

# Web Design & Development I

## IDD103

### Tailwind CSS - Fundamental I



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## What is Tailwind CSS?

- Tailwind is a CSS framework that uses low-level “utility” classes to create layout. This is also known as **utility-first** framework.
- Used to style web pages.
- CSS framework like Bootstrap use classes that are directly correlated to components (eg. Navbars). Tailwind uses classes as utilities to put together to build your own custom components.

## Utility Classes and Their Advantages?

- Utility classes are simple HTML classes typically scoped to a single and specific CSS property.
- Example:

```
<div class="max-w-xl mx-auto p-2">  
  <h2 class="text-2xl font-bold mb-2">Hello</h2>  
</div>
```

- Named according to their purpose
- Easy to understand and remember
- Knows exactly what it does
- No naming inconsistencies
- Allow for very fast layout creation and testing.

## How is Tailwind different from Bootstrap?



→ Newer framework that is gaining popularity.

→ Low-level classes for fast UI

→ Popular framework that has been around a while.

→ High level pre-designed

development.

- More flexible and unique.
- You need to know quite a bit of CSS.
- HTML usually has a lot of classes.

components.

- Some Bootstrap sites look very similar.
- Easier for beginners.
- Higher level components usually means less classes.

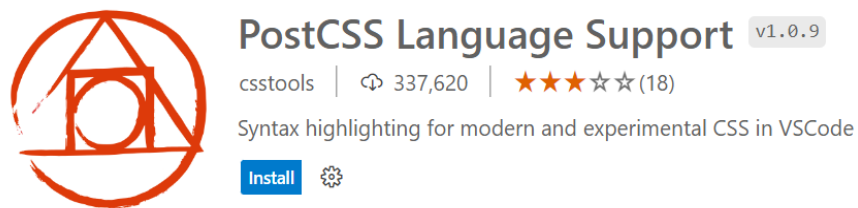
## Environment Setup

### 1. Install Visual Studio code

- Download the Visual Studio Code installer for Windows  
<https://code.visualstudio.com/Download>
- Once it is downloaded, run the installer (VSCodeUserSetup-{version}.exe).
- By default, VS Code is installed under  
`C:\users\{username}\AppData\Local\Programs\Microsoft VS Code`
- Recommended VS code Extension
  - Tailwind CSS IntelliSense



### ■ PostCSS Language Support



2. To add TailwindCSS to the project copy-paste the script `<script>` into `<head>`.  
`<script src="http://cdn.tailwindcss.com"></script>`

## Colors Palette

Slate			Gray		
	50 #f8fafc	900 #0f172a		50 #f9fafb	900 #111827
Zinc			Neutral		
	50 #fafafa	900 #18181b		50 #fafafa	900 #171717
Stone			Red		
	50 #fafaf9	900 #1c1917		50 #fef2f2	900 #7f1d1d
Orange			Amber		
	50 #fff7ed	900 #7c2d12		50 #fffbeb	900 #78350f
Yellow			Lime		
	50 #fefce8	900 #713f12		50 #f7fee7	900 #365314
Green			Emerald		
	50 #f0fdf4	900 #14532d		50 #ecfdf5	900 #064e3b
Teal			Cyan		
	50 #f0fdfa	900 #134e4a		50 #ecfeff	900 #164e63
Sky			Blue		
	50 #f0f9ff	900 #0c4a6e		50 #eff6ff	900 #1e3a8a
Indigo			Violet		
	50 #eef2ff	900 #312e81		50 #f5f3ff	900 #4c1d95
Purple			Fuchsia		
	50 #faf5ff	900 #581c87		50 #fdf4ff	900 #701a75
Pink			Rose		
	50 #fdf2f8	900 #831843		50 #fff1f2	900 #881337

- Color shades have a numeric scale between 50 to 900 (where 50 is light and 900 is dark).

## Text Color

- Color black and white don't have any shades

<code>&lt;p class="text-black"&gt;Hello Everyone!.&lt;/p&gt;</code>	Hello Everyone!.
<code>&lt;p class="text-white"&gt;Hello Everyone!.&lt;/p&gt;</code>	Hello Everyone!.
<code>&lt;p class="text-rose-200"&gt;Hello Everyone!.&lt;/p&gt;</code>	Hello Everyone!.
<code>&lt;p class="text-sky-500"&gt;Hello Everyone!.&lt;/p&gt;</code>	Hello Everyone!.
<code>&lt;p class="text-pink-900"&gt;Hello Everyone!.&lt;/p&gt;</code>	Hello Everyone!.

