

The background features abstract, organic shapes in dark blue and orange. In the top-left corner, there are three dark blue shapes. In the top-right corner, there is a large orange shape. In the bottom-left corner, there is an orange shape. In the bottom-right corner, there are dark blue shapes.

BOOTSTRAP FRAMEWORK

Apa itu Framework

CSS framework adalah kerangka kerja yang berisi kumpulan kode CSS yang sudah siap pakai untuk membantu pengembang mendesain website. Framework ini menyediakan berbagai elemen desain yang dapat digunakan untuk mempercepat proses pengembangan website, seperti: Sistem grid, Pola UI interaktif, Tipografi, Tombol, Ikon.

Dengan menggunakan CSS framework, kita sebagai pengembang tidak perlu membuat coding dari nol lagi.

Jenis-jenis Framework CSS

Top 5 CSS Frameworks for 2024



Bootstrap



Tailwind CSS



Foundation



Bulma



Chakra ui

Apa itu Bootstrap

Bootstrap adalah framework CSS yang memudahkan pengembang membuat website yang responsif dan modern dengan cepat. Framework ini menyediakan komponen siap pakai seperti grid, tombol, form, dan navigasi yang dapat langsung digunakan tanpa harus menulis kode dari awal. Dengan Bootstrap, desain web bisa lebih konsisten dan otomatis menyesuaikan dengan berbagai ukuran layar, seperti desktop dan mobile.

Instalasi Bootstrap

Instalasi bootstrap bisa menggunakan 2 cara yaitu:

- Dengan CDN
- Mendownload bootstrap secara langsung

Instalasi Bootstrap CDN

Langkah pertama ialah kunjungi link berikut [bootstrap](#).
Copy dan paste kode berikut:

2. **Include Bootstrap's CSS and JS.** Place the `<link>` tag in the `<head>` for our CSS, and the `<script>` tag for our JavaScript bundle (including Popper for positioning dropdowns, poppers, and tooltips) before the closing `</body>`. Learn more about our [CDN links](#).

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Bootstrap demo</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.cs
  </head>
  <body>
    <h1>Hello, world!</h1>
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle
  </body>
</html>
```

Instalasi Bootstrap

Untuk menggunakan dropdown, tooltip, dll. Ganti kode pada bagian script dengan kode dibawah:

You can also include [Popper](#) and our JS separately. If you don't plan to use dropdowns, popovers, or tooltips, save some kilobytes by not including Popper.

```
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.11.8/dist/umd/popper.min.js"
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.min.js" in
```

Instalasi Bootstrap Download

Kunjungi link berikut [download bootstrap](#). Tekan tombol download.

Compiled CSS and JS

Download ready-to-use compiled code for **Bootstrap v5.3.3** to easily drop into your project, which includes:

- Compiled and minified CSS bundles (see [CSS files comparison](#))
- Compiled and minified JavaScript plugins (see [JS files comparison](#))

This doesn't include documentation, source files, or any optional JavaScript dependencies like Popper.

Download

Cara Kerja Bootstrap

Untuk menggunakan bootstrap, pastikan konfigurasi sesuai dengan gambar dibawah

