

Curso de nivelamento: desenvolvimento de aplicações para internet

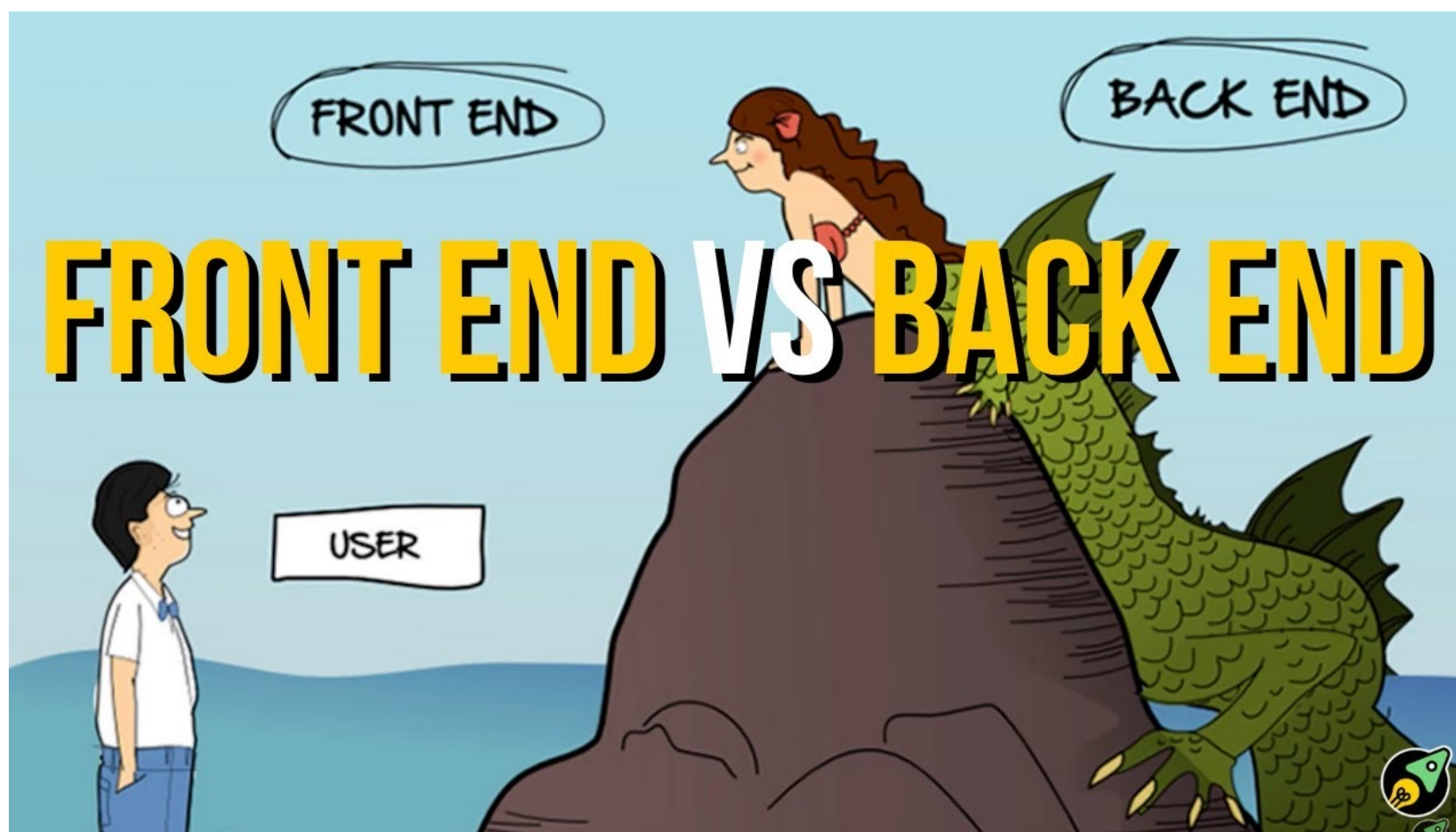
Bootstrap

24/01/2023

Agenda

- Frameworks front-end;
- Bootstrap;

Frameworks front-end



Frameworks front-end

- O desenvolvimento web tem se tornado cada vez mais complexo com o passar do tempo;
- Ao mesmo tempo, há a necessidade de produção de código cada vez mais ágil, limpa e reutilizável;
- Foco na **responsividade** e **reutilização**!

Frameworks front-end

ADAPTÁVEL

Modelos gerais que são otimizados e exclusivo para cada classe de dispositivo



RESPONSIVO

Design universal que flui pelas telas



Frameworks front-end

- Será que pra cada novo projeto web devemos começar tudo do zero?
- Problema: como desenvolver aplicações que possam ser reutilizáveis, que sejam responsivas, em menor tempo possível e com qualidade e padronização?

