WHAT IS RESPONSIVE WEB DESIGN?

THE HELPER.

BOOTSTRAP 5

WHAT IS BOOTSTRAP?

- Bootstrap is a free front-end framework for faster and easier web development
- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins
- Bootstrap also gives you the ability to easily create responsive designs

THE MAIN FEATURES OF BOOTSTRAP

- Bootstrap is a free front-end framework, with the purpose to make web development faster and easier.
- It also includes HTML and CSS-based design templates for forms, typography, buttons, navigation, tables, modals, image carousels, and many other components along with other optional JavaScript plugins.
- Bootstrap also provides the users with the ability to easily create responsive designs.
- The responsive CSS of Bootstrap also adjusts to phones, tablets, and desktops easily.
- It is compatible with all modern browsers like Chrome, Firefox, Internet Explorer, Edge, Safari, and Opera.

DOWNLOADING BOOTSTRAP 5 HTTPS://GETBOOTSTRAP.COM/

BOOTSTRAP 5

CONTAINERS

Bootstrap comes with three different containers:

.container : which sets a max-width at each responsive breakpoint

.container-{breakpoint} : which is width: 100% until the specified breakpoint

.container-fluid : which is width: 100% at all breakpoints

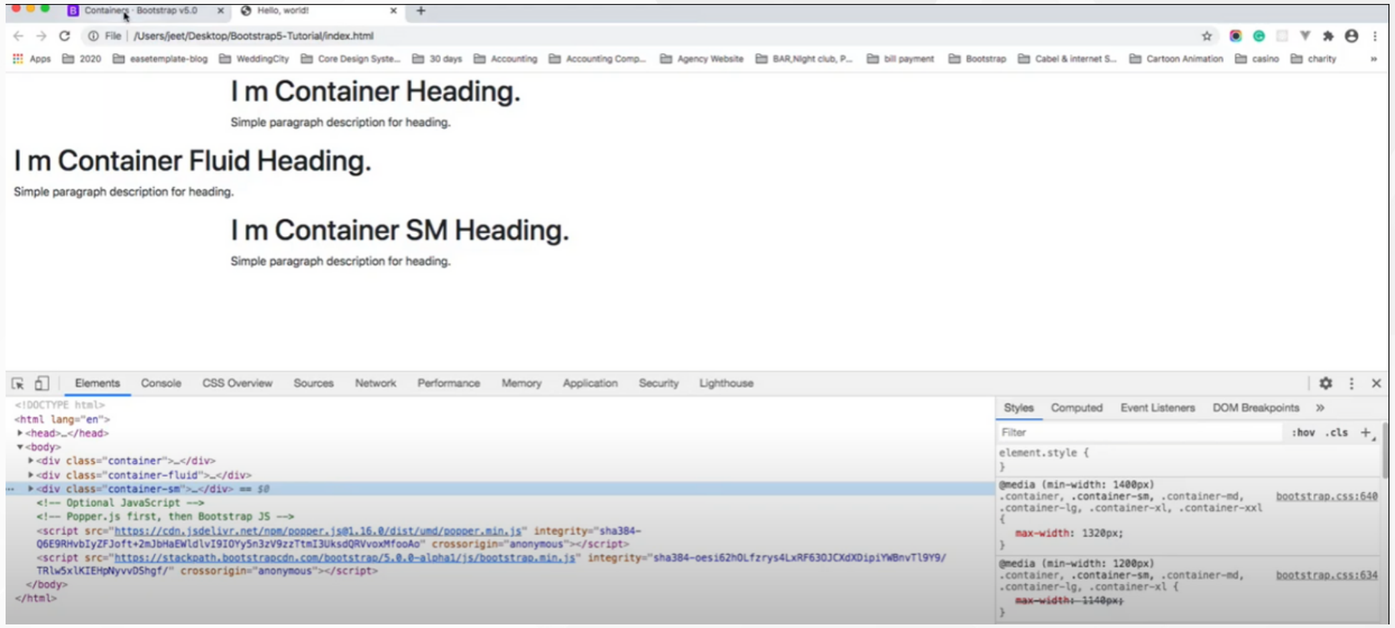
learn

https://www.w3schools.com/bootstrap5/bootstrap_containers.php

Class	Extra small <576px	Small ≥576px	Medium ≥768px	Large ≥992px	Extra large ≥1200px	XXL ≥1400px
.container-sm	100%	540px	720px	960px	1140px	1320px
.container-md	100%	100%	720px	960px	1140px	1320px
.container-lg	100%	100%	100%	960px	1140px	1320px
.container-xl	100%	100%	100%	100%	1140px	1320px
.container-xxl	100%	100%	100%	100%	100%	1320px

EXAMPLE

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <!-- Required meta tags -->
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1" />

    <!-- Bootstrap CSS -->
    <link rel="stylesheet" href="css/bootstrap.css" />
    <!-- Custom CSS-->
    <link rel="stylesheet" href="css/custom.css" />

    <title>Hello, world!</title>
  </head>
  <body>

    <div class="container">
      <!-- Content here -->
      <h1>I m Container Heading.</h1>
      <p>Simple paragrapg description for heading.</p>

    </div>
    <div class="container-fluid">
      <h1>I m Container Fluid Heading.</h1>
      <p>Simple paragraph description for heading.</p>
    </div>
    <div class="container-sm">
      <h1>I m Container SM Heading.</h1>
      <p>Simple paragraph description for heading.</p>

    </div>

    <!-- Optional JavaScript -->
    <!-- Popper.js first, then Bootstrap JS -->
```



HTTPS://DRIVE.GOOGLE.COM/DRIVE/U/2/FOLDERS/1EYM0FT7KLULCTLJGI56WWHU423YUT7OE

BOOTSTRAP 5

GRIDS

The Bootstrap 5 grid system has six classes:

- .col- (extra small devices - screen width less than 576px)
- .col-sm- (small devices - screen width equal to or greater than 576px)
- .col-md- (medium devices - screen width equal to or greater than 768px)
- .col-lg- (large devices - screen width equal to or greater than 992px)
- .col-xl- (xlarge devices - screen width equal to or greater than 1200px)
- .col-xxl- (xxlarge devices - screen width equal to or greater than 1400px)

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

learn https://www.w3schools.com/bootstrap5/bootstrap_grid_basic.php

BOOTSTRAP 5

GRIDS

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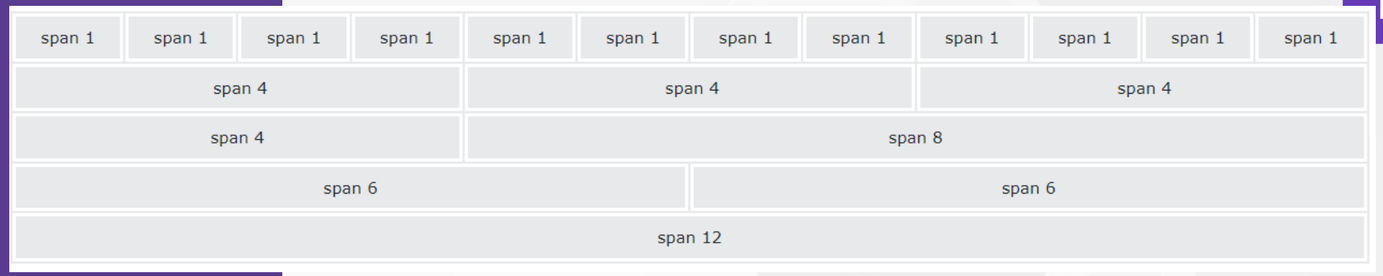
Column ordering	Yes					

learn https://www.w3schools.com/bootstrap5/bootstrap_grid_basic.php

BOOTSTRAP 5

GRIDS



The Bootstrap 5 grid system has six classes:

- .col- (extra small devices - screen width less than 576px)
- .col-sm- (small devices - screen width equal to or greater than 576px)
- .col-md- (medium devices - screen width equal to or greater than 768px)
- .col-lg- (large devices - screen width equal to or greater than 992px)
- .col-xl- (xlarge devices - screen width equal to or greater than 1200px)
- .col-xxl- (xxlarge devices - screen width equal to or greater than 1400px)