## Text Underline

<code>&lt;p class="underline decoration-white"&gt;Hello Everyone!.&lt;/p&gt;</code>	<u>Hello Everyone!.</u>
<code>&lt;p class="underline decoration-rose-200"&gt;Hello Everyone!.&lt;/p&gt;</code>	<u>Hello Everyone!.</u>
<code>&lt;p class="underline decoration-sky-500"&gt;Hello Everyone!.&lt;/p&gt;</code>	<u>Hello Everyone!.</u>
<code>&lt;p class="underline decoration-pink-900"&gt;Hello Everyone!.&lt;/p&gt;</code>	<u>Hello Everyone!.</u>

## Border Color

<code>&lt;input type="text" class="border border-black"&gt;</code>	<input type="text"/>
<code>&lt;input type="text" class="border border-rose-200"&gt;</code>	<input type="text"/>
<code>&lt;input type="text" class="border border-sky-500"&gt;</code>	<input type="text"/>
<code>&lt;input type="text" class="border pink-900"&gt;</code>	<input type="text"/>


## Background Color

<code>&lt;p class="bg-White"&gt;Hello Everyone!.&lt;/p&gt;</code>	Hello Everyone!.
<code>&lt;p class="bg-rose-200"&gt;Hello Everyone!.&lt;/p&gt;</code>	Hello Everyone!.
<code>&lt;p class="bg-sky-500"&gt;Hello Everyone!.&lt;/p&gt;</code>	Hello Everyone!.
<code>&lt;p class="bg-pink-900"&gt;Hello Everyone!.&lt;/p&gt;</code>	Hello Everyone!.

## Outline Colors

<code>&lt;button class="outline outline-red-500"&gt;Submit&lt;/button&gt;</code> <code>&lt;button class="outline outline-sky-900"&gt;Submit&lt;/button&gt;</code>	
--	--

## Box Shadow Colors

<code>&lt;button class="shadow-lg shadow-red-500"&gt;Submit&lt;/button&gt;</code> <code>&lt;button class="shadow-lg shadow-sky-900"&gt;Submit&lt;/button&gt;</code>	
--	--

## Arbitrary Colors

<code>&lt;div class="bg-[#e9c6c6]"&gt; Hello!!&lt;/div&gt;</code>	Hello!!
<code>&lt;div class="bg-[rgb(255,0,0)]"&gt; Hello!!&lt;/div&gt;</code>	Hello!!
<code>&lt;div class="bg-[steelblue]"&gt; Hello!!&lt;/div&gt;</code>	Hello!!



## Container and Spacing

- Breakpoints for container

Class	Breakpoint	Properties
container	none	width: 100%
	sm (640px)	max-width: 640px;
	md (760px)	max-width: 760px;
	lg (1024px)	max-width: 1024px;
	xl (1280px)	max-width: 1280px;
	2xl (1536px)	max-width: 1536px;

### Using the Container

- The container class sets the max-width of an element to match the min-width of the current breakpoint. This is useful if you'd prefer to design for a fixed set of screen sizes instead of trying to accommodate a fully fluid viewport.
- Tailwind's container does not center itself automatically and does not have any built-in horizontal padding.
- To center a container, use the mx-auto utility.
- Example:

```
<div class="container mx-auto">  
  <!-- ... -->  
</div>
```

## Margin

- Control the margin on one side of an element using the `m{t|r|b|l}-{size}` utilities.
- Example, `mt-6` would add 1.5rem of margin to the top of an element, `mr-4` would add 1rem of margin to the right of an element, `mb-8` would add 2rem of margin to the bottom of an element, and `ml-2` would add 0.5rem of margin to the left of an element.
- Utilities for controlling an element's margin.

Class	Properties	Class	Properties
<code>m-0</code>	<code>margin: 0px;</code>	<code>m-auto</code>	<code>margin: auto;</code>
<code>mx-0</code>	<code>margin-left: 0px;</code> <code>margin-right: 0px;</code>	<code>mx-auto</code>	<code>margin-left: auto;</code> <code>margin-right: auto;</code>
<code>my-0</code>	<code>margin-top: 0px;</code> <code>margin-bottom: 0px;</code>	<code>my-auto</code>	<code>margin-top: auto;</code> <code>margin-bottom: auto;</code>
<code>mr-0</code>	<code>margin-right: 0px;</code>	<code>mr-auto</code>	<code>margin-right: auto;</code>
<code>ml-0</code>	<code>margin-left: 0px;</code>	<code>ml-auto</code>	<code>margin-left: auto;</code>
<code>mt-0</code>	<code>margin-top: 0px;</code>	<code>mt-auto</code>	<code>margin-top: auto;</code>
<code>mb-0</code>	<code>margin-bottom: 0px;</code>	<code>mb-auto</code>	<code>margin-bottom: auto;</code>

