Information Te@hnology

Web Technology

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Spring 23-24

Semester 4



Information Te@hnology

Cascading Style Sheets

>>>

CSS





```
<!DOCTYPE html>
<html>
<html>
<!--This ia a midterm exam-->
<body>
<h1>Essay Question</h1>

web engineering 1<br/>

web engineering 1<br/>

<a href="mailto:rabdelsalam@eelu.edu.eg">Send Mail</a>

</body>
</html>
```



CSS stands for Cascading Style Sheets

- Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation semantics (the look and formatting) of a document written in a markup language.
- Its most common application is to style web pages written in HTML and XHTML
- CSS is designed primarily to enable the separation of document content (written in HTML or a similar markup language) from document presentation, including elements such as the layout, colors, and fonts.
- This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content (such as by allowing for table less web design).



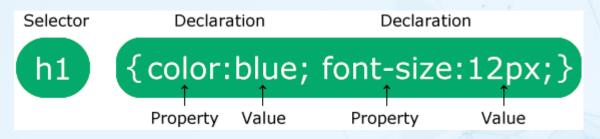


- CSS is a style language that defines layout of HTML documents
- Styles are normally saved in external .css files.
- External style sheets enable you to change the appearance and layout of all the pages in a Web site, just by editing one single file!





CSS Syntax



- A CSS rule has two main parts: a selector and a declaration block.
 - The selector points to the HTML element you want to style.
 - The declaration block contains one or more declarations separated by semicolons.
 - Each declaration includes a CSS property name and a value, separated by a colon. The property is the style attribute you want to change. Each property has a value.
 - Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.





CSS Example

• To make the CSS more readable, you can put one declaration on each line, like this:

```
<!DOCTYPE html>
<html>
<head>
<style>
р {
 color: red;
 text-align: center;
</style>
</head>
<body>
Hello World!
These paragraphs are styled with CSS.
</body>
</html>
```

Hello World!

These paragraphs are styled with CSS.



CSS Comments

- Comments are used to explain your code, and may help you when you edit the source code at a later date.
- Comments are ignored by browsers.
- A CSS comment is placed inside the <style> element, and starts with /* and ends with */

```
<!DOCTYPE html>
<html>
<head>
<style>
/* This is a single-line comment */
 color: red;
</style>
</head>
<body>
Hello World!
This paragraph is styled with CSS.
CSS comments are not shown in the output.
</body>
</html>
```

Hello World!

This paragraph is styled with CSS.

CSS comments are not shown in the output.



Ways to Insert CSS

- When a browser reads a style sheet, it will format the document according to it.
- Three Ways to Insert CSS
 - External style sheet
 - Internal style sheet
 - Inline style sheet





External style sheet

- An external style sheet is ideal when the style is applied to many pages.
- With an external style sheet, you can change the look of an entire Web site by changing one file.
- Each page must link to the style sheet using the k> tag.
- The tag goes inside the head section.

```
<!DOCTYPE html>
<html>
<head>
link rel="stylesheet" type="text/css" href="mystyle.css" />
</head>
• An external style sheet can be written in any text editor.
• The file should not contain any html tags.
• Your style sheet should be saved with a .css extension.

• An external style sheet can be written in any text editor. • The file should not contain any html tags.
• Your style sheet can be written in any text editor. • The file should not contain any html tags.
• Your style sheet should be saved with a .css extension. hr {color:sienna;} p {margin-left:20px;}
body {background-image:url("images/back40.gif");}
```

- Note: Do not leave spaces between the property value and the unit.
 - Example for correct way: margin-left:20px.





Internal style sheet

- An internal style sheet should be used when a single document has a unique style.
- You define internal styles in the head section of an HTML page, by using the <style> tag, like this:

```
<head>
     <style type="text/css">
          hr {color:sienna;}
          p {margin-left:20px;}
          body {background-image:url("images/back40.gif");}
          </style>
</head>
```





Inline style sheet

- An inline style loses many of the advantages of style sheets by mixing content with presentation.
- To use inline styles you use the style attribute in the relevant tag.
- The style attribute can contain any CSS property.

```
<!DOCTYPE html>
<html>
<body>

This is a paragraph.
This is a paragraph.
tolor:Tomato;margin-left:20px">This is a paragraph.
</body>
</html>
```

This is a paragraph.