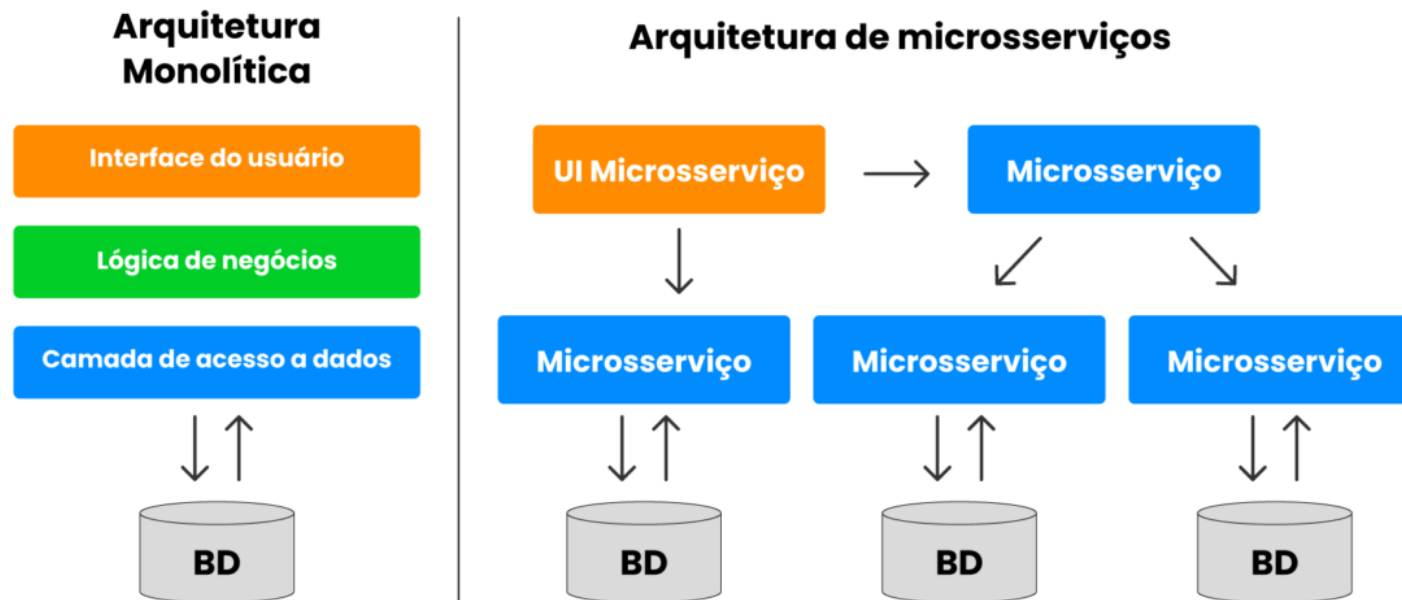
Frameworks front-end

- Framework é, de forma básica, um facilitador;
- Ele traz diversas soluções já pré-definidas, que descomplicam o trabalho dos profissionais no desenvolvimento de aplicativos e outros projetos digitais;
- Afinal, a atuação de um programador pode ter muito de criatividade, mas também traz aspectos mecânicos, de repetição de tarefas, que seriam maçantes sem a possibilidade de automatização;
- Como os frameworks representam um conjunto de códigos prontos, que podem ser replicados para a criação de funções que aparecem com frequência no desenvolvimento de um projeto digital, eles poupam tempo e permitem elevar a produtividade;

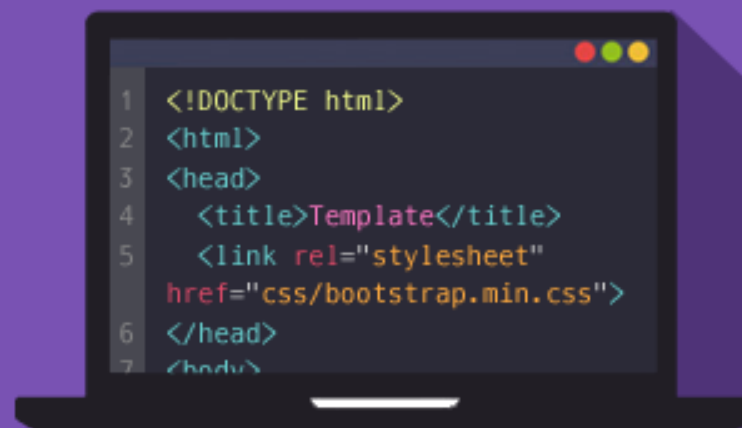
Frameworks front-end

- Os frameworks funcionam como solucionadores de problemas;
- Basicamente, eles integram uma série de funcionalidades, tornando mais ágil todo o processo;
- Por exemplo, por que criar um código novo se você pode reutilizar um já existente, fazendo apenas algumas alterações pontuais?
- Com soluções prontas e que já foram amplamente testadas por outros profissionais, economiza-se um tempo valioso – e tempo é dinheiro;

Frameworks front-end



Bootstrapap



Bootstrap

- Bootstrap é um framework front-end com código-fonte aberto para desenvolvimento de componentes de interface e front-end para sites e aplicações web, usando HTML, CSS e JavaScript, baseado em modelos de design para a tipografia, melhorando a experiência do usuário em um site amigável e responsivo;
- O Bootstrap é um dos projetos mais bem avaliados no site GitHub, com mais de 111 600 estrelas e 51 500 forks;
- Possui ampla documentação na página oficial: <https://getbootstrap.com/>, assim como diversos tutoriais e materiais em português.
- Última versão: 5.2.3 (22/11/2022);

Bootstrap

- Acessar:
- https://github.com/fabriciopa/curso_nivelamento_webdev

Bootstrap

```
aula_5_ex > <> ex1.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">
6    <title>Bootstrap demo</title>
7    <link href="https://cdn.jsdelivr.net/npm/
      bootstrap@5.2.1/dist/css/bootstrap.min.css"
      rel="stylesheet">
8  </head>
9  <body>
10   <h1>Hello, world!</h1>
11   <script src="https://cdn.jsdelivr.net/npm/
      bootstrap@5.2.1/dist/js/bootstrap.bundle.
      min.js"></script>
12 </body>
13 </html>
```

Bootstrap

- Todo projeto em Bootstrap começa com o template inicial;
- Acessar: <https://getbootstrap.com/docs/5.2/getting-started/introduction/>
- Procurar o item “2”;

