ▶ According to the HTML5 standard; the <html>, the <body>, and the <head> tag can be omitted.

- ▶ <!DOCTYPE html>
<title>Page Title</title>

```
<h1>This is a heading</h1>  
<p>This is a paragraph.</p>
```

HTML Entities

- ▶ Reserved characters in HTML must be replaced with character entities.
- ▶ Characters that are not present on your keyboard can also be replaced by entities.

HTML Entities

- ▶ Some characters are reserved in HTML.
- ▶ If you use the less than (<) or greater than (>) signs in your text, the browser might mix them with tags.
- ▶ Character entities are used to display reserved characters in HTML.
- ▶ A character entity looks like this:
 - ▶ `&entity_name;`OR
 - ▶ `&#entity_numbers`

Non-breaking Space

- ▶ A common character entity used in HTML is the non-breaking space: ` `;
- ▶ A non-breaking space is a space that will not break into a new line.

Some Other Useful HTML Character Entities

Result	Description	Entity Name	Entity Number
	non-breaking space	 	
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	double quotation mark	"	"
'	single quotation mark (apostrophe)	'	'
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
©	copyright	©	©
®	registered trademark	®	®

Note: Entity names are case sensitive.

HTML Symbols Example

- ▶ `<p>I will display €</p>`
`<p>I will display €</p>`
`<p>I will display €</p>`

End Of Lecture 3 to 6