Utilities Classes

Utility classes are generated for you as part of a framework. Some of these popular tools and frameworks provide lots of styles out of the box, so you can just use class="padding-10" and be confident that the style already exists. Others give you the tools to define only the utilities you require for your project.

What are Sass Maps?

Maps are a Sass data type that represent **an association between keys and values**. If you're familiar with other scripting languages, you could see it as an **associative array**. It allows you to store data, and have a name to reference each piece.

Create new file utilities.scss in shinabi folder:

```scss
@use 'sass:math';

$utilities: (
  "padding": (
    "prefix": "p",
    "values": (
      "0": 0,
      "1": $base-padding,
      "2": $base-padding * 2,
      "3": $base-padding * 4,
      "4": $base-padding * 6,
      "5": $base-padding * 8
    ),
  ),
  "padding-left": (
    "prefix": "pl",
    "values": (
      "0": 0,
      "1": $base-padding,
      "2": $base-padding * 2,
      "3": $base-padding * 4,
      "4": $base-padding * 6,
      "5": $base-padding * 8
    ),
  ),
```

```scss
  "padding-right": (
    "prefix": "pr",
    "values": (
      "0": 0,
      "1": $base-padding,
      "2": $base-padding * 2,
      "3": $base-padding * 4,
      "4": $base-padding * 6,
      "5": $base-padding * 8
    ),
  ),
  "padding-top": (
    "prefix": "pt",
    "values": (
      "0": 0,
      "1": $base-padding,
      "2": $base-padding * 2,
      "3": $base-padding * 4,
      "4": $base-padding * 6,
      "5": $base-padding * 8
    ),
  ),
  "padding-bottom": (
    "prefix": "pb",
    "values": (
      "0": 0,
      "1": $base-padding,
      "2": $base-padding * 2,
      "3": $base-padding * 4,
      "4": $base-padding * 6,
      "5": $base-padding * 8
    ),
  ),
  "margin": (
    "prefix": "m",
    "values": (
      "0": 0,
      "1": $base-margin,
      "2": $base-margin * 2,
      "3": $base-margin * 4,
      "4": $base-margin * 6,
      "5": $base-margin * 8
    ),
  ),
  "margin-left": (
    "prefix": "ml",
    "values": (
      "0": 0,
```

```scss
      "1": $base-margin,
      "2": $base-margin * 2,
      "3": $base-margin * 4,
      "4": $base-margin * 6,
      "5": $base-margin * 8
    ),
  ),
  "margin-right": (
    "prefix": "mr",
    "values": (
      "0": 0,
      "1": $base-margin,
      "2": $base-margin * 2,
      "3": $base-margin * 4,
      "4": $base-margin * 6,
      "5": $base-margin * 8
    ),
  ),
  "margin-top": (
    "prefix": "mt",
    "values": (
      "0": 0,
      "1": $base-margin,
      "2": $base-margin * 2,
      "3": $base-margin * 4,
      "4": $base-margin * 6,
      "5": $base-margin * 8
    ),
  ),
  "margin-bottom": (
    "prefix": "mb",
    "values": (
      "0": 0,
      "1": $base-margin,
      "2": $base-margin * 2,
      "3": $base-margin * 4,
      "4": $base-margin * 6,
      "5": $base-margin * 8
    ),
  ),

  "opacity": (
    "prefix": "o",
    "values": (
      "10": 0.1,
      "20": 0.2,
      "30": 0.3,
      "40": 0.4,
```

```scss
      "50": 0.5,
      "60": 0.6,
      "70": 0.7,
      "80": 0.8,
      "90": 0.9,
      "100": 1,
    ),
  ),
  "border-radius": (
    "prefix": "br",
    "values": (
      "default": $base-border-radius,
      "none": 0,
      "xs": math.div($base-border-radius, 4),
      "sm": math.div($base-border-radius, 2),
      "lg": $base-border-radius * 2,
      "full": 50%,
    )
  ),
  "display": (
    "prefix": "display",
    "values": (
      "n": none,
      "b": block,
      "f": flex,
      "i": inline,
      "i-b": inline-block
    )
  ),
  "font-size": (
    "prefix": "font",
    "values": (
      "sm": $font-size-sm,
      "md": $base-font-size,
      "lg": $font-size-lg,
      "xl": $font-size-xl,
      "xxl": $font-size-xxl
    )
  )
);

// generate utility classes
@each $property, $map in $utilities {
  $prefix: map-get($map, "prefix");
  $values: map-get($map, "values");

  @each $k, $v in $values {
    @if($k == "default") {
```

```scss
    .#{$prefix} {
      #{$property}: $v;
    }
  } @else {
    .#{$prefix}-#{$k}{
      #{$property}: $v;
    }
  }
 }
}
```

Import file in index.scss file

```scss
// variable & function
@import "functions";
@import "variable";

// base & layout

@import "base";

// colors
@import "colors";
// components(button, card, navbar)

@import 'components/card';
@import 'components/buttons';
                                    <<<<<<<
// utilities(margin, padding, opacity)
@import 'utilities';
```