Bootstrap

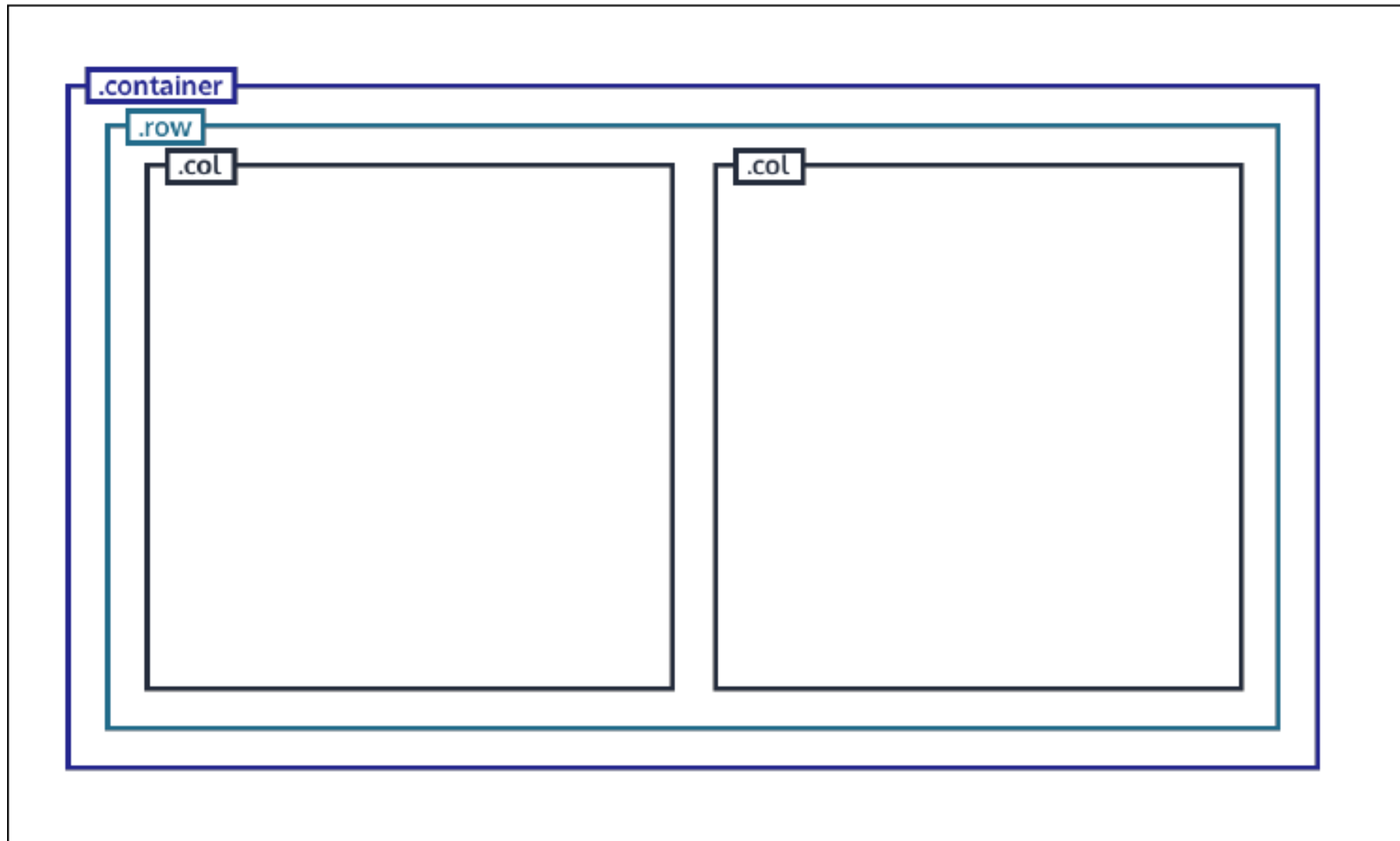
```
aula_5_ex > <> ex2.html > html > body
1  <!doctype html>
2  <html lang="en">
3    <head>
4      <meta charset="utf-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1">
6      <title>Bootstrap demo</title>
7      <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/css/
      bootstrap.min.css" rel="stylesheet">
8    </head>
9    <body>
10
11    <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
12
13
14    <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
15
16    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/js/
      bootstrap.bundle.min.js"></script>
17  </body>
18 </html>
```

Bootstrap

- Sistema de grade (grid): container, row e col;
- Container: bloco principal onde todo o conteúdo será adicionado;
- Row: determina as linhas que de conteúdo dentro do container;
- Col: determina as colunas de conteúdo dentro dos rows;

Bootstrap

Tela



Bootstrap

```
aula_5_ex > <> ex3.html > html > body
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">
6      <title>Bootstrap demo</title>
7      <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/css/
      bootstrap.min.css" rel="stylesheet">
8    </head>
9    <body>
10
11      <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
12      <div class="container">
13        <div class="row">
14          <div class="col-12">
15            <h1>Hello world!</h1>
16          </div>
17        </div>
18      </div>
19
20      <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
21
22      <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/js/
      bootstrap.bundle.min.js"></script>
23    </body>
24  </html>
```

Bootstrap

```
aula_5_ex > <> ex4.html > html > body
11      <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
12      <div class="container">
13          <div class="row">
14              <div class="col-12">
15                  <h1>Hello world!</h1>
16              </div>
17          </div>
18      </div>
19
20      <div class="container-fluid">
21          <div class="row">
22              <div class="col-12">
23                  <h1>Hello world!</h1>
24              </div>
25          </div>
26      </div>
27
28      <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
```

Bootstrap

```
aula_5_ex > <> ex5.html > html > body
10
11 <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
12 <div class="container">
13   <div class="row">
14     <div class="col-12">
15       <h1>Hello world!</h1>
16     </div>
17   </div>
18   <div class="row">
19     <div class="col-12">
20       <h1>Olá mundo!</h1>
21     </div>
22   </div>
23   <div class="row">
24     <div class="col-12">
25       <h1>Bootstrap é firme!</h1>
26     </div>
27   </div>
28 </div>
29
30 <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
```

Bootstrap

.container

.row

.col	.col	.col	.col	.col	.col	.col	.col	.col	.col	.col	.col
1	2	3	4	5	6	7	8	9	10	11	12

.row

.col-12

.row

.col-6	.col-6
--------	--------

.row

.col-4	.col-8
--------	--------

.row

.col-3	.col-3	.col-3	.col-3
--------	--------	--------	--------

Bootstrap

- Acessar o `ex6.html`;

