

# MEDIA QUERIES AND TABLES

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# MEDIA QUERIES

## SECTION 13.1: TERMINOLOGY AND STRUCTURE

**Media queries** allow one to apply CSS rules based on the type of device / media (e.g. screen, print or handheld) called media type, additional aspects of the device are described with media features such as the availability of color or viewport dimensions.

# SECTION 13.1: TERMINOLOGY AND STRUCTURE

## General Structure of a Media Query

```
@media [...] {  
    /* One or more CSS rules to apply when the query is satisfied */  
}
```

## A Media Query containing a Media Type

```
@media print {  
    /* One or more CSS rules to apply when the query is satisfied */  
}
```

## A Media Query containing a Media Type and a Media Feature

```
@media screen and (max-width: 600px) {  
    /* One or more CSS rules to apply when the query is satisfied */  
}
```

## A Media Query containing a Media Feature (and an implicit Media Type of "all")

```
@media (orientation: portrait) {  
    /* One or more CSS rules to apply when the query is satisfied */  
}
```

## SECTION 13.2: BASIC EXAMPLE

```
@media screen and (min-width: 720px) {  
    body {  
        background-color: skyblue;  
    }  
}
```

The above media query specifies two conditions:

1. The page must be viewed on a normal screen (not a printed page, projector, etc).
2. The width of the user's view port must be at least 720 pixels.

## SECTION 13.3: MEDIATYPE

Media queries have an optional mediatype parameter. This parameter is placed directly after the @media declaration (@media mediatype), for example:

```
@media print {  
    html {  
        background-color: white;  
    }  
}
```

## SECTION 13.3: MEDIATYPE

The list of `mediatype` can be understood better with the following table:

<b>Media Type</b>	<b>Description</b>
<code>all</code>	Apply to all devices
<code>screen</code>	Default computers
<code>print</code>	Printers in general. Used to style print-versions of websites
<code>handheld</code>	PDA's, cellphones and hand-held devices with a small screen
<code>projection</code>	For projected presentation, for example projectors
<code>aural</code>	Speech Systems
<code>braille</code>	Braille tactile devices
<code>embossed</code>	Paged braille printers
<code>tv</code>	Television-type devices
<code>tty</code>	Devices with a fixed-pitch character grid. Terminals, portables.

## SECTION 13.5: WIDTH VS VIEWPORT

When we are using "width" with media queries it is important to set the meta tag correctly. Basic meta tag looks like this and it needs to be put inside the <head> tag.

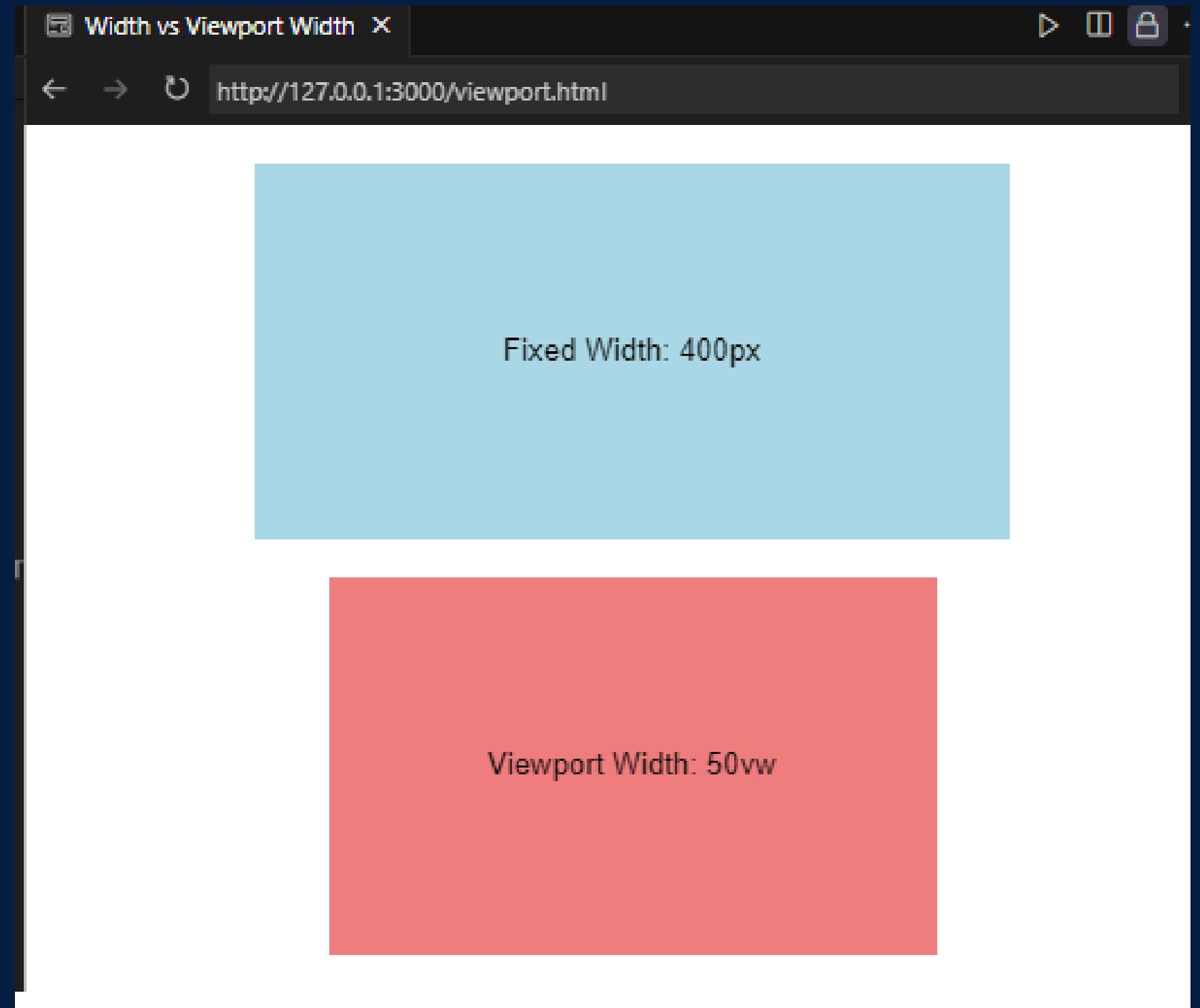
```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

### Why this is important?

The width media feature describes the width of the rendering surface of the output device (such as the width of the document window, or the width of the page box on a printer).

# SECTION 13.5: WIDTH VS VIEWPORT

