

DHTML

What is DHTML?

- DHTML stands for Dynamic HTML.
- DHTML is NOT a scripting language.
- DHTML is a browser feature-that gives you the ability to make dynamic Web pages.
- DHTML uses a combination of:
 1. Scripting language
 2. DOM
 3. CSSto create HTML that can change even after a page has been loaded into a browser.

How to Apply?

- Dynamic Styles
- Positioning Page Elements
- Dynamic Content
- Dynamic Filters

Dynamic Styles

1. Font Styles
2. Text Styles
3. Text and Background Colors
4. Borders, Padding, and Margins
5. Background Images

1. Font Styles

CSS and DOM Reference	Values
font-family: <i>name</i> <i>object.style.fontFamily</i> ="name"	Font <i>name</i> can be any system font;
font-size: <i>size</i> <i>object.style.fontSize</i> ="size"	Font <i>size</i> is specified as in a unit of measurement, normally point size (12pt).
font-style: <i>style</i> <i>object.style.fontStyle</i> ="style"	Font <i>style</i> specified as - normal - italic
font-weight: <i>weight</i> <i>object.style.fontWeight</i> ="weight"	Font <i>weight</i> specified as - normal - bold
font-variant: <i>variant</i> <i>object.style.fontVariant</i> ="variant"	Font <i>variant</i> specified as - normal - small-caps

2. Text Styles

CSS and DOM Reference	Values
text-align : <i>alignment</i> <i>object.style.textAlign</i> ="alignment"	Sets the horizontal <i>alignment</i> of text within an element. The <i>alignment</i> - left - center - right - justify
line-height : <i>height</i> <i>object.style.lineHeight</i> ="height"	Sets the <i>height</i> of lines of text in an element; specify a measurement (px , pt , n% , em , en) normal
letter-spacing : <i>spacing</i> <i>object.style.letterSpacing</i> ="spacing"	Sets the <i>spacing</i> between letters in an element; specify a measurement (px , pt , n% , em , en) normal
text-transform : <i>case</i> <i>object.style.textTransform</i> ="case"	Sets the <i>case</i> of words in a text block - capitalize - lowercase - uppercase - none
text-decoration : <i>style</i> <i>object.style.textDecoration</i> ="style"	Sets a <i>style</i> using: - underline - overline - line-through - none

3. Text & Background Colors

CSS and DOM Reference	Values
color: <i>color</i> <i>object.style.color</i> ="color"	Foreground color specified as a color name, hexadecimal value, or RGB value: color:red color:#FF0000 color:rgb(255,0,0)
background-color: <i>color</i> <i>object.style.backgroundColor</i> ="color"	Background color specified as a color name, hexadecimal value, or RGB value: background-color:red background-color:#FF0000 background-color:rgb(255,0,0)

4. Borders, Padding & Margins

CSS and DOM Reference.	Values
border-style: <i>style</i> object.style. borderStyle	Sets the <i>style</i> of a border surrounding a page element.
border-top-style: <i>style</i> object.style. borderTopStyle	The <i>style</i> can be applied to all borders (border-style, borderStyle) or to selected borders. Style types can be
border-right-style: <i>style</i> object.style. borderRightStyle	<ul style="list-style-type: none">- dashed- dotted- double- groove- inset- none- outset- ridge- solid
border-bottom-style: <i>style</i> object.style. borderBottomStyle	
border-left-style: <i>style</i> object.style. borderLeftStyle	

4. Borders, Padding & Margins

CSS and DOM Reference.	Values
border-width: <i>width</i> <i>object.style.borderWidth</i> ="width"	Sets the <i>width</i> of a border surrounding a page element.
border-top-width: <i>width</i> <i>object.style.borderTopWidth</i> ="width"	The <i>width</i> can be applied to all borders (<i>border-width</i> , <i>borderWidth</i>) or to selected borders. Widths can be <ul style="list-style-type: none">- thin- medium- thick- npx
border-right-width: <i>width</i> <i>object.style.borderRightWidth</i> ="width"	
border-bottom-width: <i>width</i> <i>object.style.borderBottomWidth</i> ="width"	
border-left-width: <i>width</i> <i>object.style.borderLeftWidth</i> ="width"	