Bootstrap

Breakpoint	Class infix	Dimensions
Extra small	<i>None</i>	<576px
Small	sm	≥576px
Medium	md	≥768px
Large	lg	≥992px
Extra large	xl	≥1200px
Extra extra large	xxl	≥1400px

Bootstrap

	xs <576px	sm ≥576px	md ≥768px	lg ≥992px	xl ≥1200px	xxl ≥1400px
Container <i>max-width</i>	None (auto)	540px	720px	960px	1140px	1320px
Class prefix	<i>.col-</i>	<i>.col-sm-</i>	<i>.col-md-</i>	<i>.col-lg-</i>	<i>.col-xl-</i>	<i>.col-xxl-</i>
# of columns	12					
Gutter width	1.5rem (.75rem on left and right)					
Custom gutters	Yes					
Nestable	Yes					
Column ordering	Yes					

Bootstrap

```
aula_5_ex > <> ex8.html > html > body
10
11 <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
12 <div class="container">
13   <div class="row">
14     <div class="col-12 col-md-2 col-xl-1">
15       <p>
16         Aqui tem a coluna 1
17       </p>
18     </div>
```

Bootstrap

- Aplicar para o restante do arquivo;

Bootstrap

- Primeiro: imaginar o layout em uma tela de celular;
- Segundo: imaginar o layout em uma tela de tablet (md);
- Terceiro: imaginar o layout em uma tela de computador (xl);

Bootstrap

- Acessar: <https://getbootstrap.com/docs/5.2/components/>

Bootstrap

- Alertas (Alerts):
<https://getbootstrap.com/docs/5.2/components/alerts/>

The screenshot shows the Bootstrap 5.2 Alerts documentation page. The page has a purple header with navigation links: Docs, Examples, Icons, Themes, Blog, and a search bar. A sidebar on the left lists various Bootstrap components, with 'Alerts' highlighted. The main content area features the title 'Alerts' with a 'View on GitHub' link. Below the title is a description: 'Provide contextual feedback messages for typical user actions with the handful of available and flexible alert messages.' This is followed by an 'Examples' section with a paragraph explaining that alerts are available for any length of text and can include an optional close button. It lists eight required contextual classes (e.g., `.alert-success`) and mentions the `alerts JavaScript plugin`. Below this text are six examples of alerts, each in a different color: primary (blue), secondary (gray), success (green), danger (red), warning (yellow), and info (light blue). Each example contains the text 'A simple [type] alert—check it out!'.

Alerts [View on GitHub](#)

Provide contextual feedback messages for typical user actions with the handful of available and flexible alert messages.

Examples

Alerts are available for any length of text, as well as an optional close button. For proper styling, use one of the eight **required** contextual classes (e.g., `.alert-success`). For inline dismissal, use the [alerts JavaScript plugin](#).

- A simple primary alert—check it out!
- A simple secondary alert—check it out!
- A simple success alert—check it out!
- A simple danger alert—check it out!
- A simple warning alert—check it out!
- A simple info alert—check it out!

Bootstrap

```
aula_5_ex > ex9.html > html > body
13 <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
14 <div class="container">
15   <div class="row">
16     <div class="col-12">
17       <div class="alert alert-primary" role="alert">
18         A simple primary alert-check it out!
19       </div>
20       <div class="alert alert-secondary" role="alert">
21         A simple secondary alert-check it out!
22       </div>
23       <div class="alert alert-success" role="alert">
24         A simple success alert-check it out!
25       </div>
26       <div class="alert alert-danger" role="alert">
27         A simple danger alert-check it out!
28       </div>
29       <div class="alert alert-warning" role="alert">
30         A simple warning alert-check it out!
31       </div>
32       <div class="alert alert-info" role="alert">
33         A simple info alert-check it out!
34       </div>
35       <div class="alert alert-light" role="alert">
36         A simple light alert-check it out!
37       </div>
38       <div class="alert alert-dark" role="alert">
39         A simple dark alert-check it out!
40       </div>
41     </div>
42   </div>
43 </div>
44 <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
```

Bootstrap

- Botões (Buttons):
<https://getbootstrap.com/docs/5.2/components/buttons/>

The screenshot shows the Bootstrap 5.2 documentation page for Buttons. The page has a purple header with navigation links: Docs, Examples, Icons, Themes, Blog, and a search bar. A sidebar on the left lists various components, with 'Buttons' highlighted. The main content area features the title 'Buttons', a description, and a section for 'Examples' showing various button styles: Primary, Secondary, Success, Danger, Warning, Info, Light, Dark, and Link. Below the examples is a code block showing the HTML for each button style.

Buttons [View on GitHub](#)

Use Bootstrap's custom button styles for actions in forms, dialogs, and more with support for multiple sizes, states, and more.

Examples

Bootstrap includes several predefined button styles, 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>