This is a paragraph.

This is a paragraph.

 The example shows how to change the color and the left margin of a paragraph.





Multiple Style Sheets

• If some properties have been set for the same selector in different style sheets, the values will be inherited from the more specific style sheet.





Multiple Style Sheets

- Example:
 - An external style sheet has these properties for the h3 selector.

```
h3
{
color:red;
text-align:left;
font-size:8pt;
}
```

• And an internal style sheet has these properties for the h3 selector:

```
h3 {
text-align:right;
font-size:20pt;
}
```

- If the page with the internal style sheet also links to the external style sheet the properties for h3 will be:
 - color:red;
 - text-align:right;
 - font-size:20pt;
- The color is inherited from the external style sheet and the text-alignment and the font-size is replaced by the internal style sheet.



1. Styling Backgrounds

- CSS background properties are used to define the background effects of an element.
- background property: Sets all the background properties in one declaration
- CSS properties used for background effects:
 - a. background-color
 - b. background-image
 - c. background-repeat
 - d. background-position





1. Styling Backgrounds

- a. background-color
- The background-color property specifies the background color of an element.
- The background color of a page is defined in the body selector.

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
   background-color: lightblue;
}
</style>
</head>
<body>
<h1>Hello World!</h1>
This page has a light blue background color!
</body>
</html>
```

Hello World!

This page has a light blue background color!



1. Styling Backgrounds

- a. background-color
- CSS Colors
 - Colors in CSS can be specified by the following
 - Hexadecimal colors.
 - RGB colors.
 - RGBA colors.
 - HSL colors.
 - HSLA colors.
 - Predefined/Cross-browser color names.





1. Styling Backgrounds

- a. background-color
- CSS Colors

Hexadecimal colors.

- Hexadecimal color values are supported in all major browsers.
- A hexadecimal color is specified with: #RRGGBB, where the RR (red), GG (green) and BB (blue)
- hexadecimal integers specify the components of the color. All values must be between 0 and FF.
- For example, the #0000ff value is rendered as blue, because the blue component is set to its highest value (ff) and the others are set to 0.
- Example for a red background

```
P {
background-color:#ff0000;
}
```



1. Styling Backgrounds

- a. background-color
- CSS Colors

HSL Colors

- HSL color values are supported in IE9+, Firefox, Chrome, Safari, and in Opera 10+.
- HSL stands for hue, saturation, and lightness and represents a cylindrical-coordinate representation of colors.
- An HSL color value is specified with: hsl(hue, saturation, lightness).
 - Hue is a degree on the color wheel (from 0 to 360) 0 (or 360) is red, 120 is green, 240 is blue.
 - Saturation is a percentage value; 0% means a shade of gray and 100% is the full color.
 - Lightness is also a percentage; 0% is black, 100% is white.
- Example for a light green background, with 65% saturation,

```
p {
background-color: hsl(120, 65%, 75%);
}
```



1. Styling Backgrounds

b. background-image

- The background-image property specifies an image to use as the background of an element.
- By default, the image is repeated so it covers the entire element.

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
   background-image: url("paper.gif");
}
</style>
</head>
<body>
<h1>Hello World!</h1>
This page has an image as the background!
</body>
```

Hello World!

This page has an image as the background!



1. Styling Backgrounds

b. background-image

• This example shows a **bad combination** of text and background image. The text is hardly readable:

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
   background-image: url("bgdesert.jpg");
}
</style>
</head>
<body>
<h1>Hello World!</h1>
This text is not easy to read on this background image.
</body>
</body>
</body>
</html>
```



• Note: When using a background image, use an image that does not disturb the text.





1. Styling Backgrounds

b. background-image

- By default, the background-image property repeats an image both horizontally and vertically.
- Some images should be repeated only horizontally or vertically, or they will look strange, like this:

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
 background-image: url("gradient_bg.png");
</style>
</head>
<body>
<h1>Hello World!</h1>
Strange background image...
</body>
</html>
```

Hello World!