```
<!-- Control the column width, and how they should appear on different devices -->
<div class="row">
  <div class="col-*-*"></div>
  <div class="col-*-*"></div>
</div>
<div class="row">
  <div class="col-*-*"></div>
  <div class="col-*-*"></div>
  <div class="col-*-*"></div>
</div>

<!-- Or let Bootstrap automatically handle the layout -->
<div class="row">
  <div class="col"></div>
  <div class="col"></div>
  <div class="col"></div>
</div>
```

learn https://www.w3schools.com/bootstrap5/bootstrap_grid_basic.php

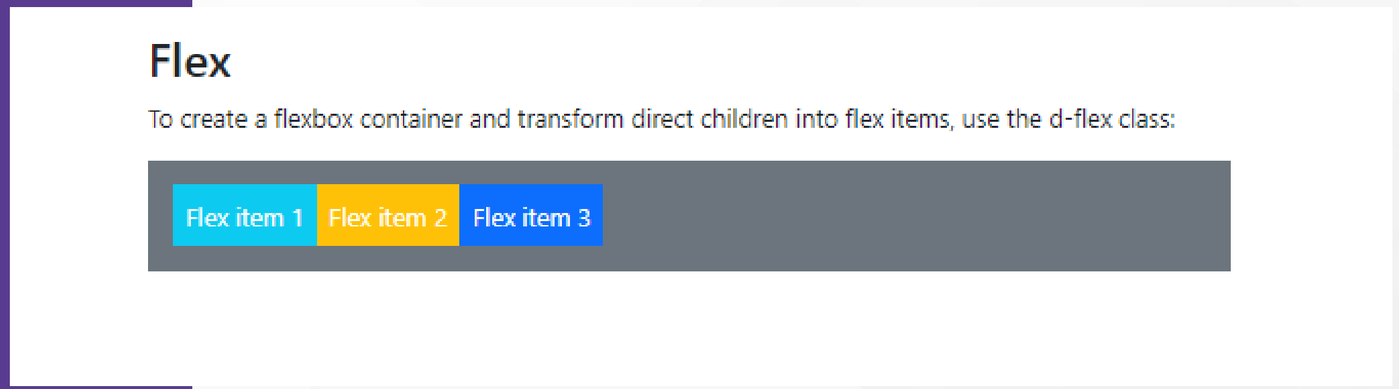
BOOTSTRAP 5

Flex

To create a flexbox container and to transform direct children into flex items, use the d-flex class:

learn
https://www.w3schools.com/bootstrap5/bootstrap_flex.php

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Flex</h2>
  <p>To create a flexbox container and transform direct children into flex items, use the d-flex class:</p>
  <div class="d-flex p-3 bg-secondary text-white">
    <div class="p-2 bg-info">Flex item 1</div>
    <div class="p-2 bg-warning">Flex item 2</div>
    <div class="p-2 bg-primary">Flex item 3</div>
  </div>
</div>

</body>
</html>
```

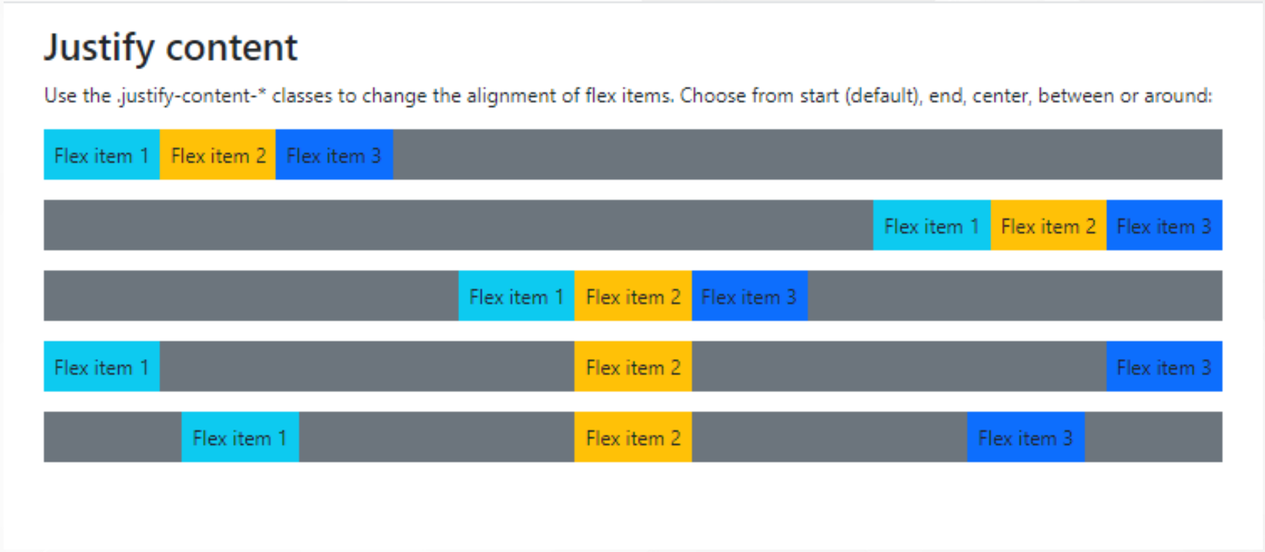


example https://www.w3schools.com/bootstrap5/bootstrap_typography.php

EXAMPLE

Use the .justify-content-* classes to change the alignment of flex items. Valid classes are start (default), end, center, between or around:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Justify content</h2>
  <p>Use the .justify-content-* classes to change the alignment of flex items. Choose from start (default),
between or around:</p>
  <div class="d-flex justify-content-start bg-secondary mb-3">
    <div class="p-2 bg-info">Flex item 1</div>
    <div class="p-2 bg-warning">Flex item 2</div>
    <div class="p-2 bg-primary">Flex item 3</div>
  </div>
  <div class="d-flex justify-content-end bg-secondary mb-3">
    <div class="p-2 bg-info">Flex item 1</div>
    <div class="p-2 bg-warning">Flex item 2</div>
    <div class="p-2 bg-primary">Flex item 3</div>
  </div>
  <div class="d-flex justify-content-center bg-secondary mb-3">
    <div class="p-2 bg-info">Flex item 1</div>
    <div class="p-2 bg-warning">Flex item 2</div>
    <div class="p-2 bg-primary">Flex item 3</div>
  </div>
  <div class="d-flex justify-content-between bg-secondary mb-3">
    <div class="p-2 bg-info">Flex item 1</div>
    <div class="p-2 bg-warning">Flex item 2</div>
    <div class="p-2 bg-primary">Flex item 3</div>
  </div>
  <div class="d-flex justify-content-around bg-secondary mb-3">
    <div class="p-2 bg-info">Flex item 1</div>
    <div class="p-2 bg-warning">Flex item 2</div>
    <div class="p-2 bg-primary">Flex item 3</div>
  </div>
</div>