```
viewport.html > html > head > style > .viewport-width
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Width vs Viewport Width</title>
7      <style>
8          body {
9              margin: 0;
10             font-family: Arial, sans-serif;
11         }
12
13         /* Fixed width */
14         .fixed-width {
15             width: 400px; /* Fixed width */
16             height: 200px;
17             background-color: lightblue;
18             margin: 20px auto;
19             text-align: center;
20             line-height: 200px; /* Center text vertically */
21         }
22
23         /* Viewport width */
24         .viewport-width {
25             width: 50vw; /* 50% of the viewport width */
26             height: 200px;
27             background-color: lightcoral;
28             margin: 20px auto;
29             text-align: center;
30             line-height: 200px; /* Center text vertically */
31         }
32     </style>
33 </head>
34 <body>
35
36     <div class="fixed-width">Fixed Width: 400px</div>
37     <div class="viewport-width">Viewport Width: 50vw</div>
38
39 </body>
40 </html>
```



## SECTION 13.6: USING MEDIA QUERIES TO TARGET DIFFERENT SCREEN SIZES

Often times, responsive web design involves media queries, which are CSS blocks that are only executed if a condition is satisfied. This is useful for responsive web design because you can use media queries to specify different CSS styles for the mobile version of your website versus the desktop version.

## SECTION 13.6: USING MEDIA QUERIES TO TARGET DIFFERENT SCREEN SIZES

```
@media only screen and (min-width: 300px) and (max-width: 767px) {  
    .site-title {  
        font-size: 80%;  
    }  
  
    /* Styles in this block are only applied if the screen size is atleast 300px wide, but no more  
    than 767px */  
}  
  
@media only screen and (min-width: 768px) and (max-width: 1023px) {  
    .site-title {  
        font-size: 90%;  
    }  
  
    /* Styles in this block are only applied if the screen size is atleast 768px wide, but no more  
    than 1023px */  
}
```

# SECTION 13.7: USE ON LINK TAG

The screenshot shows a code editor interface with several tabs open. The tabs include "Welcome", "media screen.html", "used link.html", "# external.css", "viewport.html", and "Document". The "Document" tab is active, displaying a browser preview at <http://127.0.0.1:3000/used link.html>. The preview contains the following text:

Resize the browser window. When the width of this document is 500 pixels or less, the background-color is "tan", otherwise it is "powderblue".

The "external.css" file contains the following CSS code:

```
/* external.css */ @media screen and (max-width: 500px) {  
    body {  
        background-color: tan;  
    }  
}  
  
@media screen and (max-width: 500px) {  
    body {  
        background-color: powderblue;  
    }  
}
```

The "used link.html" file contains the following HTML code:

```
<!DOCTYPE html>  
<html lang="en">  
    <head>  
        <meta charset="UTF-8">  
        <meta name="viewport" content="width=device-width, initial-scale=1.0">  
        <title>Document</title>  
    </head>  
    <body>  
        <p>Resize the browser window. When the width of this document is 500  
        </p>  
    </body>  
</html>
```

The "viewport.html" file is also visible in the background.

# TABLES

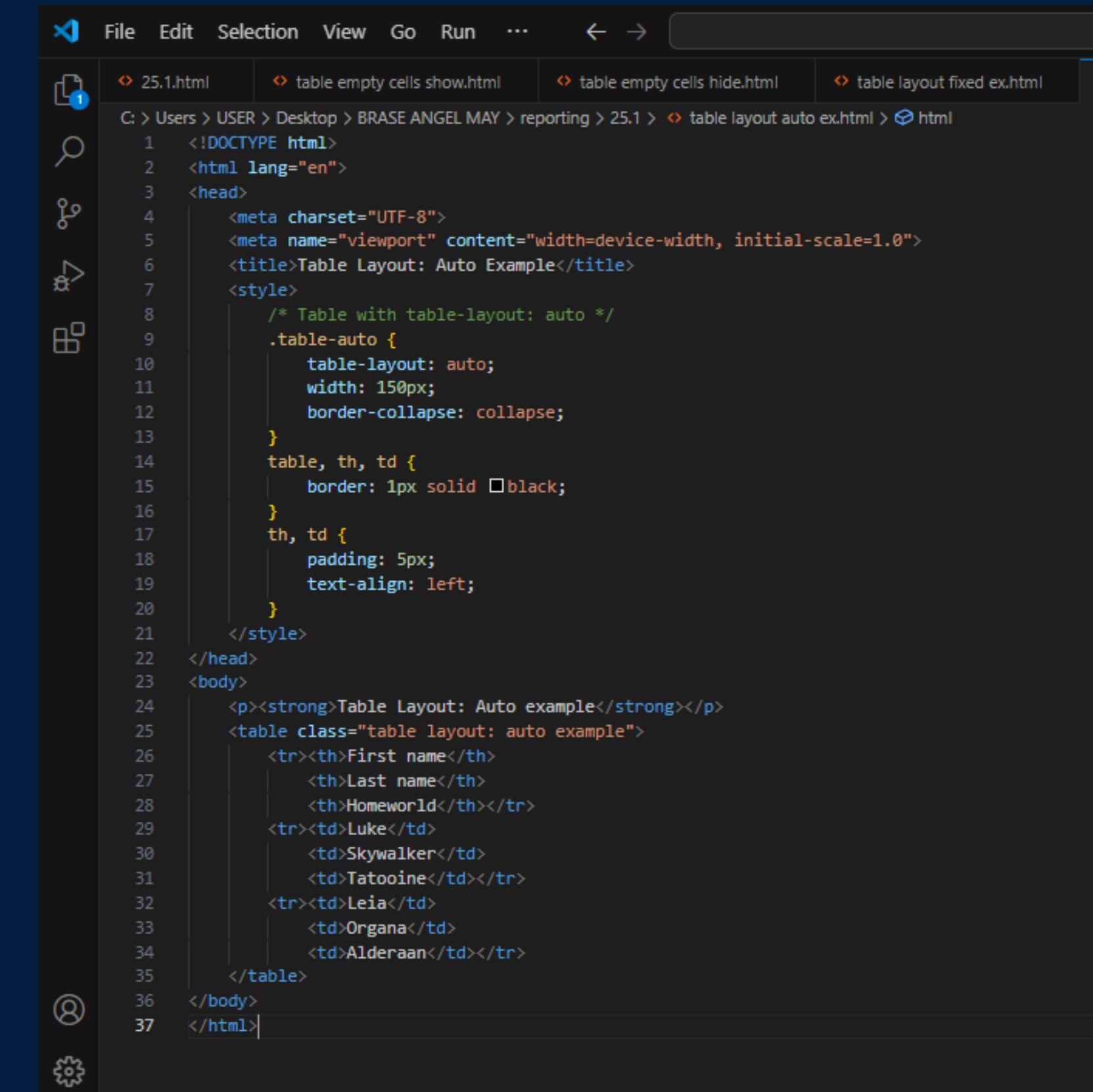
# SECTION 25.1: TABLE-LAYOUT

The **table-layout** property changes the algorithm that is used for the layout of a table.

Below an example of two tables both set to width: 150px:

# AUTO

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan



The screenshot shows a code editor window with the following details:

- File Bar:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for file operations (New, Open, Save, Find, Copy, Paste, etc.) and a search bar.
- Code Area:** Displays the HTML and CSS code for the "25.1.html" file.
- Code Content:**

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Table Layout: Auto Example</title>
<style>
/* Table with table-layout: auto */
.table-auto {
    table-layout: auto;
    width: 150px;
    border-collapse: collapse;
}
table, th, td {
    border: 1px solid black;
}
th, td {
    padding: 5px;
    text-align: left;
}
</style>
</head>
<body>
<p><strong>Table Layout: Auto example</strong></p>
<table class="table layout: auto example">
<tr><th>First name</th>
<th>Last name</th>
<th>Homeworld</th></tr>
<tr><td>Luke</td>
<td>Skywalker</td>
<td>Tatooine</td>
</tr>
<tr><td>Leia</td>
<td>Organa</td>
<td>Alderaan</td>
</tr>
</table>
</body>
</html>
```