Strange background image...



1. Styling Backgrounds

c. background-repeat

• If the image above is repeated only horizontally (background-repeat: repeat-x;), the background will look better:

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
    background-image: url("gradient_bg.png");
    background-repeat: repeat-x;
}
</style>
</head>
<body>
<h1>Hello World!</h1>
Here, a background image is repeated only horizontally!
</body>
</html>
```

Hello World!

Here, a background image is repeated only horizontally!

• Tip: To repeat an image vertically, set background-repeat: repeat-y;



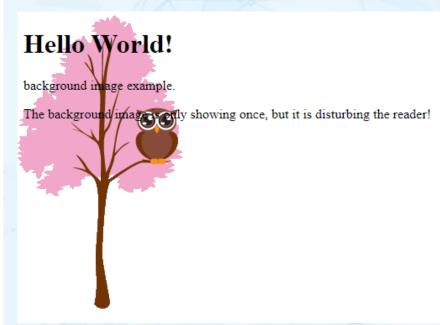


1. Styling Backgrounds

c. background-repeat

Showing the background image only once is also specified by the background-repeat property:

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
 background-image: url("img_tree.png");
 background-repeat: no-repeat;
</style>
</head>
<body>
<h1>Hello World!</h1>
background image example.
The background image is only showing once, but it is disturbing the reader!
</body>
</html>
```



• In the example above, the background image is placed in the same place as the text. We want to change the position of the image, so that it does not disturb the text too much.



1. Styling Backgrounds

d. background-position

 The background-position property is used to specify the position of the background image.

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
 background-image: url("img tree.png");
 background-repeat: no-repeat;
 background-position: right top;
 margin-right: 200px;
</style>
</head>
<body>
<h1>Hello World!</h1>
W3Schools background no-repeat, set position example.
Now the background image is only shown once, and positioned away from the
text.
In this example we have also added a margin on the right side, so the
background image will never disturb the text.
```

Hello World!

W3Schools background no-repeat, set position example.

Now the background image is only shown once, and positioned away from the text.

In this example we have also added a margin on the right side, so the background image will never disturb the text.





2. Styling Text

- This text is styled with some of the text formatting properties.
- The heading uses the text-align, text-transform, and color properties.
- The paragraph is indented, aligned, and the space between characters is specified.



2. Styling Text

a. Text Color

- The color property is used to set the color of the text.
- With CSS, a color is most often specified by:
 - a HEX value like "#ff0000"
 - an RGB value like "rgb(255,0,0)"
 - a color name like "red"
- The default color for a page is defined in the body selector.





2. Styling Text

a. Text Color

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
  color: blue;
                                                            in the body selector.
h1 {
  color: green;
                                                            Another paragraph.
</style>
</head>
<body>
<h1>This is heading 1</h1>
This is an ordinary paragraph. Notice that this text is blue. The default
text color for a page is defined in the body selector.
Another paragraph.
</body>
</html>
```

This is heading 1

This is an ordinary paragraph. Notice that this text is blue. The default text color for a page is defined



2. Styling Text

a. Text Color

 In this example, we define both the background-color property and the color property:

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
 background-color: lightgrey;
  color: blue;
h1 {
 background-color: black;
  color: white;
</style>
</head>
<body>
<h1>This Heading is Black with White Text</h1>
This page has a grey background color and a blue text.
Another paragraph.
</body>
</html>
```

This Heading is Black with White Text

This page has a grey background color and a blue text.

Another paragraph.



2. Styling Text

b. Text Alignment

- The text-align property is used to set the horizontal alignment of a text.
- A text can be left or right aligned, centered, or justified.
- The following example shows center aligned, and left and right aligned text (left alignment is default if text direction is left-to-right, and right alignment is default if text direction is right-to-left):





2. Styling Text

b. Text Alignment

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {
 text-align: center;
h2 {
 text-align: left;
h3 {
 text-align: right;
</style>
</head>
<body>
<h1>Heading 1 (center)</h1>
<h2>Heading 2 (left)</h2>
<h3>Heading 3 (right)</h3>
The three headings above are aligned center, left and right.
</body>
 /html>
```

Heading 1 (center)

Heading 2 (left)

Heading 3 (right)

The three headings above are aligned center, left and right.