</body>
</html>
```



example

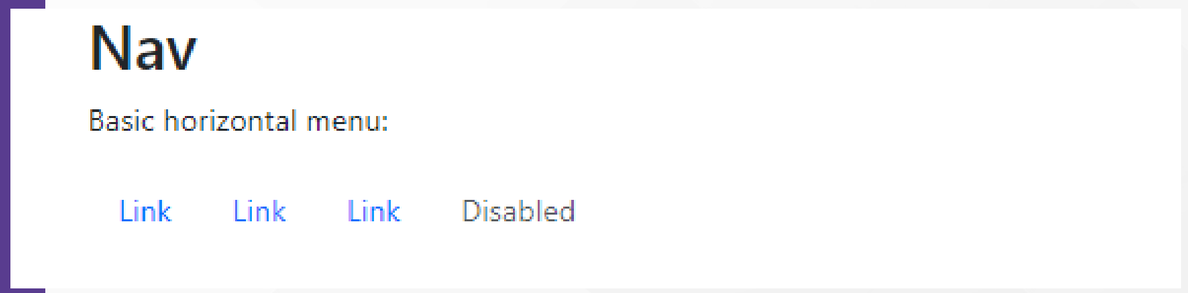
https://www.w3schools.com/bootstrap5/bootstrap_typography.php

BOOTSTRAP 5

Navs

If you want to create a simple horizontal menu, add the .nav class to a <ul> element, followed by .nav-item for each <li> and add the .nav-link class to their links:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Nav</h2>
  <p>Basic horizontal menu:</p>
  <ul class="nav">
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link disabled" href="#">Disabled</a>
    </li>
  </ul>
</div>

</body>
</html>
```



learn

https://www.w3schools.com/bootstrap5/bootstrap_typography.php

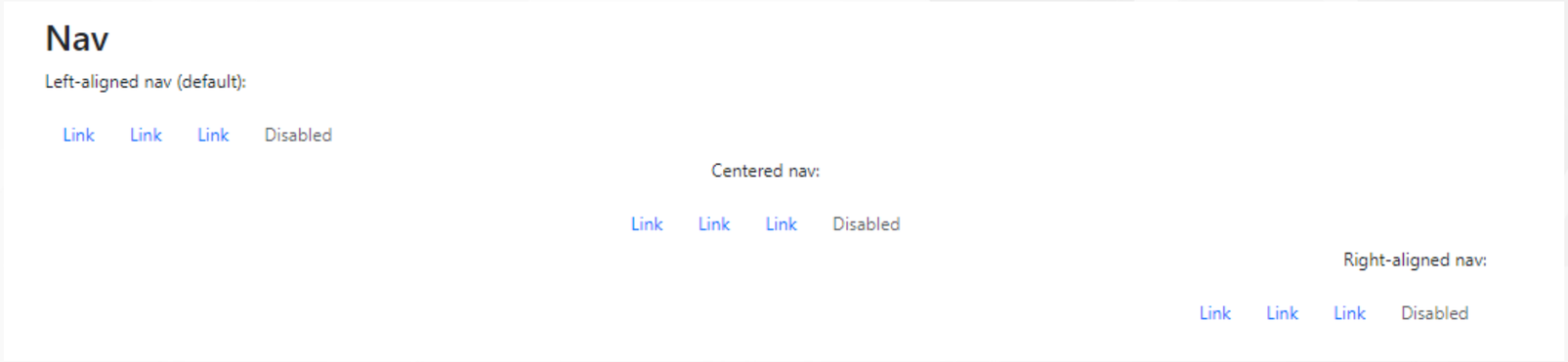
example

https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_nav&stacked=h

```
<body>

<div class="container mt-3">
  <h2>Nav</h2>
  <p>Left-aligned nav (default):</p>
  <ul class="nav">
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link disabled" href="#">Disabled</a>
    </li>
  </ul>

  <p class="text-center">Centered nav:</p>
  <ul class="nav justify-content-center">
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link disabled" href="#">Disabled</a>
    </li>
  </ul>

  <p class="text-end">Right-aligned nav:</p>
  <ul class="nav justify-content-end">
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Link</a>
    </li>
    <li class="nav-item">
      <a class="nav-link disabled" href="#">Disabled</a>
    </li>
  </ul>
</div>

</body>
```

EXAMPLE

Add the .justify-content-center class to center the nav, and the .justify-content-end class to right-align the nav.



example

https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_nav_align&stacked=h

BOOTSTRAP 5

Navbars

With Bootstrap, a navigation bar can extend or collapse, depending on the screen size.

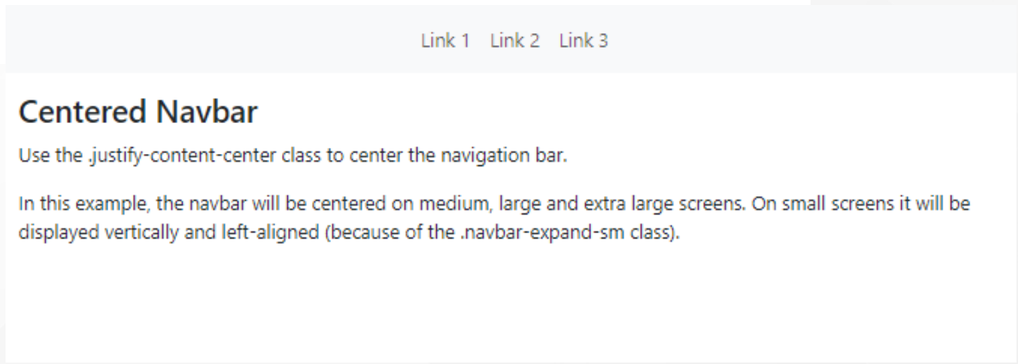
A standard navigation bar is created with the .navbar class, followed by a responsive collapsing class: .navbar-expand-xxl|xl|lg|md|sm (stacks the navbar vertically on xxlarge, extra large, large, medium or small screens).

To add links inside the navbar, use either an <ul> element (or a) with class="navbar-nav". Then add <li> elements with a .nav-item class followed by an <a> element with a .nav-link class:

learn

https://www.w3schools.com/bootstrap5/bootstrap_navbar.phpd

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css"
rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js">
</script>
</head>
<body>

<nav class="navbar navbar-expand-sm bg-light justify-content-center">
  <ul class="navbar-nav">
    <li class="nav-item">
      <a class="nav-link" href="#">Link 1</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Link 2</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Link 3</a>
    </li>
  </ul>
</nav>

<div class="container-fluid mt-3">
  <h3>Centered Navbar</h3>
  <p>Use the .justify-content-center class to center the navigation bar.</p>
  <p>In this example, the navbar will be centered on medium, large and extra large screens. On small
screens it will be displayed vertically and left-aligned (because of the .navbar-expand-sm class).
</p>
</div>

</body>
</html>
```



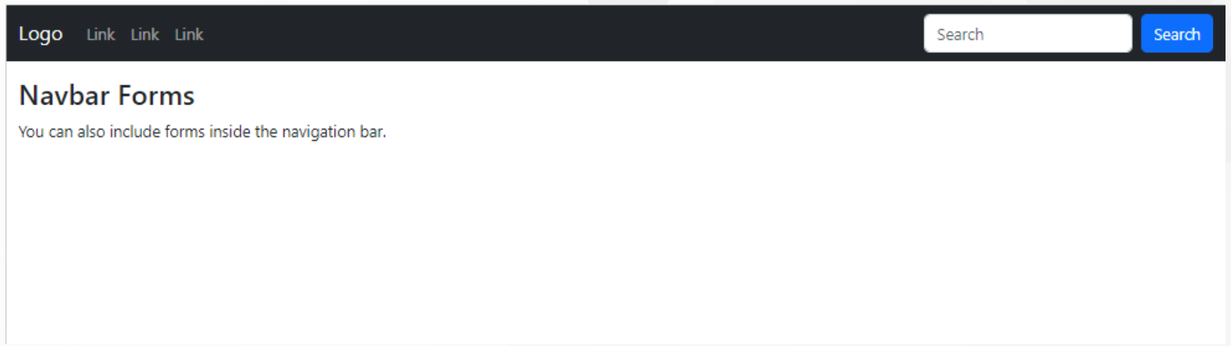
example

https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_navbar_centered&stacked=h

EXAMPLE

Navbar Forms and Buttons

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</head>
<body>

<nav class="navbar navbar-expand-sm navbar-dark bg-dark">
  <div class="container-fluid">
    <a class="navbar-brand" href="javascript:void(0)">Logo</a>
    <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#mynavbar">
      <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="mynavbar">
      <ul class="navbar-nav me-auto">
        <li class="nav-item">
          <a class="nav-link" href="javascript:void(0)">Link</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="javascript:void(0)">Link</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="javascript:void(0)">Link</a>
        </li>
      </ul>
      <form class="d-flex">
        <input class="form-control me-2" type="text" placeholder="Search">
        <button class="btn btn-primary" type="button">Search</button>
      </form>
    </div>
  </div>
</nav>

<div class="container-fluid mt-3">
  <h3>Navbar Forms</h3>
  <p>You can also include forms inside the navigation bar.</p>
</div>

</body>
</html>
```