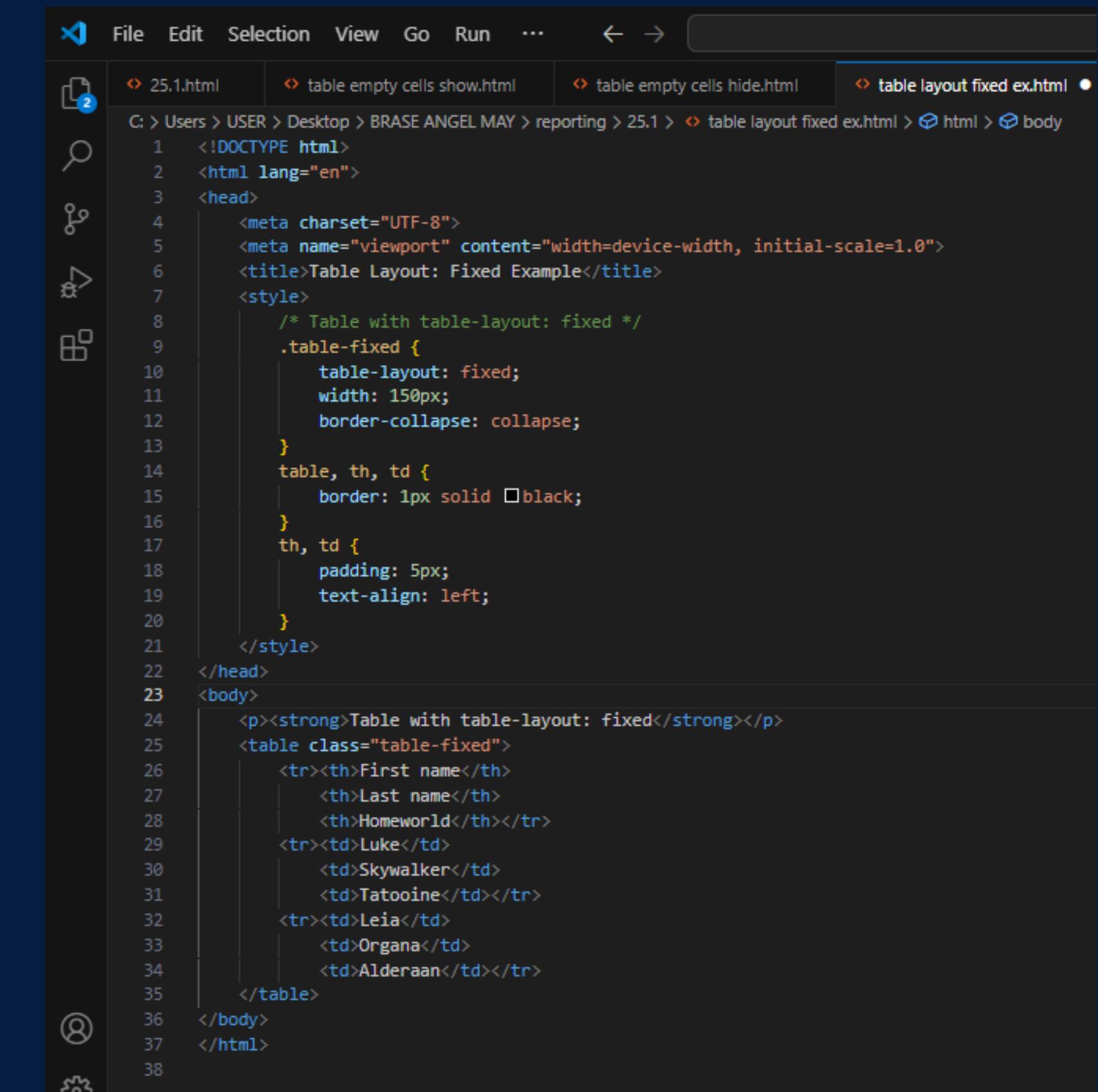
# SECTION 25.1: TABLE-LAYOUT

The **table-layout** property changes the algorithm that is used for the layout of a table.

