

Grids and Flexbox

CSS Grids

Grids allow you to display items in a table view on a webpage

HTML: `<div class="grid-container">`

`<div class="grid-item">1</div>`

`<div class="grid-item">2</div>`

`<div class="grid-item">3</div>`

`<div class="grid-item">4</div>`

`<div class="grid-item">5</div>`

`<div class="grid-item">6</div>`

`</div>`

1	2	3
4	5	6

CSS: `.grid-container {`

`display: grid;`

`grid-template-columns: auto auto auto; -> This specifies the number of columns`

`}`


Grid Container vs Item

Grid Container specifies the grid as a whole (Similar to a div container)

```
.grid-container {  
    display: grid;  
    grid-template-columns: auto auto auto auto;  
}
```

Grid Item specifies each cell within the grid. Typically you only use this when trying to format a specific cell in the grid

```
.item1 {  
    grid-column-start: 1;  
}
```



Styling Grids

- `row-gap: 50px;`
- `column-gap: 50px;`
- `background-color`
- `border`
- `text-align`



Expanding Column and Row Items

To expand content into multiple columns you can specify with column start and end

```
.item1 {  
    grid-column-start: 1;  
    grid-column-end: 3;  
}
```

To expand content into multiple rows you can specify with row start and end

```
.item1 {  
    grid-row-start: 1;  
    grid-row-end: 3;  
}
```



CSS Flexbox

Flexbox works similar to grid but it is more responsive in how it displays and can better scale to the devices display

Similar to Grid it uses a Container and Item methodology

```
.container {  
    display: flex; /* or inline-flex */  
}  
  
.item {  
    flex-shrink: 3;  
}
```



Flex-Wrap

By default Flex will try to fit onto one line. By using flex-wrap you can dynamically have your tables scale to the page

- **Flex-wrap: nowrap**
 - All flex items will fit onto one line
- **Flex-wrap: wrap**
 - All flex items will fit onto multiple lines
- **Flex-wrap: wrap-reverse**
 - All flex items will fit onto multiple lines but start from the bottom



Flex-Direction

By default flex will display items in order left to right. You can change this by using flex-direction

- Flex-direction: row
 - Left to right
- Flex-direction: row-reverse
 - Right to left
- Flex-direction: column
 - Top to bottom
- Flex-direction: column-reverse
 - Bottom to top



CSS Libraries

CSS Libraries is ready to go code that helps you format a page. Some top libraries are:

- Bootstrap
- Tailwind css
- W3.css
- Foundation
- Bulma
- Skeleton



How to import a css library

There are 2 ways you can reference a CSS library in your code

Absolute

```
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
```

Relative

```
<link rel="stylesheet" href="w3.css">
```



How to use a library

Every CSS library has documentation and a “Getting Started” page

Tailwind Css: <https://tailwindcss.com/docs/installation>

W3.css: https://www.w3schools.com/w3css/w3css_references.asp

Bootstrap: <https://getbootstrap.com/docs/3.4/css/>



W3.CSS Demo



Tailwind CSS Demo



Many MANY CSS libraries

There are millions of CSS libraries that you can utilize in your code. When utilizing CSS libraries it is always crucial to test your code and to check the privacy policies of the libraries you are using.

Remember a good coder utilizes the tools available to them but also **MUST** understand how their code works!