example

https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_navbar_form&stacked=h

EXAMPLE

Fixed Navigation Bar

.fixed-top

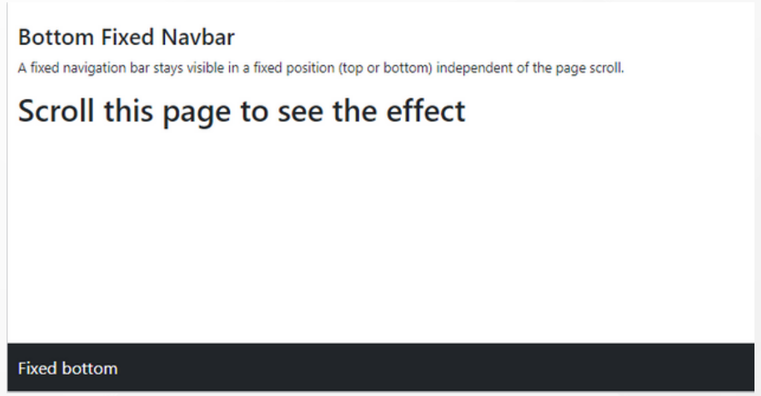
```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</head>
<body style="height:1500px">

<nav class="navbar navbar-expand-sm bg-dark navbar-dark fixed-top">
  <div class="container-fluid">
    <a class="navbar-brand" href="#">Fixed top</a>
  </div>
</nav>

<div class="container-fluid" style="margin-top:80px">
  <h3>Top Fixed Navbar</h3>
  <p>A fixed navigation bar stays visible in a fixed position (top or bottom) independent of the page scroll.</p>
  <h1>Scroll this page to see the effect</h1>
</div>

</body>
</html>
```

example

https://www.w3schools.com/bootstrap5/bootstrap_typography.php

.fixed-bottom

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</head>
<body style="height:1500px">

<nav class="navbar navbar-expand-sm bg-dark navbar-dark fixed-bottom">
  <div class="container-fluid">
    <a class="navbar-brand" href="#">Fixed bottom</a>
  </div>
</nav>

<div class="container-fluid"><br>
  <h3>Bottom Fixed Navbar</h3>
  <p>A fixed navigation bar stays visible in a fixed position (top or bottom) independent of the page scroll.
</p>
  <h1>Scroll this page to see the effect</h1>
</div>

</body>
</html>
```



example

https://www.w3schools.com/bootstrap5/bootstrap_typography.php

BOOTSTRAP 5

Tables

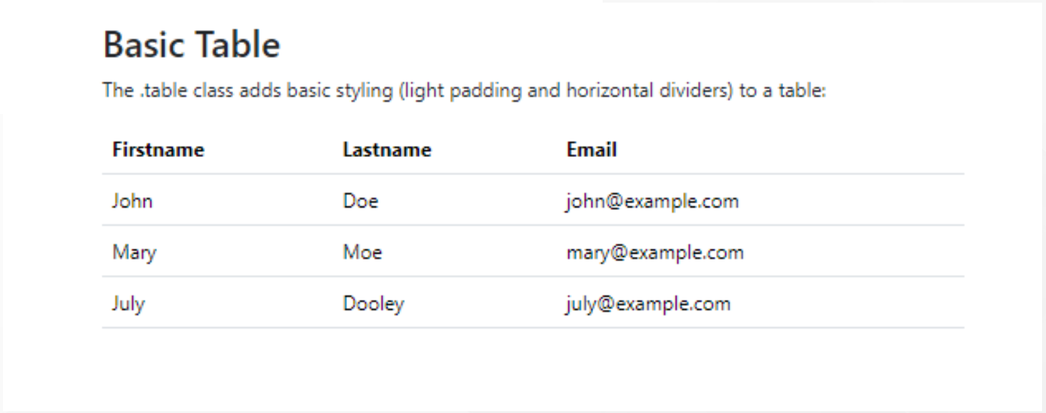
Basic Table

A basic Bootstrap 5 table has a light padding and horizontal dividers.

The .table class adds basic styling to a table:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Basic Table</h2>
  <p>The .table class adds basic styling (light padding and horizontal dividers) to a table:</p>

  <table class="table">
    <thead>
      <tr>
        <th>Firstname</th>
        <th>Lastname</th>
        <th>Email</th>
      </tr>
    </thead>
    <tbody>
      <tr>
        <td>John</td>
        <td>Doe</td>
        <td>john@example.com</td>
      </tr>
      <tr>
        <td>Mary</td>
        <td>Moe</td>
        <td>mary@example.com</td>
      </tr>
      <tr>
        <td>July</td>
        <td>Dooley</td>
        <td>july@example.com</td>
      </tr>
    </tbody>
  </table>
</div>

</body>
</html>
```

learn
https://www.w3schools.com/bootstrap5/bootstrap_tables.php



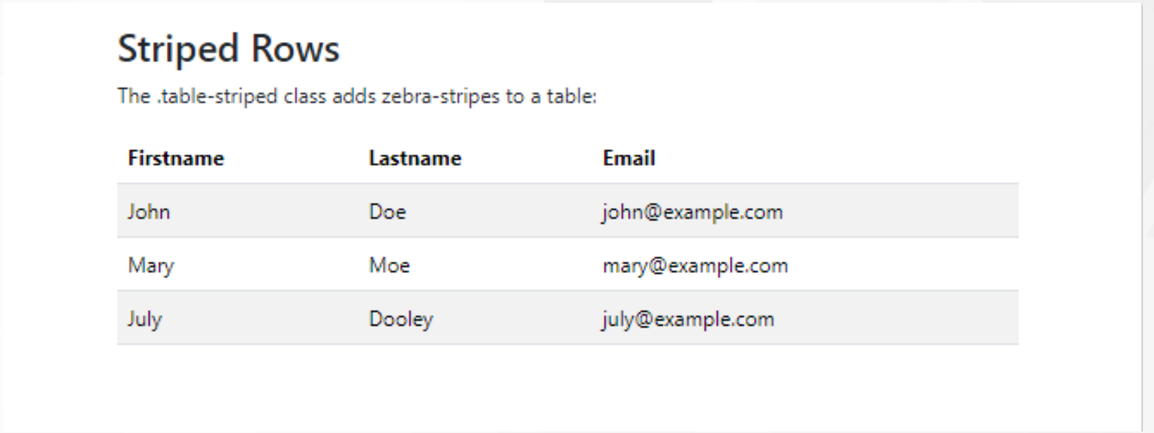
example
https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_table_basic&stacked=h

EXAMPLE

Striped Rows

The .table-striped class adds zebra-stripes to a table:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Striped Rows</h2>
  <p>The .table-striped class adds zebra-stripes to a table:</p>
  <table class="table table-striped">
    <thead>
      <tr>
        <th>Firstname</th>
        <th>Lastname</th>
        <th>Email</th>
      </tr>
    </thead>
    <tbody>
      <tr>
        <td>John</td>
        <td>Doe</td>
        <td>john@example.com</td>
      </tr>
      <tr>
        <td>Mary</td>
        <td>Moe</td>
        <td>mary@example.com</td>
      </tr>
      <tr>
        <td>July</td>
        <td>Dooley</td>
        <td>july@example.com</td>
      </tr>
    </tbody>
  </table>
</div>