Below an example of two tables both set to width: 150px:

# FIXED

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan



The screenshot shows a code editor with the file `table layout fixed ex.html` open. The code defines a table with three columns: First name, Last name, and Homeworld. The table has three rows: Luke Skywalker, Tatooine; Leia Organa, Alderaan. The CSS uses the `table-layout: fixed` property to ensure the table's width is 150px, even if its contents exceed that width. The table is styled with black borders and padding of 5px. The text-align is left for the cells.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Table Layout: Fixed Example</title>
    <style>
        /* Table with table-layout: fixed */
        .table-fixed {
            table-layout: fixed;
            width: 150px;
            border-collapse: collapse;
        }
        table, th, td {
            border: 1px solid black;
        }
        th, td {
            padding: 5px;
            text-align: left;
        }
    </style>
</head>
<body>
    <p><strong>Table with table-layout: fixed</strong></p>
    <table class="table-fixed">
        <tr><th>First name</th>
            <th>Last name</th>
            <th>Homeworld</th>
        </tr>
        <tr><td>Luke</td>
            <td>Skywalker</td>
            <td>Tatooine</td>
        </tr>
        <tr><td>Leia</td>
            <td>Organa</td>
            <td>Alderaan</td>
        </tr>
    </table>
</body>
</html>
```

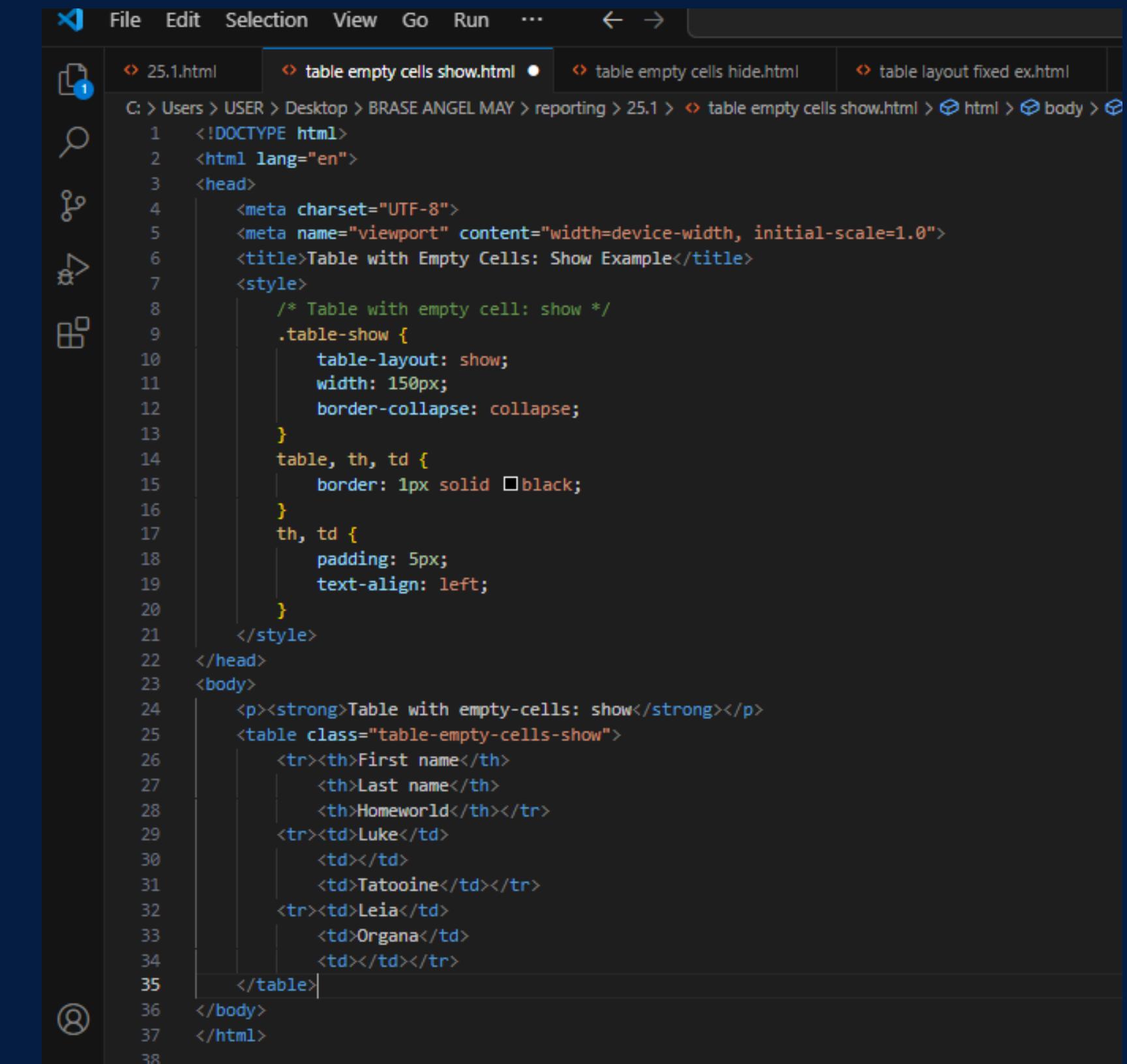
## SECTION 25.2: EMPTY-CELLS

The empty-cells property determines if cells with no content should be displayed or not. This has no effect unless border-collapse is set to separate.

Below an example with two tables with different values set to the empty-cells property:

# SHOW

First name	Last name	Homeworld
Luke		Tatooine
Leia	Organa	



The screenshot shows a code editor interface with a dark theme. The left sidebar contains icons for file operations like Open, Save, Find, and Run. The top menu bar includes File, Edit, Selection, View, Go, Run, and others. The title bar shows the current file path: C:\Users\USER\Desktop\BRASE ANGEL MAY\reporting\25.1\table empty cells show.html. The main area displays the following code:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Table with Empty Cells: Show Example</title>
    <style>
        /* Table with empty cell: show */
        .table-show {
            table-layout: show;
            width: 150px;
            border-collapse: collapse;
        }
        table, th, td {
            border: 1px solid black;
        }
        th, td {
            padding: 5px;
            text-align: left;
        }
    </style>
</head>
<body>
    <p><strong>Table with empty-cells: show</strong></p>
    <table class="table-empty-cells-show">
        <tr><th>First name</th>
            <th>Last name</th>
            <th>Homeworld</th></tr>
        <tr><td>Luke</td>
            <td></td>
            <td>Tatooine</td></tr>
        <tr><td>Leia</td>
            <td>Organa</td>
            <td></td></tr>
    </table>
</body>
</html>
```