<button type="button" class="btn btn-link">Link</button>
```

Bootstrap

```
aula_5_ex > <> ex10.html > html > body
13      <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
14      <div class="container">
15          <div class="row">
16              <div class="col-12">
17                  <button type="button" class="btn btn-primary">Primary</button>
18                  <button type="button" class="btn btn-secondary">Secondary</button>
19                  <button type="button" class="btn btn-success">Success</button>
20                  <button type="button" class="btn btn-danger">Danger</button>
21                  <button type="button" class="btn btn-warning">Warning</button>
22                  <button type="button" class="btn btn-info">Info</button>
23                  <button type="button" class="btn btn-light">Light</button>
24                  <button type="button" class="btn btn-dark">Dark</button>
25                  <button type="button" class="btn btn-link">Link</button>
26              </div>
27          </div>
28      </div>
29      <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
```


Bootstrap

- Card: <https://getbootstrap.com/docs/5.2/components/card/>

The screenshot shows the Bootstrap 5.2 documentation page for the 'Cards' component. The page has a purple header with navigation links: Docs, Examples, Icons, Themes, and Blog. A search bar and a version dropdown (v5.2) are also present. On the left, a sidebar lists various components, with 'Card' highlighted. The main content area features the title 'Cards' and a sub-header 'About'. The 'About' section explains that Bootstrap's cards provide a flexible and extensible content container. Below this is an 'Example' section with a description of how cards are built and a link to 'spacing utilities'. A 'View on GitHub' button is located next to the 'About' section. On the right, a 'On this page' section lists the page's contents, including 'About', 'Example', 'Content types', 'Sizing', 'Text alignment', 'Navigation', 'Images', 'Horizontal', 'Card styles', and 'Mixins utilities'.

Card

- Carousel
- Close button
- Collapse
- Dropdowns
- List group
- Modal
- Navbar
- Navs & tabs
- Offcanvas
- Pagination
- Placeholders
- Popovers
- Progress
- Scrollspy
- Spinners
- Toasts
- Tooltips

Helpers

- Clearfix
- Color & background

Cards

[View on GitHub](#)

Bootstrap's cards provide a flexible and extensible content container with multiple variants and options.

About

A **card** is a flexible and extensible content container. It includes options for headers and footers, a wide variety of content, contextual background colors, and powerful display options. If you're familiar with Bootstrap 3, cards replace our old panels, wells, and thumbnails. Similar functionality to those components is available as modifier classes for cards.

Example

Cards are built with as little markup and styles as possible, but still manage to deliver a ton of control and customization. Built with flexbox, they offer easy alignment and mix well with other Bootstrap components. They have no **margin** by default, so use [spacing utilities](#) as needed.

Below is an example of a basic card with mixed content and a fixed width. Cards have no fixed width to start, so they'll naturally fill the full width of its parent element. This is easily customized with our various [sizing options](#).

[View on GitHub](#)

On this page

- About
- Example
- Content types
 - Body
 - Titles, text, and links
- Images
- List groups
- Kitchen sink
- Header and footer
- Sizing
 - Using grid markup
 - Using utilities
 - Using custom CSS
- Text alignment
- Navigation
- Images
 - Image caps
 - Image overlays
- Horizontal
- Card styles
 - Background and color
 - Border
 - Mixins utilities

Bootstrap

```
aula_5_ex > <> ex11.html > html > body
12
13 <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
14 <div class="container">
15   <div class="row">
16     <div class="col-12">
17       <div class="card" style="width: 18rem;">
18         
20         <div class="card-body">
21           <h5 class="card-title">Card title</h5>
22           <p class="card-text">Some quick example text to build on the card title
23           and make up the bulk of
24           the card's content.</p>
25           <a href="#" class="btn btn-primary">Go somewhere</a>
26         </div>
27       </div>
28     </div>
29 <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
```

Bootstrap

```
aula_5_ex > ex12.html > html > body
12
13 <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
14 <div class="container">
15   <div class="row">
16     <div class="col-12">
17       <div class="card">
18         
20         <div class="card-body">
21           <h5 class="card-title">Card title</h5>
22           <p class="card-text">Some quick example text to build on the card title
23             and make up the bulk of
24             the card's content.</p>
25           <a href="#" class="btn btn-primary">Go somewhere</a>
26         </div>
27       </div>
28     </div>
29 <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
```

Bootstrap

- Barra de menu (Navbar):
<https://getbootstrap.com/docs/5.2/components/navbar/>

The screenshot shows the Bootstrap 5.2 documentation page for the Navbar component. The page has a purple header with navigation links (Docs, Examples, Icons, Themes, Blog), a search bar, and social media icons. The main content area is titled 'Navbar' and includes a 'View on GitHub' button. The page is divided into three columns: a left sidebar with a table of contents, a central main content area, and a right sidebar with 'On this page' links. The main content area contains a description of the Navbar, a 'How it works' section, and a list of key points.

Navbar

Documentation and examples for Bootstrap's powerful, responsive navigation header, the navbar. Includes support for branding, navigation, and more, including support for our collapse plugin.

How it works

Here's what you need to know before getting started with the navbar:

- Navbars require a wrapping `.navbar` with `.navbar-expand{-sm|-md|-lg|-xl|-xxl}` for responsive collapsing and `color scheme` classes.
- Navbars and their contents are fluid by default. Change the `container` to limit their horizontal width in different ways.
- Use our `spacing` and `flex` utility classes for controlling spacing and alignment within navbars.
- Navbars are responsive by default, but you can easily modify them to change that. Responsive behavior depends on our Collapse JavaScript plugin.
- Ensure accessibility by using a `<nav>` element or, if using a more generic element such as a `<div>`, add a `role="navigation"` to every navbar to explicitly identify it as a landmark region for users of assistive technologies.
- Indicate the current item by using `aria-current="page"` for the current page or `aria-current="true"` for the current item in a set.
- **New in v5.2.0:** Navbars can be themed with CSS variables that are scoped to the `.navbar` base class. `.navbar-light` has been deprecated and `.navbar-dark` has been rewritten to override CSS variables instead of adding additional styles.

On this page

- How it works
- Supported content
 - Brand
 - Text
 - Image
 - Image and text
- Nav
- Forms
- Text
- Color schemes
- Containers
- Placement
- Scrolling
- Responsive behaviors
 - Toggler
 - External content
 - Offcanvas
- CSS
 - Variables
 - Sass variables
 - Sass loop

Bootstrap

- Abrir o ex13.html;

Bootstrap

- Cor do texto (Colors):
<https://getbootstrap.com/docs/5.2/utilities/colors/>

The screenshot shows the Bootstrap 5.2 documentation page for the 'Colors' utility. The page has a purple header with navigation links: Docs, Examples, Icons, Themes, Blog, a search bar, and social media icons. The left sidebar lists various utility categories, with 'Colors' highlighted under 'Utilities'. The main content area features the title 'Colors' and a description: 'Convey meaning through color with a handful of color utility classes. Includes support for styling links with hover states, too.' Below this, there is a section titled 'Colors' with a description: 'Colorize text with color utilities. If you want to colorize links, you can use the `.link-* helper classes` which have `:hover` and `:focus` states.' A list of text color classes is shown with corresponding color swatches: `.text-primary` (blue), `.text-secondary` (dark gray), `.text-success` (green), `.text-danger` (red), `.text-warning` (yellow), `.text-info` (cyan), `.text-light` (light gray), and `.text-dark` (dark gray). The right sidebar, titled 'On this page', lists links to 'Colors', 'Opacity', 'How it works', 'Example', 'Specificity', 'Sass', 'Variables', 'Map', and 'Utilities API'.

Utilities

- API
- Background
- Borders
- Colors
- Display
- Flex
- Float
- Interactions
- Opacity
- Overflow
- Position
- Shadows
- Sizing
- Spacing
- Text
- Vertical align
- Visibility

Extend

- Approach
- Icons

Colors

Convey meaning through color with a handful of color utility classes. Includes support for styling links with hover states, too.

View on GitHub

Colors

Colorize text with color utilities. If you want to colorize links, you can use the `.link-* helper classes` which have `:hover` and `:focus` states.

- `.text-primary`
- `.text-secondary`
- `.text-success`
- `.text-danger`
- `.text-warning`
- `.text-info`
- `.text-light`
- `.text-dark`

On this page

- Colors
- Opacity
- How it works
- Example
- Specificity
- Sass
- Variables
- Map
- Utilities API

Bootstrap