```
<!doctype html>
<html lang="en">

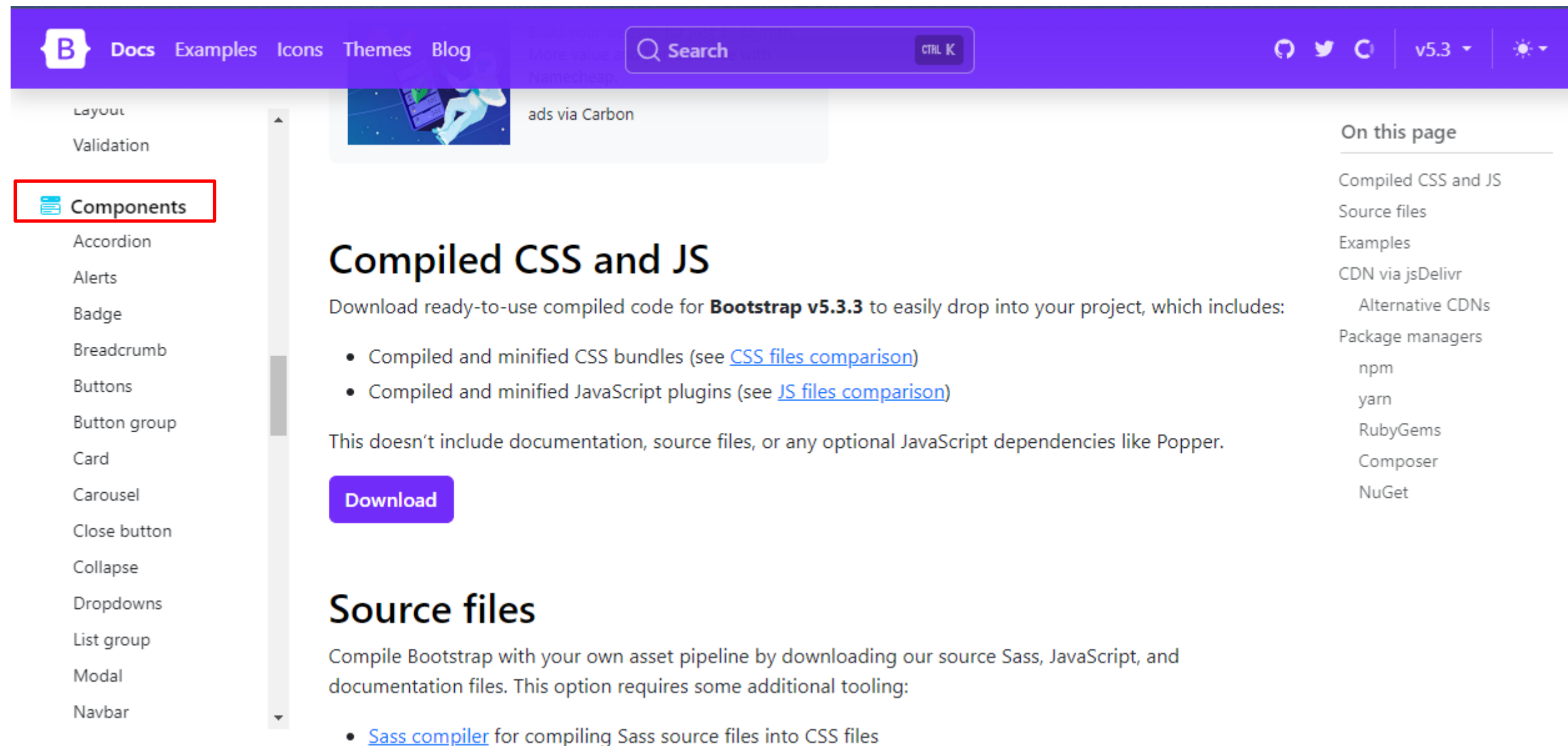
<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <title>Bootstrap demo</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css"
    rel="stylesheet"
    integrity="sha384-QWTKZyjpPEjISv5WaRU90FeRpok6YctnYmDr5pNlyT2bRjXh0JMhY6hW+ALEwIH"
    crossorigin="anonymous">
</head>

<body>
  <h1>Hello, world!</h1>
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"
    integrity="sha384-YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDz0xhy9GkcIdslK1eN7N6jIeHz"
    crossorigin="anonymous"></script>
</body>