## SECTION 25.2: EMPTY-CELLS

The empty-cells property determines if cells with no content should be displayed or not. This has no effect unless border-collapse is set to separate.

Below an example with two tables with different values set to the empty-cells property:

# HIDE

First name	Last name	Homeworld
Luke		Tatooine
Leia	Organa	

```
C:\> Users > USER > Desktop > BRASE ANGEL MAY > reporting > 25.1 > table empty cells hide.html > html > body > script
Debug
  1  <!DOCTYPE html>
  2  <html lang="en">
  3  <head>
  4    <meta charset="UTF-8">
  5    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  6    <title>Table with Empty Cells: Hide</title>
  7    <style>
  8      .table-hide {
  9        table-layout: hide;
 10        width: 150px;
 11        border-collapse: collapse;
 12      }
 13      table, th, td {
 14        border: 1px solid black;
 15      }
 16      th, td {
 17        padding: 5px;
 18        text-align: left;
 19      }
 20      .hidden {
 21        visibility: hidden;
 22      }
 23    </style>
 24  </head>
 25  <body>
 26    <p><strong>Table with Empty Cells: Hide</strong></p>
 27  <table id="empty-cells-hide">
 28    <tr><th>First Name</th>
 29    <th>Last Name</th>
 30    <th>Homeworld</th></tr>
 31    <tr><td>Luke</td>
 32    <td></td>
 33    <td>Tatooine</td></tr>
 34    <tr><td>Leia</td>
 35    <td>Organa</td>
 36    <td></td></tr>
 37  </table>
 38  <script>
 39    // Function to hide empty cells
 40    function hideEmptyCells() {
 41      const table = document.getElementById("empty-cells-hide");
 42      for (let i = 1; i < table.rows.length; i++) { // skip the header row
 43        const cells = table.rows[i].cells;
 44        for (let j = 0; j < cells.length; j++) {
 45          if (cells[j].innerText.trim() === '') {
 46            cells[j].classList.add('hidden'); // Add class to hide empty cells
 47          }
 48        }
 49      }
 50    }
 51    // Call the function to hide empty cells
 52    hideEmptyCells();
 53  </script>
 54  </body>
 55  </html>
```

## SECTION 25.3: BORDER-COLLAPSE

The border-collapse property determines if a tables' borders should be separated or merged.