0 = 0px

px = 1px

0.5 = 0.125rem/2px

1 = 0.25rem/4px

1.5 = 0.375rem/6px

2 = 0.5rem/8px

## Padding

- Control the padding on one side of an element using the `p{t|r|b|l}-{size}` utilities.
- Example, `pt-6` would add 1.5rem of padding to the top of an element, `pr-4` would add 1rem of padding to the right of an element, `pb-8` would add 2rem of padding to the bottom of an element, and `pl-2` would add 0.5rem of padding to the left of an element.

- Utilities for controlling an element's padding.

Class	Properties	Class	Properties
p-0	<code>padding: 0px;</code>	p-auto	<code>padding: auto;</code>
px-0	<code>padding-left: 0px;</code> <code>padding-right: 0px;</code>	px-auto	<code>padding-left: auto;</code> <code>padding-right: auto;</code>
py-0	<code>padding-top: 0px;</code> <code>padding-bottom: 0px;</code>	py-auto	<code>padding-top: auto;</code> <code>padding-bottom: auto;</code>
pr-0	<code>padding-right: 0px;</code>	pr-auto	<code>padding-right: auto;</code>
pl-0	<code>padding-left: 0px;</code>	pl-auto	<code>padding-left: auto;</code>
pt-0	<code>padding-top: 0px;</code>	pt-auto	<code>padding-top: auto;</code>
pb-0	<code>padding-bottom: 0px;</code>	pb-auto	<code>padding-bottom: auto;</code>

0 = 0px

px = 1px

0.5 = 0.125rem/2px

1 = 0.25rem/4px

1.5 = 0.375rem/6px

2 = 0.5rem/8px

## Typography

### Font Family

```
<div class="font-sans">Font sans</div>
<div class="font-serif">Font serif</div>
<div class="font-mono">Font mono</div>
```

Font sans  
Font serif  
Font mono

## Font Size

```
<div class="text-xs">Extra Small</div>
<div class="text-sm">Small</div>
<div class="text-base">Base</div>
<div class="text-lg">Large</div>
<div class="text-xl">Extra Large</div>
<div class="text-2xl">2Extra large</div>
<div class="text-9xl">9Extra large</div>
```

Extra Small  
Small  
Base  
Large  
Extra Large  
2Extra large

9Extra large

## Font Weight

```
<div class="font-light">Light</div>
<div class="font-normal">Normal</div>
<div class="font-medium">Medium</div>
<div class="font-semibold">semibold</div>
<div class="font-bold">Bold</div>
```

Light  
Normal  
Medium  
semibold  
Bold

## Letter Spacing

```
<div class="tracking-tight">tracking tight</div>
<div class="tracking-normal">tracking
normal</div>
<div class="tracking-wide">tracking wide</div>
```

tracking tight  
tracking normal  
tracking wide

## Text Alignment

```
<div class="text-left">text left</div>
<div class="text-center">text center</div>
<div class="text-right">text right</div>
```

text left

text center

text right

## Text Decoration

<pre>&lt;div class="underline"&gt;Underline&lt;/div&gt; &lt;div class="italic"&gt;Italic&lt;/div&gt;</pre>	<div>Underline</div> <div>Italic</div>
--	--

## Decoration Style

<pre>&lt;div class="underline decoration-4"&gt;Underline decoration-4&lt;/div&gt; &lt;div class="underline decoration-double"&gt;Underline decoration-double&lt;/div&gt; &lt;div class="underline decoration-dotted"&gt;Underline decoration-dotted&lt;/div&gt; &lt;div class="underline decoration-dashed"&gt;Underline decoration-dashed&lt;/div&gt; &lt;div class="underline decoration-wavy"&gt;Underline decoration-wavy&lt;/div&gt;</pre>	<div>Underline decoration-4</div> <div>Underline decoration-double</div> <div>Underline decoration-dotted</div> <div>Underline decoration-dashed</div> <div>Underline decoration-wavy</div>
---	---

## Decoration Offset

<pre>&lt;div class="underline decoration-4 underline-offset-8"&gt;Underline decoration-4&lt;/div&gt;</pre>	<div>Underline decoration-4</div>
--	-----------------------------------