</html>
```

Cara Kerja Bootstrap

Cari bagian components dan pilih component yang mau diambil, missal button.



The screenshot shows the Bootstrap v5.3.3 documentation website. The top navigation bar is purple with links for Docs, Examples, Icons, Themes, and Blog. A search bar is on the right. The left sidebar is white with a list of components, where 'Components' is highlighted with a red box. The main content area is white and shows the 'Compiled CSS and JS' section, which includes a 'Download' button. The right sidebar is white and lists 'On this page' links.

Components

- Accordion
- Alerts
- Badge
- Breadcrumb
- Buttons
- Button group
- Card
- Carousel
- Close button
- Collapse
- Dropdowns
- List group
- Modal
- Navbar

Compiled CSS and JS

Download ready-to-use compiled code for **Bootstrap v5.3.3** to easily drop into your project, which includes:

- Compiled and minified CSS bundles (see [CSS files comparison](#))
- Compiled and minified JavaScript plugins (see [JS files comparison](#))

This doesn't include documentation, source files, or any optional JavaScript dependencies like Popper.

[Download](#)

Source files

Compile Bootstrap with your own asset pipeline by downloading our source Sass, JavaScript, and documentation files. This option requires some additional tooling:

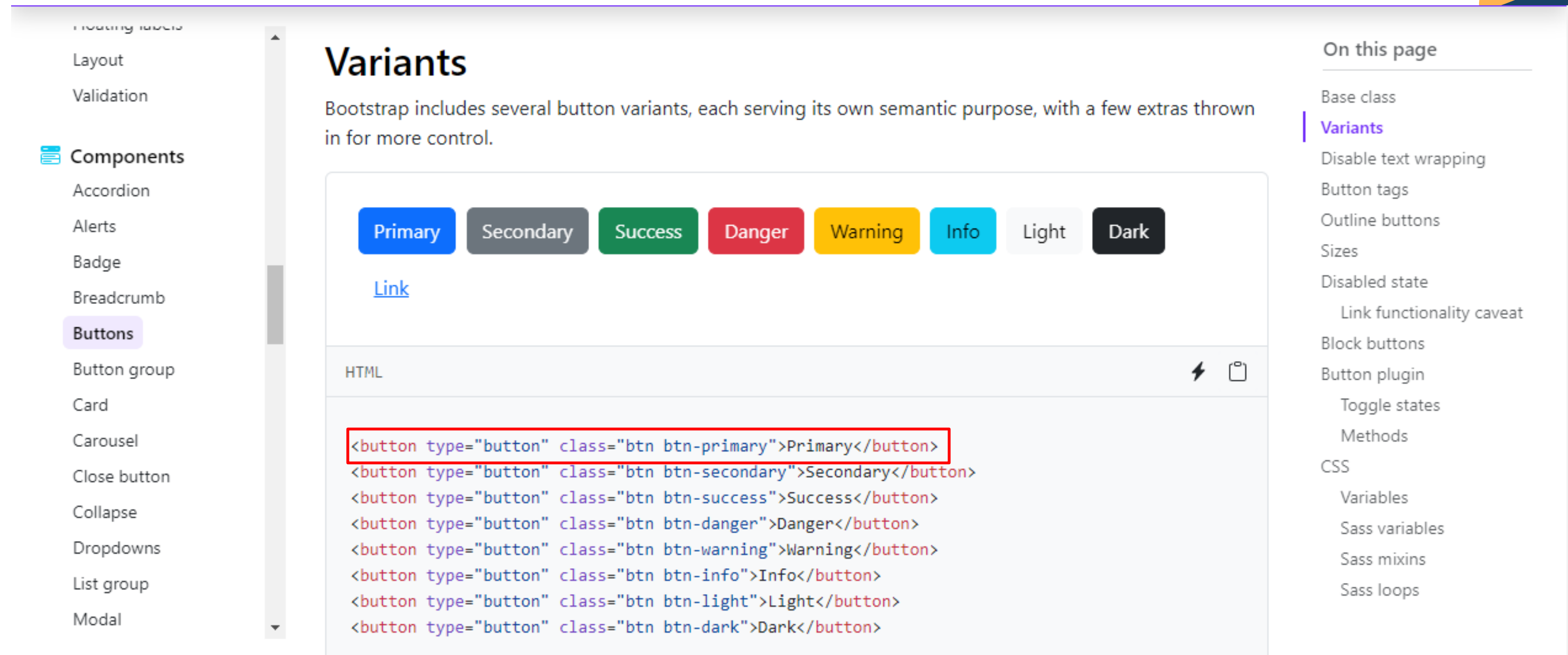
- [Sass compiler](#) for compiling Sass source files into CSS files

On this page

- Compiled CSS and JS
- Source files
- Examples
- CDN via jsDelivr
 - Alternative CDNs
- Package managers
 - npm
 - yarn
 - RubyGems
 - Composer
 - NuGet

Cara Kerja Bootstrap

Setelah itu, pilih type buttonnya, contoh primary



The screenshot shows the Bootstrap documentation page for Button Variants. The left sidebar lists various components, with 'Buttons' highlighted. The main content area is titled 'Variants' and includes a description of Bootstrap's button variants. Below the text, there is a visual representation of the button variants: Primary (blue), Secondary (gray), Success (green), Danger (red), Warning (yellow), Info (cyan), Light (light gray), and Dark (dark gray). A 'Link' variant is also shown as a blue underlined text. Below the visual representation, there is an 'HTML' section containing the code for each button variant. The first line of code, `<button type="button" class="btn btn-primary">Primary</button>`, is highlighted with a red box.

Variants

Bootstrap includes several button variants, each serving its own semantic purpose, with a few extras thrown in for more control.

Primary Secondary Success Danger Warning Info Light Dark

[Link](#)

HTML