```
aula_5_ex > ex14.html > html > body
13 <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
14 <div class="container">
15   <div class="row">
16     <div class="col-12">
17       <p class="text-primary">.text-primary</p>
18       <p class="text-secondary">.text-secondary</p>
19       <p class="text-success">.text-success</p>
20       <p class="text-danger">.text-danger</p>
21       <p class="text-warning bg-dark">.text-warning</p>
22       <p class="text-info bg-dark">.text-info</p>
23       <p class="text-light bg-dark">.text-light</p>
24       <p class="text-dark">.text-dark</p>
25       <p class="text-body">.text-body</p>
26       <p class="text-muted">.text-muted</p>
27       <p class="text-white bg-dark">.text-white</p>
28       <p class="text-black-50">.text-black-50</p>
29       <p class="text-white-50 bg-dark">.text-white-50</p>
30     </div>
31   </div>
32 </div>
33 <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
```

Bootstrap

- Cor de fundo (Background):
<https://getbootstrap.com/docs/5.2/utilities/background/>

The screenshot shows the Bootstrap 5.2 documentation page for Background utilities. The page has a purple header with navigation links (Docs, Examples, Icons, Themes, Blog), a search bar, and social media icons. The left sidebar lists various utility categories, with 'Background' highlighted. The main content area features the title 'Background' with a 'View on GitHub' button, a brief description, and a section for 'Background color' with a list of color classes. The right sidebar lists related topics like 'Background color', 'Background gradient', and 'Opacity'.

Background [View on GitHub](#)

Convey meaning through `background-color` and add decoration with gradients.

Background color

Similar to the contextual text color classes, set the background of an element to any contextual class. Background utilities **do not set color**, so in some cases you'll want to use `.text-*` [color utilities](#).

<code>.bg-primary</code>
<code>.bg-secondary</code>
<code>.bg-success</code>
<code>.bg-danger</code>

On this page

- Background color
- Background gradient
- Opacity
 - How it works
 - Example
- Sass
 - Variables
 - Map
 - Mixins
 - Utilities API

Bootstrap

```
aula_5_ex > ex15.html > html > body
12
13 <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
14 <div class="container">
15   <div class="row">
16     <div class="col-12">
17       <div class="p-3 mb-2 bg-primary text-white">.bg-primary</div>
18       <div class="p-3 mb-2 bg-secondary text-white">.bg-secondary</div>
19       <div class="p-3 mb-2 bg-success text-white">.bg-success</div>
20       <div class="p-3 mb-2 bg-danger text-white">.bg-danger</div>
21       <div class="p-3 mb-2 bg-warning text-dark">.bg-warning</div>
22       <div class="p-3 mb-2 bg-info text-dark">.bg-info</div>
23       <div class="p-3 mb-2 bg-light text-dark">.bg-light</div>
24       <div class="p-3 mb-2 bg-dark text-white">.bg-dark</div>
25       <div class="p-3 mb-2 bg-body text-dark">.bg-body</div>
26       <div class="p-3 mb-2 bg-white text-dark">.bg-white</div>
27       <div class="p-3 mb-2 bg-transparent text-dark">.bg-transparent</div>
28     </div>
29   </div>
30 </div>
31 <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
```

Bootstrap

- Alinhamento de texto (Text alignment):
<https://getbootstrap.com/docs/5.2/utilities/text/#text-alignment>

The screenshot shows the Bootstrap 5.2 documentation page for Text alignment. The page has a purple header with navigation links: Docs, Examples, Icons, Themes, Blog, and a search bar. The left sidebar lists various utility classes under 'Utilities' and 'Extend'. The main content area is titled 'Text alignment #' and explains that text alignment classes are available for start, end, and center alignment, responsive classes are available that use the same viewport width breakpoints as the grid system. It provides examples for start, center, and end alignment on all viewport sizes, and for start alignment on viewports sized SM (small) or wider, MD (medium) or wider, LG (large) or wider, and XL (extra-large) or wider. The HTML code for these examples is shown in a code block.

Text alignment #

Easily realign text to components with text alignment classes. For start, end, and center alignment, responsive classes are available that use the same viewport width breakpoints as the grid system.

Start aligned text on all viewport sizes.

Center aligned text on all viewport sizes.

End aligned text on all viewport sizes.

Start aligned text on viewports sized SM (small) or wider.

Start aligned text on viewports sized MD (medium) or wider.

Start aligned text on viewports sized LG (large) or wider.

Start aligned text on viewports sized XL (extra-large) or wider.

HTML