</body>
</html>
```



example

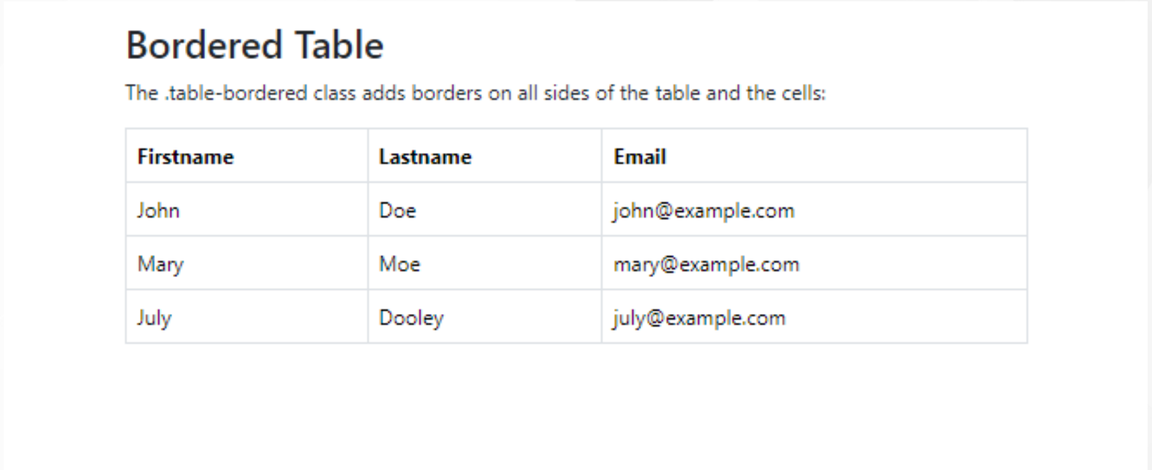
https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_table_striped&stacked=h

EXAMPLE

Bordered Table

The .table-bordered class adds borders on all sides of the table and cells:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css"
rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Bordered Table</h2>
  <p>The .table-bordered class adds borders on all sides of the table and the cells:</p>
  <table class="table table-bordered">
    <thead>
      <tr>
        <th>Firstname</th>
        <th>Lastname</th>
        <th>Email</th>
      </tr>
    </thead>
    <tbody>
      <tr>
        <td>John</td>
        <td>Doe</td>
        <td>john@example.com</td>
      </tr>
      <tr>
        <td>Mary</td>
        <td>Moe</td>
        <td>mary@example.com</td>
      </tr>
      <tr>
        <td>July</td>
        <td>Dooley</td>
        <td>july@example.com</td>
      </tr>
    </tbody>
  </table>
</div>
```



example

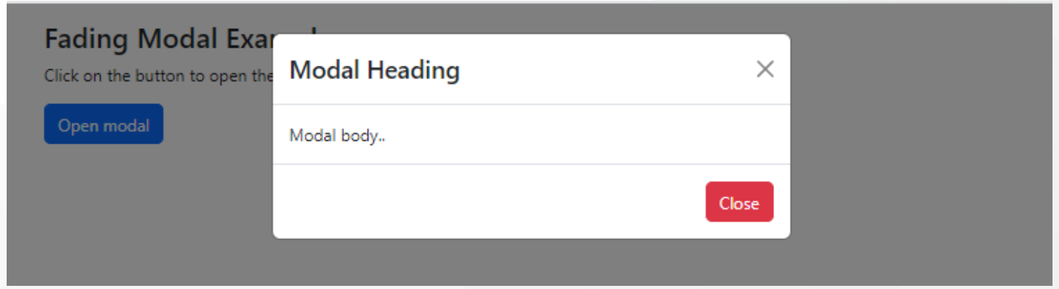
https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_table_bordered&stacked=h

BOOTSTRAP 5

Modals

The Modal component is a dialog box/popup window that is displayed on top of the current p

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</head>
<body>

<div class="container mt-3">
  <h3>Fading Modal Example</h3>
  <p>Click on the button to open the modal.</p>

  <button type="button" class="btn btn-primary" data-bs-toggle="modal" data-bs-target="#myModal">
    Open modal
  </button>
</div>

<!-- The Modal -->
<div class="modal fade" id="myModal">
  <div class="modal-dialog">
    <div class="modal-content">

      <!-- Modal Header -->
      <div class="modal-header">
        <h4 class="modal-title">Modal Heading</h4>
        <button type="button" class="btn-close" data-bs-dismiss="modal"></button>
      </div>

      <!-- Modal body -->
      <div class="modal-body">
        Modal body..
      </div>

      <!-- Modal footer -->
      <div class="modal-footer">
        <button type="button" class="btn btn-danger" data-bs-dismiss="modal">Close</button>
      </div>

    </div>
  </div>
</div>


</body>
</html>
```



learn
https://www.w3schools.com/bootstrap5/bootstrap_modal.php

example
https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_modal_fade&stacked=h

BOOTSTRAP 5

Carousel / Slideshow

The following example shows how to create a basic carousel with indicators and controls:

learn
https://www.w3schools.com/bootstrap5/bootstrap_carousel.php

EXAMPLE

How To Create a Carousel

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>
</head>
<body>

<!-- Carousel -->
<div id="demo" class="carousel slide" data-bs-ride="carousel">

  <!-- Indicators/dots -->
  <div class="carousel-indicators">
    <button type="button" data-bs-target="#demo" data-bs-slide-to="0" class="active"></button>
    <button type="button" data-bs-target="#demo" data-bs-slide-to="1"></button>
    <button type="button" data-bs-target="#demo" data-bs-slide-to="2"></button>
  </div>

  <!-- The slideshow/carousel -->
  <div class="carousel-inner">
    <div class="carousel-item active">
      <img src="la.jpg" alt="Los Angeles" class="d-block" style="width:100%">
    </div>
    <div class="carousel-item">
      <img src="chicago.jpg" alt="Chicago" class="d-block" style="width:100%">
    </div>
    <div class="carousel-item">
      <img src="ny.jpg" alt="New York" class="d-block" style="width:100%">
    </div>
  </div>

  <!-- Left and right controls/icons -->
  <button class="carousel-control-prev" type="button" data-bs-target="#demo" data-bs-slide="prev">
    <span class="carousel-control-prev-icon"></span>
  </button>
  <button class="carousel-control-next" type="button" data-bs-target="#demo" data-bs-slide="next">
    <span class="carousel-control-next-icon"></span>
  </button>
</div>

<div class="container-fluid mt-3">
  <h3>Carousel Example</h3>
  <p>The following example shows how to create a basic carousel with indicators and controls.</p>
</div>

</body>
</html>
```

Carousel Example

The following example shows how to create a basic carousel with indicators and controls.

example

https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_carousel

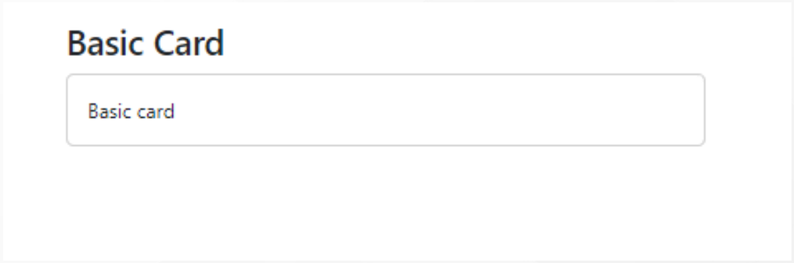
BOOTSTRAP 5

Cards

Basic Card

A basic card is created with the .card class, and content inside the card has a .card-body class:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css"
rel="stylesheet">
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js
"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Basic Card</h2>
  <div class="card">
    <div class="card-body">Basic card</div>
  </div>
</div>