```
<button type="button" class="btn btn-primary">Primary</button>
<button type="button" class="btn btn-secondary">Secondary</button>
<button type="button" class="btn btn-success">Success</button>
<button type="button" class="btn btn-danger">Danger</button>
<button type="button" class="btn btn-warning">Warning</button>
<button type="button" class="btn btn-info">Info</button>
<button type="button" class="btn btn-light">Light</button>
<button type="button" class="btn btn-dark">Dark</button>
```

On this page

- Base class
- Variants**
- Disable text wrapping
- Button tags
- Outline buttons
- Sizes
- Disabled state
 - Link functionality caveat
- Block buttons
- Button plugin
 - Toggle states
- Methods
- CSS
 - Variables
 - Sass variables
 - Sass mixins
 - Sass loops

Cara Kerja Bootstrap

Copy dan paste

```
<!doctype html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <title>Bootstrap demo</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css"
    rel="stylesheet"
    integrity="sha384-QWTKZyjpPEjISv5WaRU90FeRpok6YctnYmDr5pNlyT2bRjXh0JMHjY6hW+ALEwIH"
    crossorigin="anonymous">
</head>

<body>
  <h1>Hello, world!</h1>
  <button type="button" class="btn btn-primary">Primary</button>
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"
    integrity="sha384-YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDz0xhy9GkcIdslK1eN7N6jIeHz"
    crossorigin="anonymous"></script>
</body>