Below an example of two tables with different values to the border-collapse property

# SEPARATE

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

```
... ④ table empty cells hide.html ④ border collapse separate.html X ④ border collapse collapse.html
C: > Users > USER > Desktop > BRASE ANGEL MAY > reporting > 25.1 > ④ border collapse separate.html > html
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Table with Border Collapse: Separate</title>
7      <style>
8          .table-separate {
9              table-layout: separate;
10             width: 50%;
11             border-collapse: separate; /* Use separate borders */
12             border-spacing: 10px; /* Space between cells */
13         }
14         table, th, td {
15             border: 1px solid black;
16         }
17         th, td {
18             padding: 10px;
19             text-align: left;
20         }
21     </style>
22 </head>
23 <body>
24
25     <p><strong>Table with Border Collapse: Separate</strong></p>
26     <table class="table-border-collapse-separate">
27         <tr>
28             <th>First Name</th>
29             <th>Last Name</th>
30             <th>Homeworld</th>
31         </tr>
32         <tr>
33             <td>Luke</td>
34             <td>Skywalker</td>
35             <td>Tatooine</td>
36         </tr>
37         <tr>
38             <td>Leia</td>
39             <td>Organa</td>
40             <td>Alderaan</td>
41         </tr>
42     </table>
43
44 </body>
45 </html>
```

## SECTION 25.3: BORDER-COLLAPSE

The border-collapse property determines if a tables' borders should be separated or merged.

Below an example of two tables with different values to the border-collapse property

# COLLAPSE

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

```
... <table empty cells hide.html < border collapse separate.html < border collapse collapse.html X  
C: > Users > USER > Desktop > BRASE ANGEL MAY > reporting > 25.1 > < border collapse collapse.html > htm  
1   <!DOCTYPE html>  
2   <html lang="en">  
3   <head>  
4       <meta charset="UTF-8">  
5       <meta name="viewport" content="width=device-width, initial-scale=1.0">  
6       <title>Table with Border Collapse: Collapse</title>  
7       <style>  
8           .table-collapse {  
9               table-layout: collapse;  
10              width: 50%;  
11              border-collapse: collapse;  
12          }  
13          table, th, td {  
14              border: 1px solid black;  
15          }  
16          th, td {  
17              padding: 10px;  
18              text-align: left;  
19          }  
20      </style>  
21  </head>  
22  <body>  
23  
24      <p><strong>Table with Border Collapse: Collapse</strong></p>  
25      <table class="table-collapse">  
26          <tr>  
27              <th>First Name</th>  
28              <th>Last Name</th>  
29              <th>Homeworld</th>  
30          </tr>  
31          <tr>  
32              <td>Luke</td>  
33              <td>Skywalker</td>  
34              <td>Tatooine</td>  
35          </tr>  
36          <tr>  
37              <td>Leia</td>  
38              <td>Organa</td>  
39              <td>Alderaan</td>  
40          </tr>  
41  
42      </table>  
43  
44  </body>  
45 </html>
```

# SECTION 25.4: BORDER-SPACING

The border-spacing property determines the spacing between cells. This has no effect unless border-collapse is set to separate.

Below an example of two tables with different values to the border-spacing property

2PX

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

```
C:\> Users > USER > Desktop > BRASE ANGEL MAY > reporting > 25.1 > border spacing 2px.html > html > border spacing 2px.html
 1  <!DOCTYPE html>
 2  <html lang="en">
 3  <head>
 4      <meta charset="UTF-8">
 5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
 6      <title>Table with Border Spacing: 2px</title>
 7      <style>
 8          .table-2px {
 9              table-layout: 2px;
10              width: 50%;
11              border-collapse: separate; /* Use separate borders */
12              border-spacing: 2px; /* Space between cells */
13          }
14          table, th, td {
15              border: 1px solid black;
16          }
17          th, td {
18              padding: 10px;
19              text-align: left;
20          }
21      </style>
22  </head>
23  <body>
24      <p><strong>Table with Border Spacing: 2px</strong></p>
25      <table class="table-2px">
26          <tr>
27              <th>First Name</th>
28              <th>Last Name</th>
29              <th>Homeworld</th>
30          </tr>
31          <tr>
32              <td>Luke</td>
33              <td>Organa</td>
34              <td>Tatooine</td>
35          </tr>
36          <tr>
37              <td>Leia</td>
38              <td>Organa</td>
39              <td>Alderaan</td>
40          </tr>
41          <tr>
42              <td>Han</td>
43              <td>Solo</td>
44              <td>Corellia</td>
45          </tr>
46      </table>
47  </body>
48 </html>
```

## SECTION 25.4: BORDER-SPACING

The border-spacing property determines the spacing between cells. This has no effect unless border-collapse is set to separate.