## Text Transform

<pre>&lt;p class="normal-case"&gt;text transform&lt;/p&gt; &lt;p class="uppercase"&gt;text transform&lt;/p&gt; &lt;p class="lowercase"&gt;text transform&lt;/p&gt; &lt;p class="capitalize"&gt;text transform&lt;/p&gt;</pre>	<div>text transform</div> <div>TEXT TRANSFORM</div> <div>text transform</div> <div>Text Transform</div>
---	---

## Sizing (Width and Height)

### Width

```
<div class="bg-black text-white w-12">3rem</div>
<div class="bg-black text-white w-48">12rem</div>
<div class="bg-black text-white w-96">24rem</div>
```



### Percentage

```
<div class="bg-green-500 text-white w-1/4">25%</div>
<div class="bg-pink-700 text-white w-1/3">33%</div>
<div class="bg-sky-400 text-white w-1/2">50%</div>
```



### Width of the viewport & 100% of container

```
<div class="bg-green-500 text-white w-screen">100vw</div>
<div class="bg-pink-700 text-white w-full">100%</div>
```



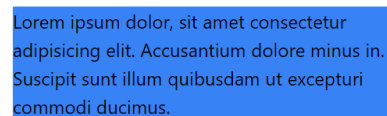
### Arbitrary width

```
<div class="bg-blue-500 text-white w-[300px]">300px</div>
```



### Max width

```
<div class="bg-blue-500
max-w-xs">Lorem ipsum dolor, sit amet
consectetur adipisicing elit.
Accusantium dolore minus in. Suscipit
sunt illum quibusdam ut excepturi
commodi ducimus.</div>
```



## Height

```
<div class="bg-sky-500 h-24">height 24
/ 6rem</div>
<div class="bg-red-500 h-48">height 28
/ 12rem</div>
```

height 24 / 6rem

height 28 / 12rem

## Full screen height

```
<div class="bg-blue-500
h-screen">100vh</div>
```

100vh

# Layout and Position

## Positioning

```
<div class="relative w-1/2 h-12 bg-blue-500">
  <p>Parent Element</p>
  <div class="absolute bottom-0 right-0 bg-red-500">
    <p>Absolute Child</p>
  </div>
</div>
```

Parent Element

Absolute Child

```
<div class="relative h-32 w-32 bg-green-500">
  <div class="absolute right-0 bottom-0 h-16 w-16
bg-sky-600">
    </div>
  </div>
</div>
```



## Display Classes

```
<div>
  Lorem ipsum dolor sit amet consectetur, <span
class="inline font-bold"> this is inline</span>
adipisicing elit. Unde, doloremque quam est, <span
class="inline-block font-bold">this is inline
block</span> harum sunt voluptatum quo impedit <span
class="block font-bold">this is block</span> nobis
iure repudiandae exercitationem necessitatibus <span
class="hidden font-bold">this is hidden</span> dolores
dolor, hic quos pariatur ipsa rerum! Voluptas.
</div>
```

Lorem ipsum dolor sit amet  
consectetur, **this is inline** adipisicing  
elit. Unde, doloremque quam est,  
**this is inline block** harum sunt  
voluptatum quo impedit  
**this is block**  
nobis iure repudiandae exercitationem  
necessitatibus dolores dolor, hic quos  
pariatur ipsa rerum! Voluptas.

## Z-index

```
<div class="relative h-36">
  <div class="absolute left-20 w-24 left-20
h-24 bg-blue-400">1</div>
  <div class="absolute left-40 w-24 left-20
h-24 bg-blue-500">2</div>
  <div class="absolute left-60 w-24 left-20
h-24 bg-blue-600">3</div>
  <div class="absolute left-80 w-24 left-20
h-24 bg-blue-700">4</div>
</div>
```





```

<div class="relative h-36">
  <div class="absolute left-20 w-24 left-20
h-24 bg-blue-400 z-40">1</div>
  <div class="absolute left-40 w-24 left-20
h-24 bg-blue-500 z-20">2</div>
  <div class="absolute left-60 w-24 left-20
h-24 bg-blue-600 z-10">3</div>
  <div class="absolute left-80 w-24 left-20
h-24 bg-blue-700 z-30">4</div>
</div>

```



## Floats

```

<div class="w-1/2">
  
  <p>Lorem ipsum dolor sit amet, consectetur
adipisicing elit. Amet sunt aperiarn
repellendus labore impedit velit
reprehenderit.</p>
</div>

```



Lorem ipsum dolor sit amet,
 consectetur adipisicing elit.
 Amet sunt aperiarn
 repellendus labore impedit
 velit reprehenderit.

```

<div class="w-1/2">
  
  <p>Lorem ipsum dolor sit amet, consectetur
adipisicing elit. Amet sunt aperiarn
repellendus labore impedit velit
reprehenderit.</p>
</div>

```

Lorem ipsum dolor sit amet,
 consectetur adipisicing elit.
 Amet sunt aperiarn
 repellendus labore impedit
 velit reprehenderit.