</html>
```

Cara Kerja Bootstrap

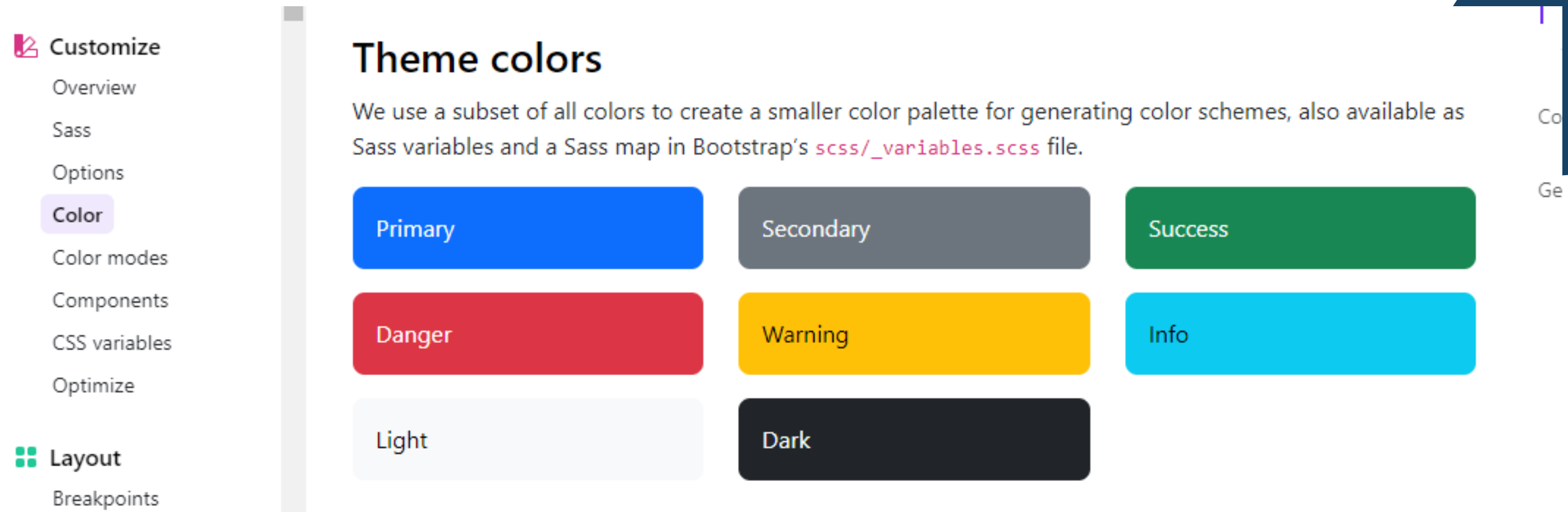
Hasilnya font dan button akan otomatis mengikuti gaya bootstrap.

Hello, world!

Primary

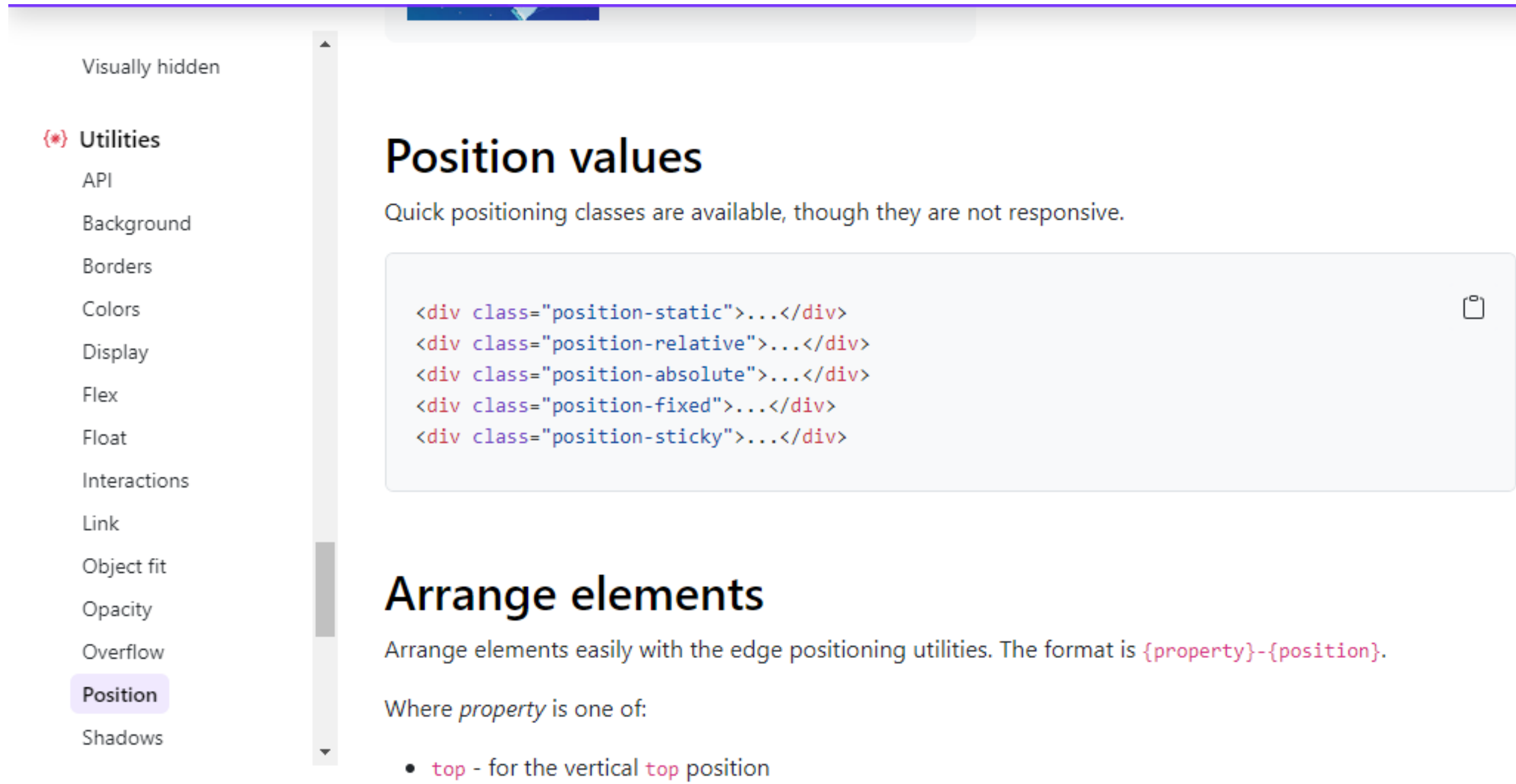
Color

Bootstrap memiliki beberapa warna bawaan, diantaranya:



Position

Untuk mengatur position, kita bisa secara sederhana menggunakan cara dibawah:



The screenshot shows a web design utility class library interface. On the left is a sidebar with a list of categories: Visually hidden, Utilities (marked with a red asterisk), API, Background, Borders, Colors, Display, Flex, Float, Interactions, Link, Object fit, Opacity, Overflow, Position (highlighted with a purple background), and Shadows. The main content area is titled 'Position values' and includes a sub-header 'Quick positioning classes are available, though they are not responsive.' Below this is a code block containing five lines of HTML code: `<div class="position-static">...</div>`, `<div class="position-relative">...</div>`, `<div class="position-absolute">...</div>`, `<div class="position-fixed">...</div>`, and `<div class="position-sticky">...</div>`. A copy icon is visible to the right of the code block. Below the code block is a section titled 'Arrange elements' with the text 'Arrange elements easily with the edge positioning utilities. The format is {property}-{position}.' and 'Where *property* is one of:'. A bulleted list follows, showing '• top - for the vertical top position'.

Visually hidden

{*} Utilities

API

Background

Borders

Colors

Display

Flex

Float

Interactions

Link

Object fit

Opacity

Overflow

Position

Shadows

Position values

Quick positioning classes are available, though they are not responsive.