Below an example of two tables with different values to the border-spacing property

8PX

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="UTF-8">
5     <meta name="viewport" content="width=device-width, initial-scale=1.0">
6     <title>Table with Border Spacing: 8px</title>
7   <style>
8     .table-8px {
9       table-layout: 8px;
10      width: 50%;
11      border-collapse: separate; /* Use separate borders */
12      border-spacing: 8px; /* Space between cells */
13    }
14   table, th, td {
15     border: 1px solid black;
16   }
17   th, td {
18     padding: 10px;
19     text-align: left;
20   }
21 </style>
22 </head>
23 <body>
24
25 <p><strong>Table with Border Spacing: 8px</strong></p>
26 <table class="table-8px">
27   <tr>
28     <th>First Name</th>
29     <th>Last Name</th>
30     <th>Homeworld</th>
31   </tr>
32   <tr>
33     <td>Luke</td>
34     <td>Skywalker</td>
35     <td>Tatooine</td>
36   </tr>
37   <tr>
38     <td>Leia</td>
39     <td>Organa</td>
40     <td>Alderaan</td>
41   </tr>
42 </table>
43
44 </body>
45 </html>
```



## SECTION 25.5: CAPTION-SIDE

The caption-side property determines the vertical positioning of the <caption> element within a table. This has no effect if such element does not exist.

Below an example with two tables with different values set to the caption-side property.

**TOP**

Star Wars figures		
First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

```
C:\Users\USER\Desktop\BRASE ANGEL MAY\reporting\25.1\25.3\captionside.html [HTML] [head]
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Table with Caption at the Top</title>
7      <style>
8          .table-top {
9              table-layout: collapse;
10             width: 50%;
11             border-collapse: collapse;
12         }
13         table, th, td {
14             border: 1px solid black;
15         }
16         th, td {
17             padding: 10px;
18             text-align: left;
19         }
20         caption {
21             caption-side: top;
22             font-weight: bold; /* Style the caption */
23             margin-bottom: 10px; /* Space between caption and table */
24         }
25     </style>
26 </head>
27 <body>
28     <p><strong>Table with Caption at the Top</strong></p>
29     <table class="table-collapse">
30         <caption>Star Wars Figures</caption>
31         <tr>
32             <th>First Name</th>
33             <th>Last Name</th>
34             <th>Homeworld</th>
35         </tr>
36         <tr>
37             <td>Luke</td>
38             <td>Skywalker</td>
39             <td>Tatooine</td>
40         </tr>
41         <tr>
42             <td>Leia</td>
43             <td>Organa</td>
44             <td>Alderaan</td>
45         </tr>
46     </table>
47 </body>
48 </html>
```

## SECTION 25.5: CAPTION-SIDE

The caption-side property determines the vertical positioning of the <caption> element within a table. This has no effect if such element does not exist.

Below an example with two tables with different values set to the caption-side property.

# BOTTOM

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

Star Wars figures

```
C:\Users\USER\Desktop\BRASE ANGEL MAY\reporting\25.1\25.3\caption side bottom.html
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Table with Caption at the Bottom</title>
7      <style>
8          .table-bottom {
9              table-layout: collapse;
10             width: 50%;
11             border-collapse: collapse;
12         }
13         table, th, td {
14             border: 1px solid black;
15         }
16         th, td {
17             padding: 10px;
18             text-align: left;
19         }
20         caption {
21             caption-side: bottom;
22             font-weight: bold; /* Style the caption */
23             margin-bottom: 10px; /* Space between caption and table */
24         }
25     </style>
26  </head>
27  <body>
28      <p><strong>Table with Caption at the Bottom</strong></p>
29      <table class="table-collapse">
30          <caption>Star Wars Figures</caption>
31          <tr>
32              <th>First Name</th>
33              <th>Last Name</th>
34              <th>Homeworld</th>
35          </tr>
36          <tr>
37              <td>Luke</td>
38              <td>Skywalker</td>
39              <td>Tatooine</td>
40          </tr>
41          <tr>
42              <td>Leia</td>
43              <td>Organa</td>
44              <td>Alderaan</td>
45          </tr>
46      </table>
47  </body>
48 </html>
```

# HANDSON

First name	Last name	Course
Angel May	Brase	BSIS
EK	Jose	BSIS

Fixed Width:300px

Viewport Width:40vw