Introduction to Bootstrap 5

Bootstrap is a free and open-source web development framework. It's designed to ease the web development process of responsive, mobile-first websites by providing a collection of syntax for template designs.

The current version is **Bootstrap 5.3** as of this writing

Introduction to Bootstrap 5 (cont'd)

Installation (Or you can go here, [https://getbootstrap.com/])
Via CDN:

- `<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.8/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-sRIl4kxILFvY47J16cr9ZwB07vP4J8+LH7qKQnuqkuIAvNWLzeN8tE5YBujZqJLB" crossorigin="anonymous">`

- `<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.8/dist/js/bootstrap.bundle.min.js" integrity="sha384-FKyoEForCGlyvwx9Hj09JcYn3nv7wiPVlz7YYwJrWVcXK/BmnVDxM+D2scQbITxI" crossorigin="anonymous"></script>`

Introduction to Bootstrap 5 (cont'd)

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Bootstrap demo</title>
  </head>
  <body>
    <h1>Hello, world!</h1>
  </body>
</html>
```

Introduction to Bootstrap 5 (cont'd)

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  </body>
</html>
```

Introduction to Bootstrap 5 (cont'd)

Containers are a fundamental building block of Bootstrap that contain, pad, and align your content within a given device or viewport.

<div class="container"></div>

Responsive container

<div class="container-sm|md|lg|xl|xxl|fluid"></container>

Introduction to Bootstrap 5 (cont'd)

Bootstrap's **grid** system uses a series of containers, rows, and columns to layout and align content. It's built with flexbox and is fully responsive.

```
<div class="container">
        <div class="row">
                <div class="col"></div>
        </div>
</div>
```

options col-xs|sm|md|lg|xl|xxl-1.. 12

Bootstrap Components (Button)

Bootstrap has a base `.btn` class that sets up basic styles such as padding and content alignment. By default, `.btn` controls have a transparent border and background color, and lack any explicit focus and hover styles.

<button type="button" class="btn">Base class</button>

<button type="button" class="btn btn-primary|secondary|success|danger|warning|info|light|dark|link">Base class</button>

Bootstrap Components (Card)

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.

```
<div class="card" style="width: 18rem;">
  <img src="..." class="card-img-top" alt="...">
  <div class="card-body">
    <h5 class="card-title">Card title</h5>
    <p class="card-text">Some quick example text to build on the card title and make up the bulk of the card's content.</p>
    <a href="#" class="btn btn-primary">Go somewhere</a>
  </div>
</div>
```

Bootstrap Components (Form – Form Control)

```
<div class="mb-3">
  <label for="exampleFormControlInput1" class="form-label">Email address</label>
  <input type="email" class="form-control" id="exampleFormControlInput1" placeholder="name@example.com">
</div>
<div class="mb-3">
  <label for="exampleFormControlTextarea1" class="form-label">Example textarea</label>
  <textarea class="form-control" id="exampleFormControlTextarea1" rows="3"></textarea>
</div>
```

Bootstrap Components (Form - Select)

```
<select class="form-select" aria-label="Default select example">

  <option selected>Open this select menu</option>

  <option value="1">One</option>

  <option value="2">Two</option>

  <option value="3">Three</option>

</select>
```

Bootstrap Components (Form - Checkbox)

```
<div class="form-check">
  <input class="form-check-input" type="checkbox" value="" id="checkDefault">
  <label class="form-check-label" for="checkDefault">
    Default checkbox
  </label>
</div>

<div class="form-check">
  <input class="form-check-input" type="checkbox" value="" id="checkChecked" checked>
  <label class="form-check-label" for="checkChecked">
    Checked checkbox
  </label>
</div>
```

Bootstrap Components (Form - Radio)

```
<div class="form-check">
 <input class="form-check-input" type="radio" name="radioDefault" id="radioDefault1">
 <label class="form-check-label" for="radioDefault1">
  Default radio
 </label>
</div>
<div class="form-check">
 <input class="form-check-input" type="radio" name="radioDefault" id="radioDefault2" checked>
 <label class="form-check-label" for="radioDefault2">
  Default checked radio
 </label>
</div>
```

Bootstrap Components (Modal)

- Modals are built with HTML, CSS, and JavaScript. They're positioned over everything else in the document and remove scroll from the `<body>` so that modal content scrolls instead.
- Clicking on the modal "backdrop" will automatically close the modal.

```
<!-- Button trigger modal -->
<button type="button" class="btn btn-primary" data-bs-toggle="modal" data-bs-target="#exampleModal">
 Launch demo modal
</button>
```