```
<div class="position-static">...</div>
<div class="position-relative">...</div>
<div class="position-absolute">...</div>
<div class="position-fixed">...</div>
<div class="position-sticky">...</div>
```

Arrange elements

Arrange elements easily with the edge positioning utilities. The format is {property}-{position}.

Where *property* is one of:

- top - for the vertical top position

Layout

Untuk mengatur layout, kita bisa menggunakan 2 cara yaitu dengan flexbox dan grid:

- Flexbox

Untuk menggunakan flexbox, wajib menambahkan class `d-flex` sebagai parent.

- Grid

Untuk menggunakan grid, wajib menambahkan class `row` sebagai parent.

Layout Flexbox

Untuk mengatur layout, kita bisa menggunakan berikut:

```
<!doctype html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <title>Bootstrap demo</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css"
    rel="stylesheet"
    integrity="sha384-QWTKZyjpPEjISv5WaRU90FeRpok6YctnYmDr5pNlyT2bRjXh0JMhY6hW+ALEwIH"
    crossorigin="anonymous">
</head>

<body>
  <h1>Hello, world!</h1>
  <div class="d-flex">Halo ini flex</div>
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"
    integrity="sha384-YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDz0xhy9GkcIdslK1eN7N6jIeHz"
    crossorigin="anonymous"></script>
</body>

</html>
```

Layout Flexbox

Membuat elemen berada ditengah secara horizontal:

```
<!doctype html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <title>Bootstrap demo</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css"
    rel="stylesheet"
    integrity="sha384-QWTKZyjpPEjISv5WaRU90FeRpok6YctnYmDr5pNlyT2bRjXh0JMhY6hW+ALEwIH"
    crossorigin="anonymous">
</head>

<body>
  <div class="d-flex justify-content-center">
    <h1>Hello, world!</h1>
  </div>
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"
    integrity="sha384-YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDzOxhy9GkcIdslK1eN7N6jIeHz"
    crossorigin="anonymous"></script>
</body>

</html>
```

Layout Flexbox

hasil:

Hello, world!

Layout Flexbox

Membuat elemen berada ditengah secara horizontal & vertical:

```
<!doctype html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <title>Bootstrap demo</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css"
    rel="stylesheet"
    integrity="sha384-QWTKZyjpPEjISv5WaRU90FeRpok6YctnYmDr5pNlyT2bRjXh0JMHjY6hW+ALEwIH"
    crossorigin="anonymous">
</head>

<body>
  <div class="border min-vh-100 d-flex justify-content-center align-items-center">
    <h1>Hello, world!</h1>
  </div>
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"
    integrity="sha384-YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDz0xhy9GkcIdslK1eN7N6jIeHz"
    crossorigin="anonymous"></script>
</body>

</html>
```

Layout Flexbox

hasil:

Hello, world!

Layout Grid

Grid secara default memiliki 12 column, berikut merupakan ukuran yang tersedia didalam grid:

Col: ukurannya menyesuaikan sisa ruang yang tersedia

Col-1: ukurannya adalah 1 dari 12 column atau $1/12$.

Col-2: ukurannya adalah 2 dari 12 column atau $2/12$.

.....

Col-12: ukurannya adalah 12 dari 12 column atau $12/12$.

Artinya elemen ini akan mengambil seluruh column.

Layout Grid

Membuat 3 elemen kesamping:

```
<div class="container text-center">
  <div class="row">
    <div class="col border p-5">
      Column 1
    </div>
    <div class="col border p-5">
      Column 2
    </div>
    <div class="col border p-5">
      Column 3
    </div>
  </div>
</div>
```

Layout Grid

Hasil 3 elemen kesamping:

Column 1	Column 2	Column 3
----------	----------	----------

Layout Grid

Membuat 3 elemen kesamping (6 col, sisanya auto):

```
<div class="container text-center">
  <div class="row">
    <div class="col-6 border p-5">
      Column 1
    </div>
    <div class="col border p-5">
      Column 2
    </div>
    <div class="col border p-5">
      Column 3
    </div>
  </div>
</div>
```

Layout Grid

Hasil 3 elemen kesamping (6 col, sisanya auto):

Column 1	Column 2	Column 3
----------	----------	----------

Lalu kalau ada 5 elemen
dimana salah satu nya
memiliki 12 column
bagaimana?

Layout Grid

Membuat 5 elemen kesamping (12 col, sisanya auto):

```
<div class="container text-center">
  <div class="row">
    <div class="col-12 border p-5">
      Column 1
    </div>
    <div class="col border p-5">
      Column 2
    </div>
    <div class="col border p-5">
      Column 3
    </div>
    <div class="col border p-5">
      Column 2
    </div>
    <div class="col border p-5">
      Column 3
    </div>
  </div>
</div>
```

Layout Grid

Hasil 5 elemen kesamping (12 col, sisanya auto):

Column 1			
Column 2	Column 3	Column 2	Column 3

Terima Kasih
ありがとう