4. Borders, Padding & Margins

CSS and DOM Reference.	Values
border-color: <i>color</i> borderColor	Sets the <i>color</i> of a border surrounding a page element.
border-top-color: <i>color</i> borderTopColor	The <i>color</i> can be applied all borders (border-color, borderColor) or to selected borders. The <i>color</i> is specified as a color name, hexadecimal value, or RGB value.
border-right-color: <i>color</i> borderRightColor	
border-bottom-color: <i>color</i> borderBottomColor	color:red color:#FF0000 color:rgb(255,0,0)
border-left-color: <i>color</i> borderLeftColor	

4. Borders, Padding & Margins

CSS and DOM Reference.	Values
border : <i>style width color</i> <i>object.style.border</i> =" <i>style width color</i> "	Border styles, widths, and colors can be set with the single border specification by coding these values separated by a blank space: border:solid 1px red border="solid 1px red"

5. Background Images

CSS and DOM Reference	Values
background-image: <i>url(url)</i> <i>object.backgroundImage="url"</i>	Sets the URL of a background image; <i>url</i> can be set to none to prevent an image from loading.
background-position: <i>location</i> <i>object.backgroundPosition="location"</i>	Sets the <i>location</i> of the left and top edges of the background image with a pair of values separated by a space. Values are left center right paired with top center bottom Locations can also be specified as pairs of percentages or pixels for the left and top values.
background-repeat: <i>axes</i> <i>object.backgroundRepeat="axes"</i>	Sets whether a background image should repeat along the horizontal and/or vertical axes. Axes values are: - no-repeat - repeat - repeat-x - repeat-y
background-attachment: <i>value</i> <i>object.backgroundAttachment="value"</i>	Describes whether a background image remain fixed in place or scrolls with the document. <i>Values</i> are: - fixed - scroll

Positioning Page Elements

1. Positioning Styles
2. z-index
3. Dynamic sizing
4. Visibility
5. display
6. clip

1. Positioning Styles

- Elements can be positioned as:

1. position:relative

→ How to position an element relative to its normal position.

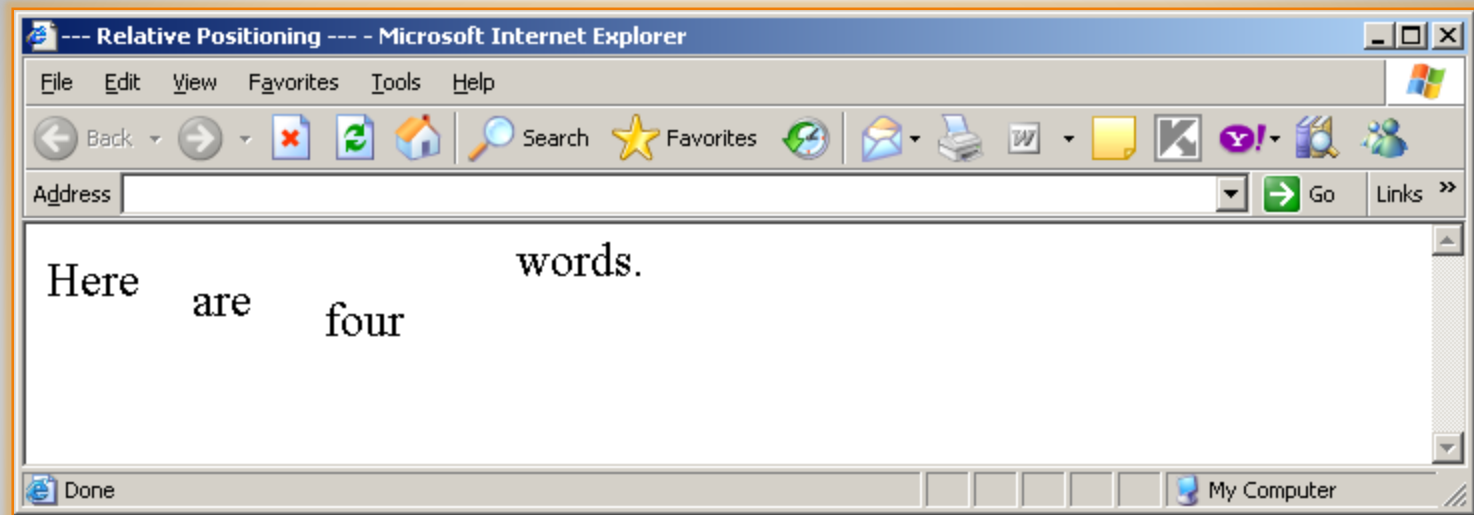
2. position:absolute

→ How to position an element using an absolute value.