# Backgrounds and Shadows

## Background Classes

```
<div
class="h-64 w-72 bg-no-repeat bg-cover bg-center"
style="background-image: url(img1.png);">
</div>
```

### Background Size

bg-auto  
bg-cover  
bg-contain

### Background Repeat

bg-repeat  
bg-no-repeat  
bg-repeat-x  
bg-repeat-y  
bg-repeat-round  
bg-repeat-space

### Background Position

bg-bottom  
bg-center  
bg-left  
bg-left-bottom  
bg-left-top  
bg-right  
bg-right-bottom  
bg-right-top  
bg-top

## Gradients

```
<div class="h-24 bg-gradient-to-r
from-yellow-500 to-blue-500"></div>
```

```
<div class="h-24 bg-gradient-to-l
from-yellow-500 to-blue-500"></div>
```

```
<div class="h-24 bg-gradient-to-r
from-indigo-500 via-purple-500
to-pink-500"></div>
```



## Shadows

```
<div class="w-62 mt-6 ml-4 p-3  
shadow">Box shadow</div>  
<div class="w-62 mt-6 ml-4 p-3  
shadow-md">Medium box shadow</div>  
<div class="w-62 mt-6 ml-4 p-3  
shadow-lg">Large box shadow</div>  
<div class="w-62 mt-6 ml-4 p-3  
shadow-2xl">2xl box shadow</div>  
<div class="w-62 mt-6 ml-4 p-3  
shadow-2xl shadow-green-500">Green  
colored box shadow</div>  
<div class="w-62 mt-6 ml-4 p-3  
shadow-md shadow-inner  
shadow-red-500">Inner shadow</div>
```

Box shadow

Medium box shadow

Large box shadow

2xl box shadow

Green colored box shadow

Inner shadow

# Borders and Border Radius

## Border Width and Colors

<pre> &lt;div class="w-64 m-3 p-2 border"&gt;Border with 1px&lt;/div&gt; &lt;div class="w-64 m-3 p-2 border-2"&gt;Border with 2px&lt;/div&gt; &lt;div class="w-64 m-3 p-2 border-4"&gt;Border with 4px&lt;/div&gt; &lt;div class="w-64 m-3 p-2 border-8"&gt;Border with 8px&lt;/div&gt; &lt;div class="w-64 m-3 p-2 border-4 border-blue-500"&gt;Border with blue color&lt;/div&gt; &lt;div class="w-64 m-3 p-2 border-t-4"&gt;Border top&lt;/div&gt; &lt;div class="w-64 m-3 p-2 border-x-4"&gt;Border left&lt;/div&gt; </pre>	<div>Border with 1px</div> <div>Border with 2px</div> <div>Border with 4px</div> <div>Border with 8px</div> <div>Border with blue color</div> <div>Border top</div> <div>Border left</div>
---	--

## Border Radius

<pre> &lt;div class="w-64 m-3 p-2 border-4 rounded"&gt;Rounded radius 0.25rem&lt;/div&gt; &lt;div class="w-64 m-3 p-2 border-4 rounded-lg"&gt;Rounded radius 0.5rem&lt;/div&gt; &lt;div class="w-64 m-3 p-2 border-4 rounded-2xl"&gt;Rounded radius 1rem&lt;/div&gt; &lt;div class="w-64 m-3 p-2 border-4 rounded-full"&gt;Rounded radius 9999px &lt;/div&gt; &lt;div class="w-64 m-3 p-2 border-4 rounded-t-2xl"&gt;Rounded radius 1rem&lt;/div&gt; </pre>	<div>Rounded radius 0.25rem</div> <div>Rounded radius 0.5rem</div> <div>Rounded radius 1rem</div> <div>Rounded radius 9999px</div> <div>Rounded radius 1rem</div>
---	---

# Filters

## Blur

```
<div class="blur-sm"> Blur</div>

```



## Brightness

```






```



## Contrast

```






```



## Grayscale, Invert and Sepia

```

```



```

```



```

```



## Hue Rotate

```

```



```

```



```

```



```

```



#####Thankyou#####