2. Styling Text

b. Text Alignment

When the text-align property is set to "justify", each line is stretched so that every line has equal width, and the left and right margins are straight (like in newspapers):

```
<!DOCTYPE html>
<html>
<head>
<style>
                                                                        magazines).
div {
 border: 1px solid black;
 padding: 10px;
 width: 200px;
 height: 200px;
 text-align: justify;
</style>
</head>
<body>
<h1>Example text-align: justify;</h1>
The text-align: justify; value stretches the lines so that each line has equal width
(like in newspapers and magazines).
<div>
In my younger and more vulnerable years my father gave me some advice that I've been
turning over in my mind ever since. 'Whenever you feel like criticizing anyone,' he told
me, 'just remember that all the people in this world haven't had the advantages that
you've had.'
</div>
```

Example text-align: justify;

The text-align: justify; value stretches the lines so that each line has equal width (like in newspapers and

In my younger and more vulnerable years my father gave me some advice that I've been turning over in my mind ever since. 'Whenever you feel like criticizing anyone, he told me, 'just remember that all the people in this world haven't had the advantages that you've



2. Styling Text

c. Text Decoration

- The text-decoration property is used to set or remove decorations from text.
- The value text-decoration: none; is often used to remove underlines from links:

```
<!DOCTYPE html>
<html>
<head>
<style>
a {
   text-decoration: none;
}
</style>
</head>
<body>
A link with no underline: <a href="https://www.eelu.edu.eg">eelu.edu.eg</a>
</body>
</body>
</html>
```

A link with no underline: eelu.edu.eg





2. Styling Text

c. Text Decoration

The other text-decoration values are used to decorate text:

This is heading 1

This is heading 2

This is heading 3

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {
  text-decoration: overline;
h2 {
  text-decoration: line-through;
h3 {
 text-decoration: underline;
</style>
</head>
<body>
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<h3>This is heading 3</h3>
</body>
</html>
```

Note: It is not recommended to underline text that is not a link, as this often confuses the reader.





2. Styling Text

d. Text Transformation

• The text-transform property is used to specify uppercase and lowercase letters in a text.

• It can be used to turn everything into uppercase or lowercase letters, or capitalize the first letter of

each word:

THIS IS UPPERCASE TEXT.

this is lowercase text.

This Is Capitalize Text.

```
<!DOCTYPE html>
<html>
<head>
<style>
p.uppercase {
 text-transform: uppercase;
p.lowercase {
 text-transform: lowercase;
p.capitalize {
 text-transform: capitalize;
</style>
</head>
<body>
This is uppercase text.
This is lowercase text.
This is capitalize text.
</body>
</html>
```





CSS 3. Styling Font

- Choosing the right font has a huge impact on how the readers experience a website.
- The right font can create a strong identity for your brand.
- Using a font that is easy to read is important.
- It is also important to choose the correct color and text size for the font.

Generic Font Families

- In CSS there are five generic font families:
 - Serif fonts have a small stroke at the edges of each letter. They create a sense of formality and elegance.
 - Sans-serif fonts have clean lines (no small strokes attached). They create a modern and minimalistic look.
 - Monospace fonts here all the letters have the same fixed width. They create a mechanical look.
 - Cursive fonts imitate human handwriting.
 - Fantasy fonts are decorative/playful fonts.
- All the different font names belong to one of the generic font families.





CSS 3. Styling Font

Generic Font Families

Generic Font Family	Examples of Font Names	
Serif	Times New Roman Georgia Garamond	
Sans-serif	Arial Verdana Helvetica	
Monospace	Courier New Lucida Console Monaco	
Cursive	Brush Seript M7 Lucida Handwriting	
Fantasy	Copperplate Papyrus	





CSS 3. Styling Font

The CSS font-family Property

- In CSS, we use the font-family property to specify the font of a text.
- The font-family property should hold several font names as a "fallback" system, to ensure maximum compatibility between browsers/operating systems. Start with the font you want, and end with a generic family (to let the browser pick a similar font in the generic family, if no other fonts are available). The font names should be separated with comma.
- **Note**: If the font name is more than one word, it must be in quotation marks, like: "Times New Roman".





3. Styling Font

Example: Specify some different fonts for three paragraphs:

```
<!DOCTYPE html>
<html>
<head>
<style>
.p1 {
 font-family: "Times New Roman", Times, serif;
.p2 {
 font-family: Arial, Helvetica, sans-serif;
.p3 {
 font-family: "Lucida Console", "Courier New", monospace;
</style>
</head>
<body>
<h1>CSS font-family</h1>
This is a paragraph, shown in the Times New Roman font.
This is a paragraph, shown in the Arial font.
This is a paragraph, shown in the Lucida Console font.
</body>
</html>
```

CSS font-family

This is a paragraph, shown in the Times New Roman font.

This is a paragraph, shown in the Arial font.

This is a paragraph, shown in the Lucida Console font.



3. Styling Font

- Font Style
- The font-style property is mostly used to specify *italic text*.
- This property has three values:
 - normal The text is shown normally
 - italic The text is shown in italics
 - oblique The text is "leaning" (oblique is very similar to italic, but less supported)

GOOD LUCK in normal style.

GOOD LUCK in italic style.

GOOD LUCK in oblique style.

```
<!DOCTYPE html>
<html>
<head>
<style>
p.normal {
 font-style: normal;
p.italic {
 font-style: italic;
p.oblique {
 font-style: oblique;
</style>
</head>
<body>
 GOOD LUCK in normal style.
 GOOD LUCK in italic style.
 GOOD LUCK in oblique style.
</body>
</html>
```

3. Styling Font

- Font Size
- The font-size property sets the size of the text.
- Being able to manage the text size is important in web design. However, you should not use font size adjustments to make paragraphs look like headings, or headings look like paragraphs.
- Always use the proper HTML tags, like <h1> <h6> for headings and for paragraphs.
- The font-size value can be an absolute, or relative size.
- Absolute size:
 - Sets the text to a specified size
 - Does not allow a user to change the text size in all browsers (bad for accessibility reasons)
 - Absolute size is useful when the physical size of the output is known
- Relative size:
 - Sets the size relative to surrounding elements
 - Allows a user to change the text size in browsers
- **Note:** If you do not specify a font size, the default size for normal text, like paragraphs, is 16px (16px=1em).





3. Styling Font

- Font Size
- Setting the text size with pixels gives you full control over the text size:
- Example

This is heading 1

This is heading 2

This is a paragraph.

This is another paragraph.

• **Tip:** If you use pixels, you can still use the zoom tool to resize the entire page.

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {
 font-size: 40px;
h2 {
  font-size: 30px;
 font-size: 14px;
</style>
</head>
<body>
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
This is a paragraph.
This is another paragraph.
</body>
</html>
```

CSS 3. Styling Font

- Font Size
- Set Font Size With Em. To allow users to resize the text (in the browser menu), many developers use em instead of pixels.
- The default size of 1em is 16px.
- Example

This is heading 1

This is heading 2

This is a paragraph.

Specifying the font-size in em allows all major browsers to resize the text. Unfortunately, there is still a problem with older versions of IE. When resizing the text, it becomes larger/smaller than it should.

 In this example, the text size in em is the same as the previous example in pixels. However, with the em size, it is possible to adjust the text size in all browsers.

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {
  font-size: 2.5em; /* 40px/16=2.5em */
h2 {
  font-size: 1.875em; /* 30px/16=1.875em */
  font-size: 0.875em; /* 14px/16=0.875em */
</style>
</head>
<body>
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
This is a paragraph.
Specifying the font-size in em allows all major browsers to resize the text.
Unfortunately, there is still a problem with older versions of IE. When resizing the
text, it becomes larger/smaller than it should.
</body>
</html>
```





4. Styling Tables

a. Table Borders

- To specify table borders in CSS, use the border property.
- The example below specifies a black border for , , and elements:

Add a border to a table:

Firstname	Lastname	
Peter	Griffin	
Lois	Griffin	