1. Positioning Styles

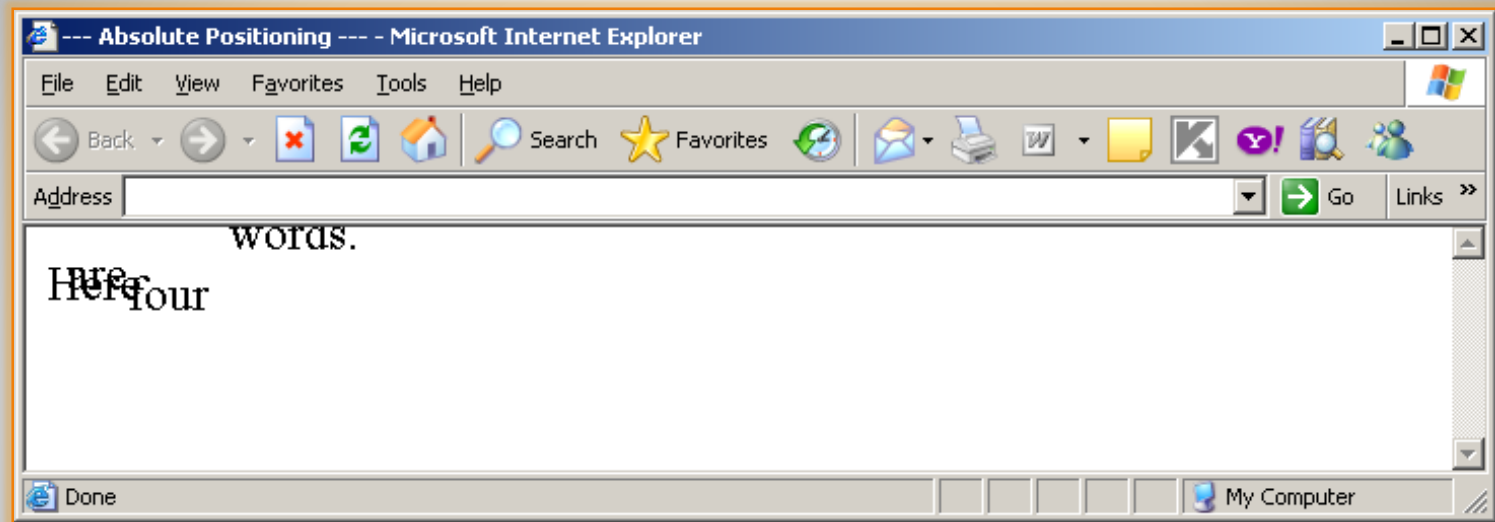
CSS and DOM Reference	Effects
left: <i>n</i> <code>object.style.left="n"</code>	Sets the left edge of the element relative to its container element; <i>n</i> is a <i>string</i> measurement unit, e.g., 100px.
top: <i>n</i> <code>object.style.top="n"</code>	Sets the top edge of the element relative to its container element; <i>n</i> is a <i>string</i> measurement unit, e.g., 100px
<code>object.style.pixelLeft=n</code>	Sets the left edge of the element relative to its container element; <i>n</i> is <i>numeric</i> for use in calculations, e.g., 100.
<code>object.style.pixelTop=n</code>	Sets the top edge of the element relative to its container element; <i>n</i> is <i>numeric</i> for use in calculations, e.g., 100.