```
<p class="text-start">Start aligned text on all viewport sizes.</p>
<p class="text-center">Center aligned text on all viewport sizes.</p>
<p class="text-end">End aligned text on all viewport sizes.</p>

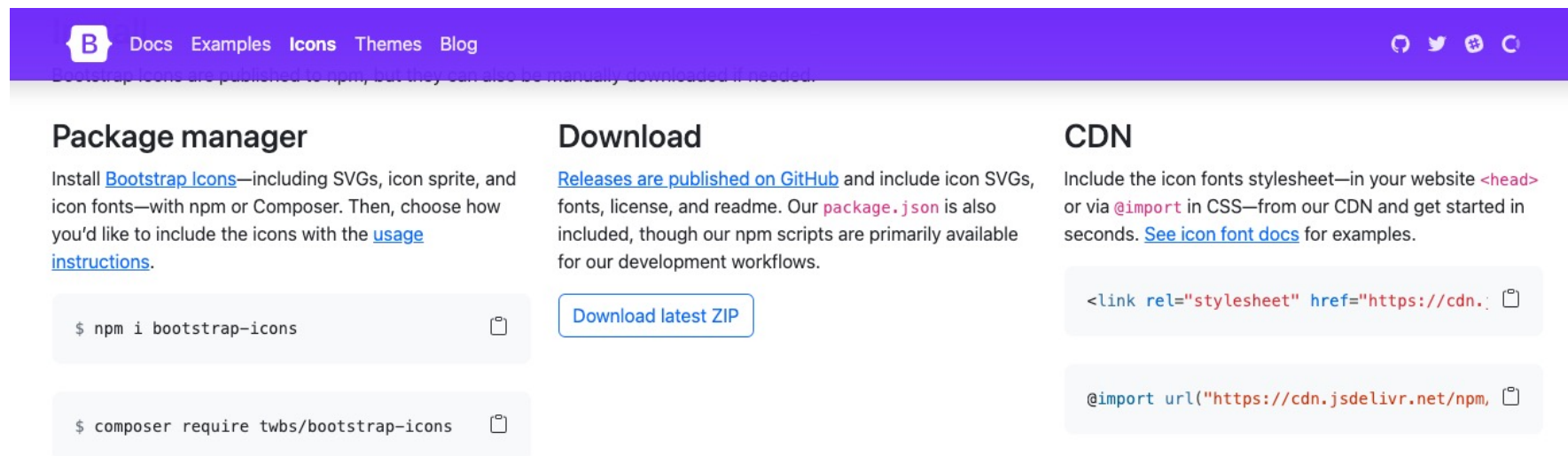
<p class="text-sm-start">Start aligned text on viewports sized SM (small) or wider.</p>
<p class="text-md-start">Start aligned text on viewports sized MD (medium) or wider.</p>
<p class="text-lg-start">Start aligned text on viewports sized LG (large) or wider.</p>
<p class="text-xl-start">Start aligned text on viewports sized XL (extra-large) or wider.</p>
```

Bootstrap

```
aula_5_ex > <> ex16.html > html > body
12
13 <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
14 <div class="container">
15   <div class="row">
16     <div class="col-12">
17       <p class="text-start">Start aligned text on all viewport sizes.</p>
18       <p class="text-center">Center aligned text on all viewport sizes.</p>
19       <p class="text-end">End aligned text on all viewport sizes.</p>
20
21       <p class="text-sm-start">Start aligned text on viewports sized SM (small) or
22       wider.</p>
23       <p class="text-md-start">Start aligned text on viewports sized MD (medium) or
24       wider.</p>
25       <p class="text-lg-start">Start aligned text on viewports sized LG (large) or
26       wider.</p>
27       <p class="text-xl-start">Start aligned text on viewports sized XL (extra-large)
28       or wider.</p>
29     </div>
30   </div>
31 </div>
32 <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
```

Bootstrap

- Ícones (Icons): <https://icons.getbootstrap.com/#install>



The screenshot shows the 'Icons' section of the Bootstrap website. It features a purple header with navigation links: Docs, Examples, Icons, Themes, and Blog. Below the header, there are three main columns: 'Package manager', 'Download', and 'CDN'. The 'Package manager' column provides instructions for installing Bootstrap Icons using npm or Composer, with corresponding code snippets and copy icons. The 'Download' column mentions that releases are published on GitHub and provides a 'Download latest ZIP' button. The 'CDN' column explains how to include the icon fonts stylesheet in a website's head or via @import in CSS, with code snippets and copy icons.

Package manager

Install [Bootstrap Icons](#)—including SVGs, icon sprite, and icon fonts—with npm or Composer. Then, choose how you'd like to include the icons with the [usage instructions](#).

```
$ npm i bootstrap-icons
```

```
$ composer require twbs/bootstrap-icons
```

Download

[Releases are published on GitHub](#) and include icon SVGs, fonts, license, and readme. Our `package.json` is also included, though our npm scripts are primarily available for our development workflows.

[Download latest ZIP](#)

CDN

Include the icon fonts stylesheet—in your website `<head>` or via `@import` in CSS—from our CDN and get started in seconds. [See icon font docs](#) for examples.