```
<!DOCTYPE html>
<html>
<head>
<style>
table, th, td {
 border: 1px solid black;
</style>
</head>
<body>
<h2>Add a border to a table:</h2>
Firstname
  Lastname
 Peter
  Griffin
 Lois
  Griffin
 </body>
</html>
```



4. Styling Tables

a. Table Borders

- Full-Width Table
- The table above might seem small in some cases. If you need a table that should span the entire screen (full-width), add width: 100% to the element:

Full-width Table

Firstname	Lastname	
Peter	Griffin	
Lois	Griffin	

Double Borders

 Notice that the table in the examples above have double borders. This is because both the table and the and elements have separate borders.

```
<!DOCTYPE html>
<html>
<head>
<style>
table, th, td {
 border: 1px solid black;
table {
 width: 100%;
</style>
</head>
<body>
<h2>Full-width Table</h2>
(tr>
  Firstname
  Lastname
 Peter
  Griffin
 Lois
  Griffin
 </body>
</html>
```



4. Styling Tables

b. Collapse Table Borders

- To remove double borders.
- The border-collapse property sets whether the table borders should be collapsed into a single border:

Let the borders collapse

Firstname	Lastname	
Peter	Griffin	
Lois	Griffin	

```
<!DOCTYPE html>
<html>
<head>
<style>
table, td, th {
 border: 1px solid black;
table {
 width: 100%;
 border-collapse; collapse;
</style>
</head>
<body>
<h2>Let the borders collapse</h2>
Firstname
  Lastname
 Peter
  Griffin
 Lois
  Griffin
 </body>
</html>
```





4. Styling Tables

b. Collapse Table Borders

 If you only want a border around the table, only specify the border property for :

Single Border Around The Table

Firstname	Lastname
Peter	Griffin
Lois	Griffin

```
<!DOCTYPE html>
<html>
<head>
<style>
table {
 width: 100%;
 border-collapse; collapse;
 border: 1px solid black;
</style>
</head>
<body>
<h2>Single Border Around The Table</h2>
Firstname
  Lastname
 Peter
  Griffin
 Lois
  Griffin
 </body>
</html>
```

CSS 4. Styling Tables

c. Table Size

- The width and height of a table are defined by the width and height properties.
- To set the width of the table to 100%, and the height of the elements to 70px:

```
<style>
table, td, th {
  border: 1px solid black;
}
table {
  border-collapse: collapse;
  width: 100%;
}
th {
  height: 70px;
}
</style>
```

• To create a table that should only span half the page, use width: 50%:

```
<style>
table, td, th {
 border: 1px solid black;
table {
 border-collapse: collapse;
 width: 50%;
th {
 height: 70px;
</style>
```



4. Styling Tables

d. Table Alignment

- Horizontal Alignment
- The text-align property sets the horizontal alignment (like left, right, or center) of the content in or .
- By default, the content of elements are center-aligned and the content of elements are left-aligned.





4. Styling Tables

d. Table Alignment

Horizontal Alignment

 To center-align the content of elements as well, use textalign: center property

```
<head>
<style>
table, td, th {
 border: 1px solid black;
table {
 border-collapse: collapse;
 width: 100%;
td {
 text-align: center;
</style>
</head>
```

 To left-align the content, force the alignment of elements to be left-aligned, with the text-align: left property

```
<head>
<style>
table, td, th {
 border: 1px solid black;
table {
 border-collapse: collapse;
 width: 100%;
th {
 text-align: left;
</style>
</head>
```



4. Styling Tables

- e. Table Style
- Table Padding
- To control the space between the border and the content in a table, use the padding property on and elements:

```
<style>
table, td, th {
  border: 1px solid #ddd;
  text-align: left;
}
table {
  border-collapse: collapse;
  width: 100%;
}
th, td {
  padding: 15px;
}
</style>
```

The padding Property

This property adds space between the border and the content in a table.

Firstname	Lastname	Savings
Peter	Griffin	\$100
Lois	Griffin	\$150
Joe	Swanson	\$300
Cleveland	Brown	\$250





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THANK YOU FOR WATCHING

QUESTIONS?