Position : relative



```
<p style="font-size:18pt">  
<span>Here</span>  
<span style="position:relative; left:20px; top:10px">are</span>  
<span style="position:relative; left:50px; top:20px">four</span>  
<span style="position:relative; left:100px; top:-10px">words.</span>  
</p>
```


Position : absolute



```
<p style="font-size:18pt">  
<span>Here</span>  
<span style="position: absolute; left:20px; top:10px">are</span>  
<span style="position: absolute; left:50px; top:20px">four</span>  
<span style="position: absolute; left:100px; top:-10px">words.</span>  
</p>
```

2. Z-index

- The z-index property is used to place an element "behind" another element.
- Default z-index is 0.
- The higher number the higher priority. z-index: 1 has lower priority.
- The general format is:
 z-index:n
OR
 object.style.zIndex=n

3. Dynamic Sizing

CSS and DOM Reference	Effects
width: <i>value</i> <i>object.style.width</i> ="n"	Sets the width of the element; <i>n</i> is a string measurement, either in pixels or percentages.
height: <i>n</i> <i>object.style.height</i> ="n"	Sets the height of the element; <i>n</i> is a string measurement, either in pixels or percentages.
<i>object.style.pixelWidth</i> = <i>n</i>	Sets the width of the element; <i>n</i> is numeric for use in calculations.
<i>object.style.pixelHeight</i> = <i>n</i>	Sets the height of the element; <i>n</i> is numeric for use in calculations.

4. Visibility

- The visibility property determines if an element is visible or not.
- The general format is:

`visibility:hidden|visible`

OR

`object.style.visibility="hidden|visible"`

5. Display

- Some possible values for display:

1. none
2. block
3. inline

- The general format is :

`display:block|inline|none`

OR

`object.style.display="block|inline|none"`

5. Clip

- Specifies how an element is clipped for display.

- The general format is:

`clip:rect(top,right,bottom,left)`

OR

`object.style.clip=(top,right,bottom,left)`

Dynamic Content

- All HTML **containers** - paragraphs, spans, divisions, and the like—have **innerText** and **innerHTML** properties representing the content that appears inside their tags.
- These properties can be changed through scripting.

DOM Reference	Values
<code>object.innerText = "text"</code>	Sets the text content of the container object, replacing any existing text.
<code>object.innerHTML = "text + HTML"</code>	Sets the text and XHTML content of a container object, replacing any existing text and XHTML tags. The XHTML is rendered when assigned to this property.

Dynamic Filters

- Filters are style settings applied to text or graphics to change their visual appearance.

- The general format is:

`filter:filtername(parameter=value [,parameter=value]...)`

OR

`object.style.filter=`

`"filtername(parameter=value[,parameter=value]...)"`

Dynamic Filters

Property	Argument	Description
alpha	<ul style="list-style-type: none"> - opacity - Style - startx - starty - finishx - finishy 	Allows you to set the opacity of the element
Example	filter:alpha(opacity=20, finishopacity=100, style=1, startx=0, starty=0, finishx=140, finishy=270)	
blur	<ul style="list-style-type: none"> - Add - Strength - direction 	Makes the element blur
Example	filter:blur(add=true, direction=90, strength=6);	
chroma	-Color	Makes the specified color transparent
Example	filter:chroma(color= #ff0000)	
glow	<ul style="list-style-type: none"> - Color - strength 	Makes the element glow
Example	filter:glow(color= #ff0000, strength=5);	
wave	<ul style="list-style-type: none"> - Add - Phase - lightstrength - freq - strength 	Renders the element like a wave
Example	filter:wave(add=true, freq=1, lightstrength=3, phase=0, strength=5)	

Dynamic Filters

Property	Argument	Description
Shadow	- Color - direction	Renders the element with a shadow
Example	filter:shadow(color=#ff0000, direction=90);	
Dropshadow	- Color - offx - Offy - positive	Renders the element with a dropshadow
Example	filter:dropshadow(color=#ff0000, offx=5, offy=5, positive=true);	
mask	-Color	Renders the element with the specified background color, and transparent foreground color
Example	filter:mask(color=#ff0000);	
fliph , flipv	- none	Flips the element horizontally , vertically
Example	filter:fliph; filter:flipv;	
gray	- none	Renders the element in black and white
Example	filter:gray;	
invert	- none	Renders the element in its reverse color and brightness values
Example	filter:invert;	