```
<link rel="stylesheet" href="https://cdn."
```

```
@import url("https://cdn.jsdelivr.net/npm,
```

Bootstrap

```
aula_5_ex > <> ex17.html > ...
1  <!doctype html>
2  <html lang="en">
3
4  <head>
5      <meta charset="utf-8">
6      <meta name="viewport" content="width=device-width, initial-scale=1">
7      <title>Bootstrap demo</title>
8      <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/css/bootstrap.min.css"
9          rel="stylesheet">
10     <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.9.1/font/
11         bootstrap-icons.css">
12 </head>
13
14 <body>
15     <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
16     <div class="container">
17         <div class="row">
18             <div class="col-12">
19                 <p>
20                     <i class="bi bi-person-circle"></i> Ícone de pessoa
21                 </p>
22                 <h1 class="text-success">
23                     <i class="bi bi-check-circle"></i> Ícone de check
24                 </h1>
25             </div>
26         </div>
27     <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
28
29     <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/js/bootstrap.bundle.min.js"></
30     script>
31 </body>
32 </html>
```

Bootstrap

- Carrossel (Carousel):
<https://getbootstrap.com/docs/5.2/components/carousel/>

The screenshot shows the Bootstrap 5.2 documentation page for the Carousel component. The page has a purple header with navigation links: Docs, Examples, Icons, Themes, and Blog. A search bar and a version dropdown (v5.2) are also present. On the left, a sidebar lists various components, with 'Carousel' highlighted. The main content area features the title 'Carousel' with a 'View on GitHub' button. Below the title is a description: 'A slideshow component for cycling through elements—images or slides of text—like a carousel.' This is followed by a 'How it works' section explaining that the carousel is a slideshow built with CSS 3D transforms and JavaScript, supporting previous/next controls and indicators. A note mentions that in browsers supporting the Page Visibility API, the carousel will avoid sliding when the webpage is not visible. A light blue callout box states that the animation effect is dependent on the 'prefers-reduced-motion' media query. At the bottom, a warning says that nested carousels are not supported and they are generally not compliant with accessibility standards. On the right, a 'On this page' section lists links to 'How it works', 'Example', 'Slides only', 'With controls', 'With indicators', 'With captions', 'Crossfade', 'Individual .carousel-item interval', 'Disable touch swiping', 'Dark variant', 'Custom transition', 'Sass', 'Variables', 'Usage', 'Via data attributes', 'Via JavaScript', 'Options', 'Methods', and 'Events'.

Carousel [View on GitHub](#)

A slideshow component for cycling through elements—images or slides of text—like a carousel.

How it works

The carousel is a slideshow for cycling through a series of content, built with CSS 3D transforms and a bit of JavaScript. It works with a series of images, text, or custom markup. It also includes support for previous/next controls and indicators.

In browsers where the [Page Visibility API](#) is supported, the carousel will avoid sliding when the webpage is not visible to the user (such as when the browser tab is inactive, the browser window is minimized, etc.).

The animation effect of this component is dependent on the `prefers-reduced-motion` media query. See the [reduced motion section of our accessibility documentation](#).

Please be aware that nested carousels are not supported, and carousels are generally not compliant with accessibility standards.

On this page













- How it works
- Example
 - Slides only
 - With controls
 - With indicators
 - With captions
 - Crossfade
 - Individual `.carousel-item` interval
 - Disable touch swiping
- Dark variant
- Custom transition
- Sass
 - Variables
- Usage
 - Via data attributes
 - Via JavaScript
 - Options
 - Methods
 - Events

Bootstrap

```
aula_5_ex > ex18.html > html > body
14  <!-- AQUI COMEÇA O CÓDIGO DA PÁGINA -->
15  <div class="container">
16    <div class="row">
17      <div class="col-12">
18        <div id="carouselExampleControls" class="carousel slide" data-bs-ride="carousel">
19          <div class="carousel-inner">
20            <div class="carousel-item active">
21              
23            </div>
24            <div class="carousel-item">
25              
27            </div>
28            <div class="carousel-item">
29              
31            </div>
32          </div>
33          <button class="carousel-control-prev" type="button"
34            data-bs-target="#carouselExampleControls"
35            data-bs-slide="prev">
36            <span class="carousel-control-prev-icon" aria-hidden="true"></span>
37            <span class="visually-hidden">Previous</span>
38          </button>
39          <button class="carousel-control-next" type="button"
40            data-bs-target="#carouselExampleControls"
41            data-bs-slide="next">
42            <span class="carousel-control-next-icon" aria-hidden="true"></span>
43            <span class="visually-hidden">Next</span>
44          </button>
45        </div>
46      </div>
47    </div>
48  </div>
49  <!-- AQUI TERMINA O CÓDIGO DA PÁGINA -->
```





























Bootstrap

Classificação de frameworks por linguagem: Frameworks css

 Bootstrap  Front-End Frameworks Favorites ★ 651 Stacks 14.7K Fans 7.31K Votes 7.4K Jobs 0 Y 3.29K R 6.33K D 93.1K GitHub 128K ★ 62.5K  about 7 hours ago	 Foundation  Front-End Frameworks Favorites ★ 86 Stacks 1.17K Fans 570 Votes 723 Jobs 0 Y - R 1.19K D 697 GitHub 27.7K ★ 5.82K  about 7 hours ago	 Semantic UI  Front-End Frameworks Favorites ★ 131 Stacks 479 Fans 571 Votes 547 Jobs 29 Y 1.46K R 862 D 2.01K GitHub 43.1K ★ 4.62K  about 9 hours ago	 UIkit  Front-End Frameworks Favorites ★ 30 Stacks 135 Fans 111 Votes 160 Jobs 0 Y 139 R 21 D 6.98K GitHub 13.2K ★ 2K  about 5 hours ago
---	--	--	--

Bootstrap

Classificação de frameworks por linguagem: Frameworks css

 Bulma  Front-End Frameworks	 Materialize  Front-End Frameworks	 Material Design Lite  Front-End Frameworks	 Pure  Front-End Frameworks
	Favorites ★ 84 Stacks 356	Favorites ★ 40 Stacks 137	Favorites ★ 11 Stacks 29
	Fans 431 Votes 477 Jobs 19	Fans 195 Votes 114 Jobs 5	Fans 35 Votes 58 Jobs 0
 162  141  280	 -  375  2.59K	 -  198  619	 825  697  0
 30 K ★ 2,386  about 2 days ago	 34.1K ★ 4.66K  about 9 hours ago	 30.7K ★ 5.29K  about 20 hours ago	 19.1K ★ 2.04K  about 19 hours ago

Dúvidas, sugestões, experiências, expectativas