Css output:

```css
.p-0 {
  padding: 0;
}

.p-1 {
  padding: 0.75rem;
}
```

```css
.p-2 {
  padding: 1.5rem;
}

.p-3 {
  padding: 3rem;
}

.p-4 {
  padding: 4.5rem;
}

.p-5 {
  padding: 6rem;
}

.pl-0 {
  padding-left: 0;
}

.pl-1 {
  padding-left: 0.75rem;
}

.pl-2 {
  padding-left: 1.5rem;
}

.pl-3 {
  padding-left: 3rem;
}

.pl-4 {
  padding-left: 4.5rem;
}

.pl-5 {
  padding-left: 6rem;
}

.pr-0 {
  padding-right: 0;
}

.pr-1 {
  padding-right: 0.75rem;
}
```

```css
.pr-2 {
  padding-right: 1.5rem;
}

.pr-3 {
  padding-right: 3rem;
}

.pr-4 {
  padding-right: 4.5rem;
}

.pr-5 {
  padding-right: 6rem;
}

.pt-0 {
  padding-top: 0;
}

.pt-1 {
  padding-top: 0.75rem;
}

.pt-2 {
  padding-top: 1.5rem;
}

.pt-3 {
  padding-top: 3rem;
}

.pt-4 {
  padding-top: 4.5rem;
}

.pt-5 {
  padding-top: 6rem;
}

.pb-0 {
  padding-bottom: 0;
}

.pb-1 {
  padding-bottom: 0.75rem;
}
```

```css
.pb-2 {
  padding-bottom: 1.5rem;
}

.pb-3 {
  padding-bottom: 3rem;
}

.pb-4 {
  padding-bottom: 4.5rem;
}

.pb-5 {
  padding-bottom: 6rem;
}

.m-0 {
  margin: 0;
}

.m-1 {
  margin: 0.75rem;
}

.m-2 {
  margin: 1.5rem;
}

.m-3 {
  margin: 3rem;
}

.m-4 {
  margin: 4.5rem;
}

.m-5 {
  margin: 6rem;
}

.ml-0 {
  margin-left: 0;
}

.ml-1 {
  margin-left: 0.75rem;
}
```

```css
.ml-2 {
  margin-left: 1.5rem;
}

.ml-3 {
  margin-left: 3rem;
}

.ml-4 {
  margin-left: 4.5rem;
}

.ml-5 {
  margin-left: 6rem;
}

.mr-0 {
  margin-right: 0;
}

.mr-1 {
  margin-right: 0.75rem;
}

.mr-2 {
  margin-right: 1.5rem;
}

.mr-3 {
  margin-right: 3rem;
}

.mr-4 {
  margin-right: 4.5rem;
}

.mr-5 {
  margin-right: 6rem;
}

.mt-0 {
  margin-top: 0;
}

.mt-1 {
  margin-top: 0.75rem;
}
```

```css
.mt-2 {
  margin-top: 1.5rem;
}

.mt-3 {
  margin-top: 3rem;
}

.mt-4 {
  margin-top: 4.5rem;
}

.mt-5 {
  margin-top: 6rem;
}

.mb-0 {
  margin-bottom: 0;
}

.mb-1 {
  margin-bottom: 0.75rem;
}

.mb-2 {
  margin-bottom: 1.5rem;
}

.mb-3 {
  margin-bottom: 3rem;
}

.mb-4 {
  margin-bottom: 4.5rem;
}

.mb-5 {
  margin-bottom: 6rem;
}

.o-10 {
  opacity: 0.1;
}

.o-20 {
  opacity: 0.2;
}
```

```css
.o-30 {
  opacity: 0.3;
}

.o-40 {
  opacity: 0.4;
}

.o-50 {
  opacity: 0.5;
}

.o-60 {
  opacity: 0.6;
}

.o-70 {
  opacity: 0.7;
}

.o-80 {
  opacity: 0.8;
}

.o-90 {
  opacity: 0.9;
}

.o-100 {
  opacity: 1;
}

.br {
  border-radius: 20px;
}

.br-none {
  border-radius: 0;
}

.br-xs {
  border-radius: 5px;
}

.br-sm {
  border-radius: 10px;
}
```

```css
.br-lg {
  border-radius: 40px;
}

.br-full {
  border-radius: 50%;
}

.display-n {
  display: none;
}

.display-b {
  display: block;
}

.display-f {
  display: flex;
}

.display-i {
  display: inline;
}

.display-i-b {
  display: inline-block;
}

.font-sm {
  font-size: 0.75rem;
}

.font-md {
  font-size: 1rem;
}

.font-lg {
  font-size: 1.5rem;
}

.font-xl {
  font-size: 2rem;
}

.font-xxl {
  font-size: 3rem;
}
```

Index.html

```html
<!-- font sizes -->
    <hr class="mt-4 mb-4">

    <!-- font sizes -->
    <h2 class="mb-2">Font Sizes</h2>
    <div class="font-sm">this is small font</div>
    <div class="font-md">this is medium font</div>
    <div class="font-lg">this is large font</div>
    <div class="font-xl">this is extra large font</div>
    <div class="font-xxl">this is extra, extra large font</div>

    <hr class="mt-4 mb-4">
```

Browser output

Font Sizes

this is small font
this is medium font
this is large font
this is extra large font

this is extra, extra large font