</body>
</html>
```



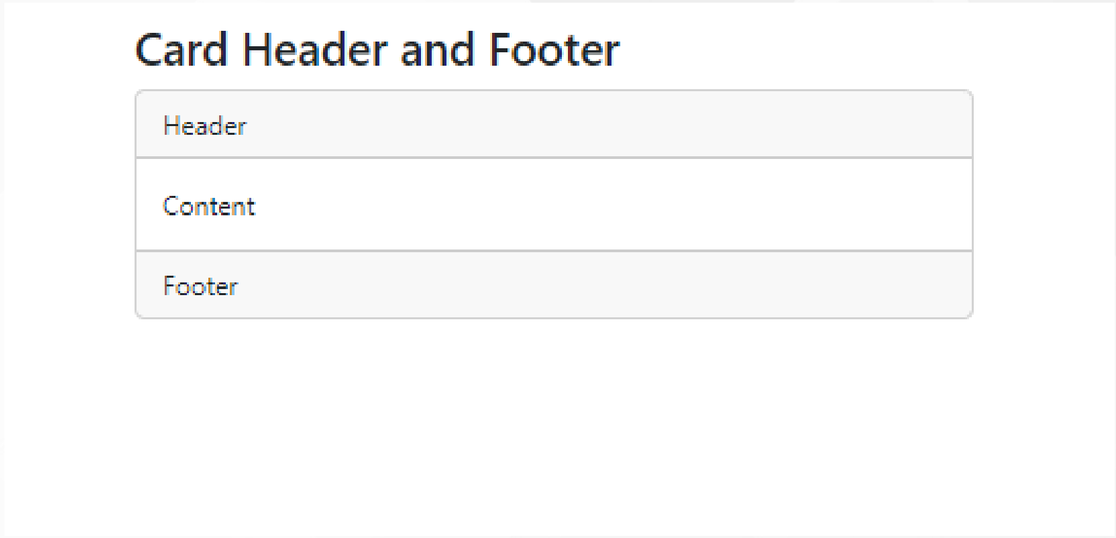
learn
https://www.w3schools.com/bootstrap5/bootstrap_cards.php

example
https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_card&stacked=h

EXAMPLE

How To Create a Carousel

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css"
rel="stylesheet">
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js
"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Card Header and Footer</h2>
  <div class="card">
    <div class="card-header">Header</div>
    <div class="card-body">Content</div>
    <div class="card-footer">Footer</div>
  </div>
</div>

</body>
</html>
```



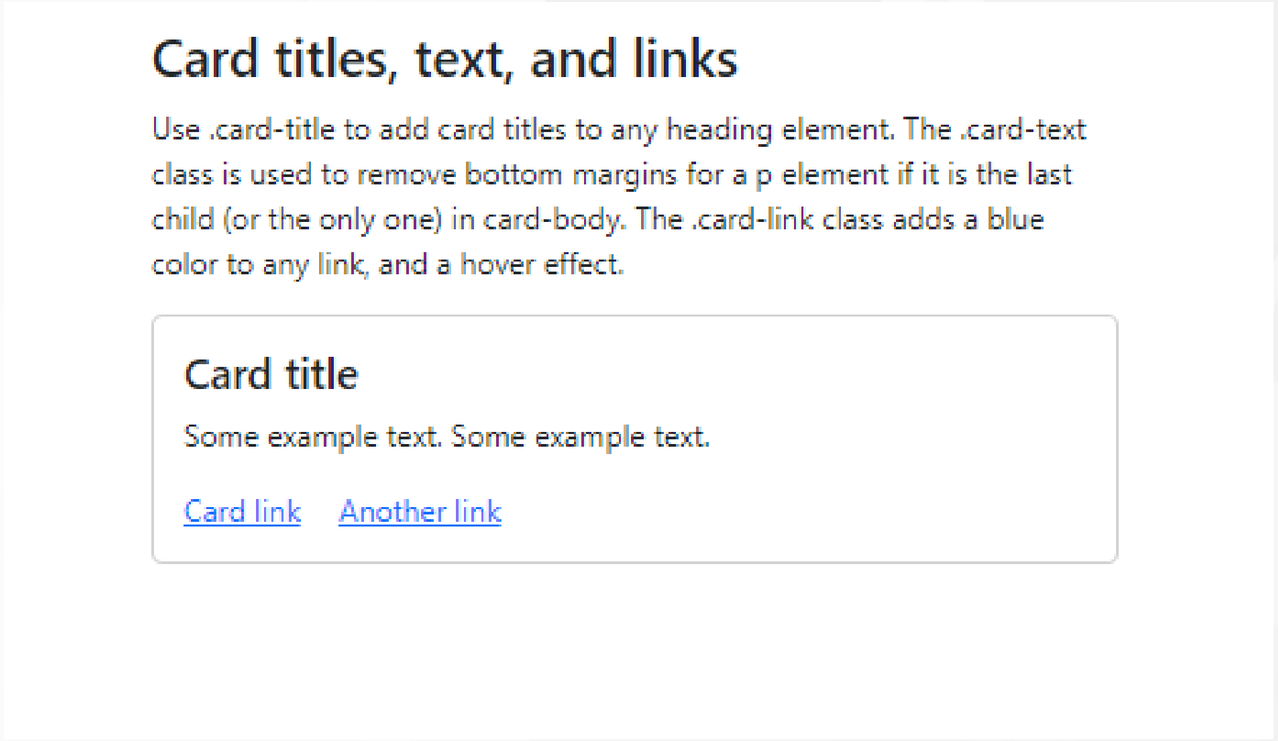
example

https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_card_header&stacked=h

EXAMPLE

Titles, text, and links

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css"
rel="stylesheet">
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js
"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Card titles, text, and links</h2>
  <p>Use .card-title to add card titles to any heading element. The .card-text
class is used to remove bottom margins for a p element if it is the last child
(or the only one) in card-body. The .card-link class adds a blue color to any
link, and a hover effect.</p>
  <div class="card">
    <div class="card-body">
      <h4 class="card-title">Card title</h4>
      <p class="card-text">Some example text. Some example text.</p>
      <a href="#" class="card-link">Card link</a>
      <a href="#" class="card-link">Another link</a>
    </div>
  </div>
</div>