Bootstrap Components (Modal cont'd)

```
<!-- Modal -->
<div class="modal fade" id="exampleModal" tabindex="-1" aria-labelledby="exampleModalLabel" aria-hidden="true">
  <div class="modal-dialog">
    <div class="modal-content">
      <div class="modal-header">
        <h1 class="modal-title fs-5" id="exampleModalLabel">Modal title</h1>
        <button type="button" class="btn-close" data-bs-dismiss="modal" aria-label="Close"></button>
      </div>
      <div class="modal-body">
        ...
      </div>
      <div class="modal-footer">
        <button type="button" class="btn btn-secondary" data-bs-dismiss="modal">Close</button>
        <button type="button" class="btn btn-primary">Save changes</button>
      </div>
    </div>
  </div>
</div>
```

Bootstrap Components (Alerts)

Alerts

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

```html
<div class="alert alert-primary|secondary|success|danger|warning|info|light|dark" role="alert">

  A simple primary alert—check it out!

</div>
```

Bootstrap Components (Dropdowns)

Dropdowns are toggleable, contextual overlays for displaying lists of links and more. They're made interactive with the included Bootstrap dropdown JavaScript plugin. They're toggled by clicking, not by hovering.

```
<div class="dropdown">
  <button class="btn btn-secondary dropdown-toggle" type="button" data-bs-toggle="dropdown" aria-expanded="false">
    Dropdown button
  </button>
  <ul class="dropdown-menu">
    <li><a class="dropdown-item" href="#">Action</a></li>
    <li><a class="dropdown-item" href="#">Another action</a></li>
    <li><a class="dropdown-item" href="#">Something else here</a></li>
  </ul>
</div>
```

Bootstrap Components (Carousel)

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

Bootstrap Components (Carousel cont'd)

```
<div id="carouselExample" class="carousel slide">
  <div class="carousel-inner">
    <div class="carousel-item active">
      <img src="..." class="d-block w-100" alt="...">
    </div>
    <div class="carousel-item">
      <img src="..." class="d-block w-100" alt="...">
    </div>
     </div>
  <button class="carousel-control-prev" type="button" data-bs-target="#carouselExample" data-bs-slide="prev">
    <span class="carousel-control-prev-icon" aria-hidden="true"></span>
    <span class="visually-hidden">Previous</span>
  </button>
  <button class="carousel-control-next" type="button" data-bs-target="#carouselExample" data-bs-slide="next">
    <span class="carousel-control-next-icon" aria-hidden="true"></span>
    <span class="visually-hidden">Next</span>
  </button>
</div>
```

Bootstrap Components (Utility classes)

Visibility

Use the `.visible` or `.invisible` classes to control the visibility of elements.

```
<div class="visible">I am visible</div>

<div class="invisible">I am invisible</div>
```

Bootstrap Components (Utility classes cont'd)

Display

- `.d-none`, `.d-block`, `.d-flex`, etc.: Control the `display` property of an element. Responsive variants like `.d-sm-none`, `.d-md-flex` allow for responsive control over display.
- `.d-print-*`: Control the display of elements specifically for printing.
- `.visually-hidden`: Hides an element visually while keeping it accessible to screen readers.

Bootstrap Components (Utility classes cont'd)

Spacing

Margin and Padding Utilities: Classes like `m-*`, `p-*`, `mt-*`, `pb-*`, `mx-*`, `py-*` with values from `0` to `5` (and `auto` for margins) control margin and padding on all sides, top/bottom, left/right, or specific sides. Responsive variants are also available (e.g., `.me-md-3`).

Bootstrap Components (Utility classes cont'd)

Flexbox:

- `.d-flex`: Initializes a flex container.
- `.flex-row`, `.flex-column`: Sets the flex direction.
- `.justify-content-*`: Aligns flex items along the main axis (e.g., `justify-content-center`, `justify-content-between`).
- `.align-items-*`: Aligns flex items along the cross axis (e.g., `align-items-start`, `align-items-center`).
- `.flex-grow-1`, `.flex-shrink-1`: Control how flex items grow or shrink.

Bootstrap Components (Utility classes cont'd)

Text and Typography:

- `.text-*`: Controls text alignment (e.g., `text-start`, `text-center`), color (e.g., `text-primary`, `text-muted`), and transformation (e.g., `text-uppercase`).
- `.fw-bold`, `.fw-light`, `.fst-italic`: Control font weight and style.

Bootstrap Components (Utility classes cont'd)

Borders:

- `.border`: Adds a border to all sides.
- `.border-top`, `.border-bottom-0`: Adds or removes borders from specific sides.
- `.border-primary`, `.border-width-2`: Control border color and width.
- `.rounded`, `.rounded-circle`: Apply border-radius for rounded corners.

Bootstrap Components (Utility classes cont'd)

Sizing:

- `.w-*`, `.h-*`: Set width and height with values like `25`, `50`, `75`, `100`, `auto`.
- `.mw-100`, `.mh-100`: Set maximum width and height to 100%.

Bootstrap Components (Utility classes cont'd)

Shadows:

- `.shadow`, `.shadow-sm`, `.shadow-lg`: Apply different levels of box-shadow.