</body>
</html>
```



example

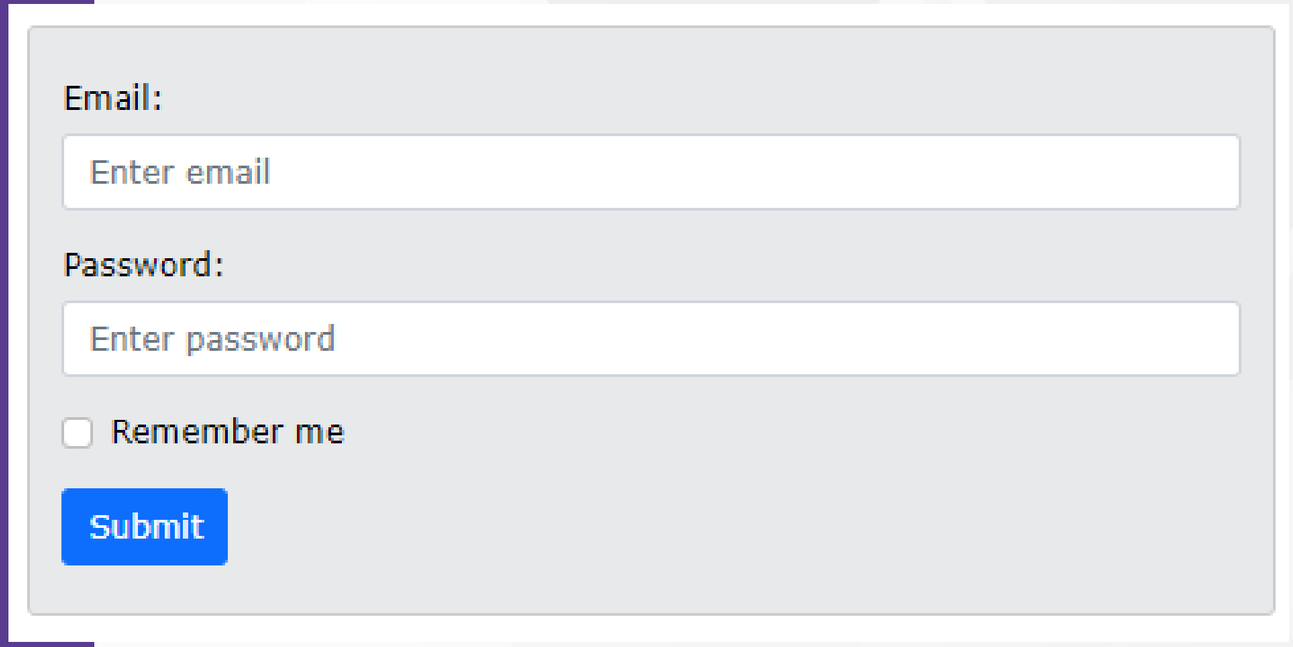
https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_card_title&stacked=h

BOOTSTRAP 5

Forms

Stacked Form

All textual <input> and <textarea> elements with class .form-control get proper form styling:

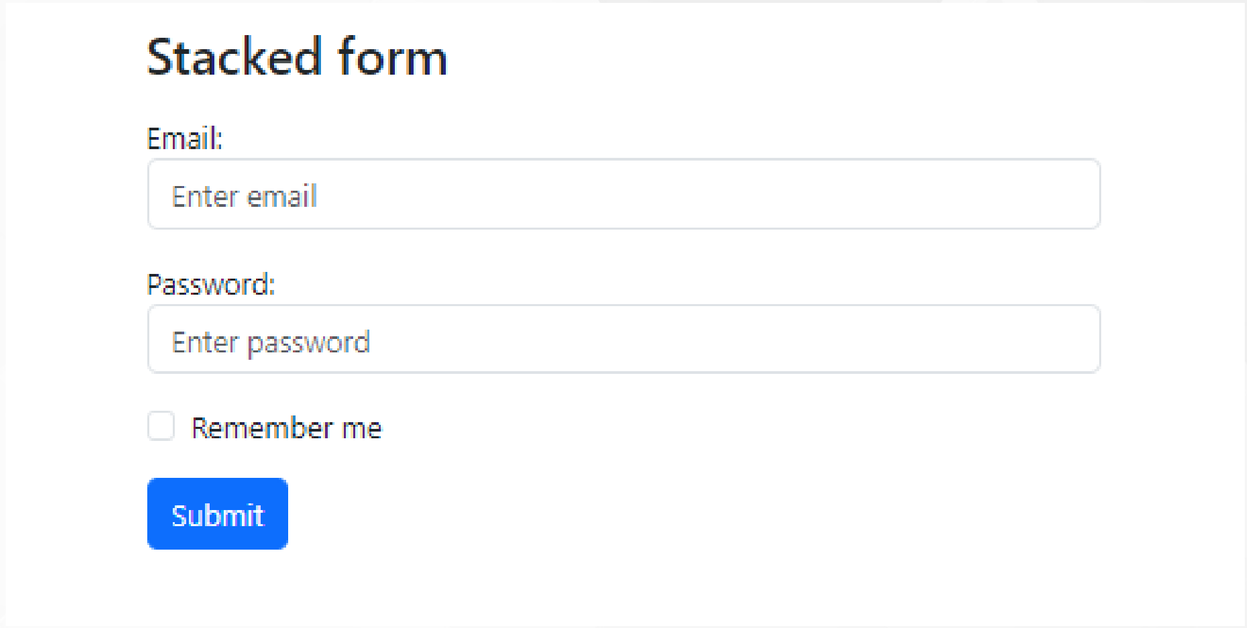


learn
https://www.w3schools.com/bootstrap5/bootstrap_forms.php

EXAMPLE

Form

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css"
rel="stylesheet">
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.
js"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Stacked form</h2>
  <form action="/action_page.php">
    <div class="mb-3 mt-3">
      <label for="email">Email:</label>
      <input type="email" class="form-control" id="email" placeholder="Enter
email" name="email">
    </div>
    <div class="mb-3">
      <label for="pwd">Password:</label>
      <input type="password" class="form-control" id="pwd" placeholder="Enter
password" name="pswd">
    </div>
    <div class="form-check mb-3">
      <label class="form-check-label">
        <input class="form-check-input" type="checkbox" name="remember">
Remember me
      </label>
    </div>
    <button type="submit" class="btn btn-primary">Submit</button>
  </form>
</div>

</body>
</html>
```



example
https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_form&stacked=h

EXAMPLE

Textarea

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css"
rel="stylesheet">
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.
js"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Textarea</h2>
  <p>Use the .form-control class to style textareas as well:</p>
  <form action="/action_page.php">
    <div class="mb-3 mt-3">
      <label for="comment">Comments:</label>
      <textarea class="form-control" rows="5" id="comment" name="text">
</textarea>
    </div>
    <button type="submit" class="btn btn-primary">Submit</button>
  </form>
</div>

</body>
</html>
```

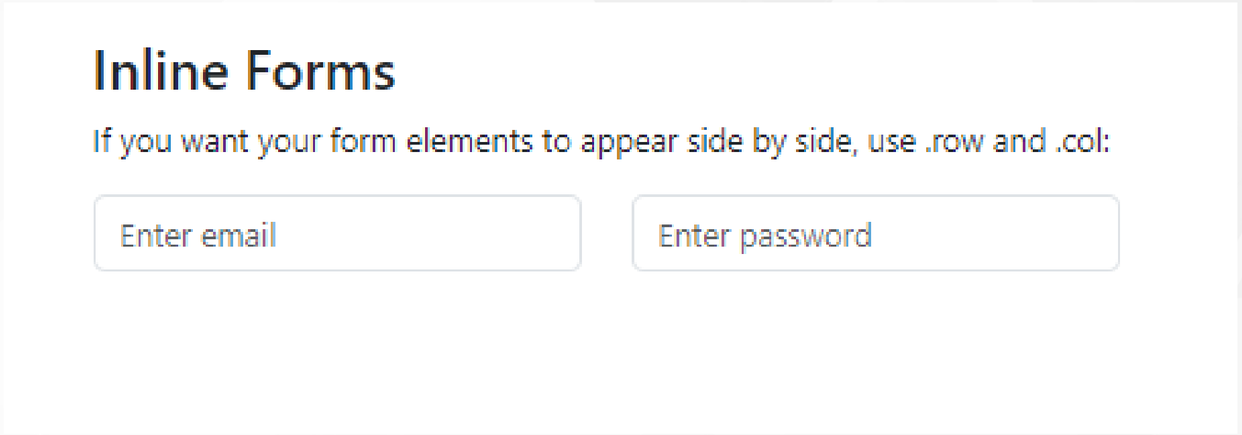
example
https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_form_textarea&stacked=h

EXAMPLE

Form Row/Grid (Inline Forms)

If you want your form elements to appear side by side, use .row and .col:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css"
rel="stylesheet">
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.
js"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Inline Forms</h2>
  <p>If you want your form elements to appear side by side, use .row and .col:
</p>
  <form>
    <div class="row">
      <div class="col">
        <input type="text" class="form-control" placeholder="Enter email"
name="email">
      </div>
      <div class="col">
        <input type="password" class="form-control" placeholder="Enter
password" name="pswd">
      </div>
    </div>
  </form>
</div>

</body>
</html>
```



example

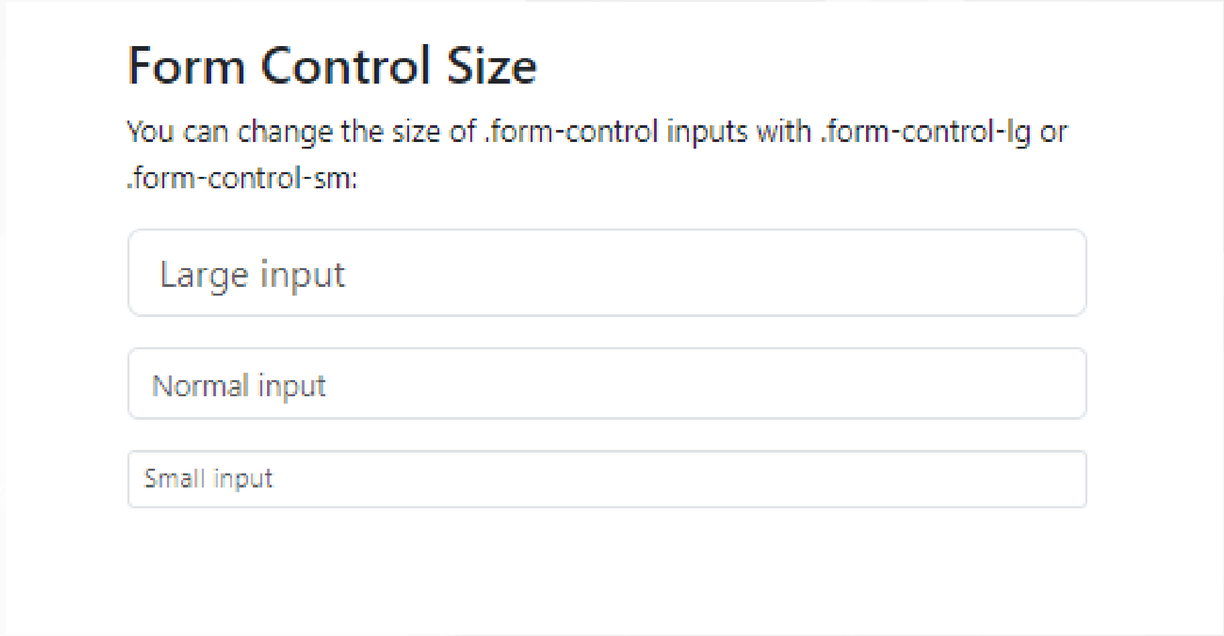
hhttps://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_form_grid&stacked=h

EXAMPLE

Form Control Size

You can change the size of .form-control inputs with .form-control-lg or .form-control-sm:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css"
rel="stylesheet">
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.
js"></script>
</head>
<body>

<div class="container mt-3">
  <h2>Form Control Size</h2>
  <p>You can change the size of .form-control inputs with .form-control-lg or
.form-control-sm:</p>
  <form>
    <input type="text" class="form-control form-control-lg" placeholder="Large
input">
    <input type="text" class="form-control mt-3" placeholder="Normal input">
    <input type="text" class="form-control form-control-sm mt-3"
placeholder="Small input">
  </form>
</div>

</body>
</html>
```



example
https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_form_size&stacked=h

BOOTSTRAP 5

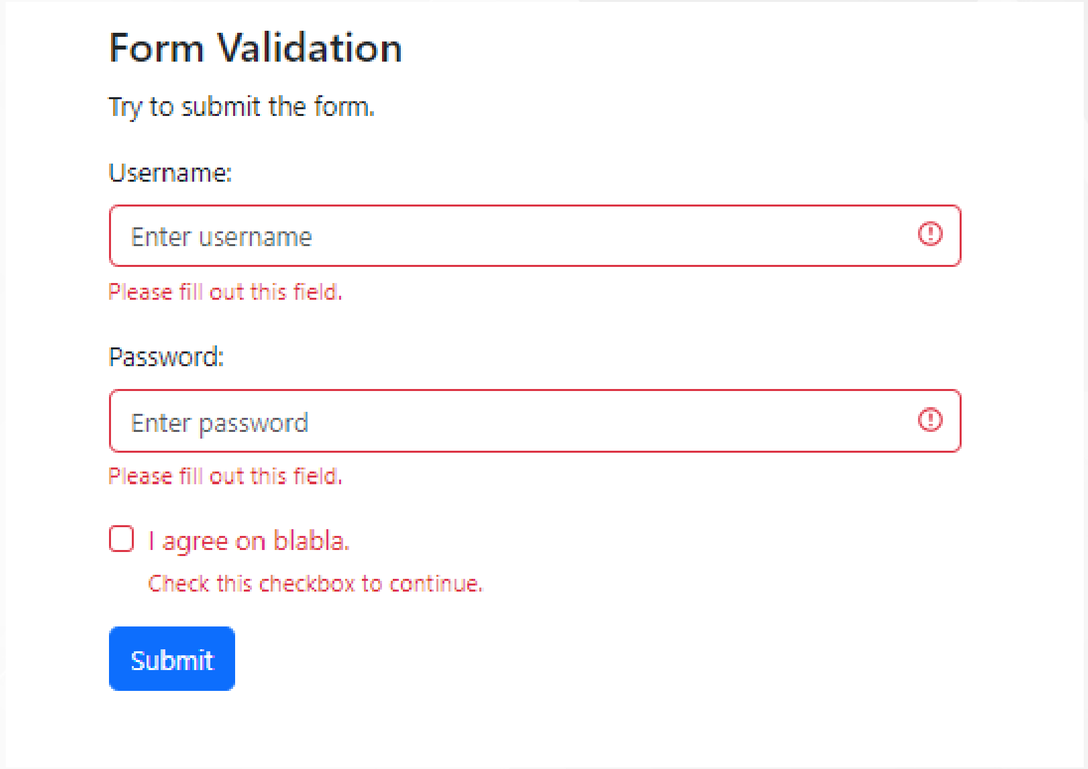
Form Validation

You can use different validation classes to provide valuable feedback to users. Add either .was-validated or .needs-validation to the <form> element, depending on whether you want to provide validation feedback before or after submitting the form. The input fields will have a green (valid) or red (invalid) border to indicate what's missing in the form. You can also add a .valid-feedback or .invalid-feedback message to tell the user explicitly what's missing, or needs to be done before submitting the form.

learn
https://www.w3schools.com/bootstrap5/bootstrap_forms.php

EXAMPLE

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css
" rel="stylesheet">
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.mi
n.js"></script>
</head>
<body>

<div class="container mt-3">
  <h3>Form Validation</h3>
  <p>Try to submit the form.</p>

  <form action="/action_page.php" class="was-validated">
    <div class="mb-3 mt-3">
      <label for="uname" class="form-label">Username:</label>
      <input type="text" class="form-control" id="uname" placeholder="Enter
username" name="uname" required>
      <div class="valid-feedback">Valid.</div>
      <div class="invalid-feedback">Please fill out this field.</div>
    </div>
    <div class="mb-3">
      <label for="pwd" class="form-label">Password:</label>
      <input type="password" class="form-control" id="pwd" placeholder="Enter
password" name="pswd" required>
      <div class="valid-feedback">Valid.</div>
      <div class="invalid-feedback">Please fill out this field.</div>
    </div>
    <div class="form-check mb-3">
      <input class="form-check-input" type="checkbox" id="myCheck"
 name="remember" required>
      <label class="form-check-label" for="myCheck">I agree on blabla.
</label>
      <div class="valid-feedback">Valid.</div>
      <div class="invalid-feedback">Check this checkbox to continue.</div>
    </div>
  <button type="submit" class="btn btn-primary">Submit</button>
  </form>
</div>

</body>
</html>
```



example

https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_form_validation&stacked=h