



# **What is Bootstrap?**

- **It's hard to make Web pages look pretty/professional**
- **Bootstrap is a popular CSS library implementing many useful, ready to use CSS classes, styles, layouts, and widgets**
- **Search for pre-configured layouts and widgets before building from scratch**

# **Responsive Design**

- **Build one Website that can be viewed in many devices**
- **Content adapts to size of screen**
- **Favor smaller, mobile devices since is fastest growing group**
- **Mobile first forces to think of what is most important**
- **As screen grows bigger, then show more details, or secondary content**

# Installing Bootstrap

- Download ZIP - preferred when developing

<https://getbootstrap.com/docs/5.1/getting-started/download/>

Copy css and js folders to your local project

- Or CDN - preferred if hosted

```
<link rel="stylesheet" href=
```

```
https://cdn.jsdelivr.net/npm/bootstrap@5.1.0/dist/css/bootstrap.min.css>
```

```
<script src=
```

```
https://cdn.jsdelivr.net/npm/bootstrap@5.1.0/dist/js/bootstrap.min.js>
```

```
</script>
```

# Mobile First

- Most Web traffic is now mobile. Develop Web applications targeting a growing demographics

```
<meta  
  name="viewport  
  content="width=device-width,  
           initial-scale=1">
```



# GRID SYSTEM

# Media Queries

`/* Extra small devices (phones, less than 768px) */`

`/* No media query it's the default in Bootstrap */`

`/* Small devices (tablets, 768px and up) */`

`@media (min-width: @screen-sm-min) { ... }`

`/* Medium devices (desktops, 992px and up) */`

`@media (min-width: @screen-md-min) { ... }`

`/* Large devices (large desktops, 1200px and up) */`

`@media (min-width: @screen-lg-min) { ... }`



# Bootstrap Breakpoint

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

# Bootstrap Breakpoint

```
// X-Small devices (portrait phones, less than 576px)
// No media query for `xs` since this is the default in Bootstrap
// Small devices (landscape phones, 576px and up)
@media (min-width: 576px) { ... }
// Medium devices (tablets, 768px and up)
@media (min-width: 768px) { ... }
// Large devices (desktops, 992px and up)
@media (min-width: 992px) { ... }
// X-Large devices (large desktops, 1200px and up)
@media (min-width: 1200px) { ... }
// XX-Large devices (larger desktops, 1400px and up)
@media (min-width: 1400px) { ... }
```

# Grid System

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

# 12 Columns

<div class="row">

```
<div class="col-md-1">.col-md-1</div>
```

```
<div class="col-md-1">.col-md-1</div>
```

```
<div class="col-md-1">.col-md-1</div>
```

<div class="col-md-1">.col-md-1</div>

```
<div class="col-md-1">.col-md-1</div>
```

```
<div class="col-md-1">.col-md-1</div>
```

```
<div class="col-md-1">.col-md-1</div>
```

```
<div class="col-md-1">.col-md-1</div>
```

```
<div class="col-md-1">.col-md-1</div>
```

<div class="col-md-1">.col-md-1</div>

```
<div class="col-md-1">.col-md-1</div>
```

```
<div class="col-md-1">.col-md-1</div>
```

&lt;/div&gt;

# Screen Sizes

```
<div class="row">
```

```
  <div class="col-md-8">.col-md-8</div>
```

```
  <div class="col-md-4">.col-md-4</div>
```

```
</div>
```

```
<div class="row">
```

```
  <div class="col-lg-4">.col-lg-4</div>
```

```
  <div class="col-lg-4">.col-lg-4</div>
```

```
  <div class="col-lg-4">.col-lg-4</div>
```

```
</div>
```

```
<div class="row">
```

```
  <div class="col-sm-6">.col-sm-6</div>
```

```
  <div class="col-sm-6">.col-sm-6</div></div>
```

```
</div>
```

# Screen Sizes

```
<div class="row">
  <div class="col-6">.col-6</div>
  <div class="col-6">.col-6</div>
</div>
<div class="row">
  <div class="col-sm-6">.col-sm-6</div>
  <div class="col-sm-6">.col-sm-6</div>
</div>
<div class="row">
  <div class="col-md-6">.col-md-6</div>
  <div class="col-md-6">.col-md-6</div>
</div>
<div class="row">
  <div class="col-lg-6">.col-lg-6</div>
  <div class="col-lg-6">.col-lg-6</div>
</div>
```



**NAVIGATION**

**DEMO**





# Vertical Split Navigation

```
<ul class="nav flex-column nav-pills">  
  <a class="nav-link active" href="#">Module 1</a>  
  <a class="nav-link" href="#">Module 2</a>  
  <a class="nav-link" href="#">Module 3</a>  
  <a class="nav-link" href="#">Module 4</a>  
</ul>
```

Module 1

Module 2

Module 3

Module 4



# Preview

Module 1

Left Side

Module 2

Module 3

Module 4

**TABS**

# Tab Navigation

```
<ul class="nav nav-tabs">  
  <li class="nav-item">  
    <a class="nav-link active" href="#">  
      Part 1</a>  
  </li>  
  <li class="nav-item">  
    <a class="nav-link" href="#">  
      Part 2</a>  
  </li>  
</ul>
```

Part 1

Part 2



# Preview

Module 1

Part 1

Part 2

Module 2

Module 3

Module 4



**PILLS**

# Pill Navigation

```
<ul class="nav nav-pills">  
  <li class="nav-item">  
    <a class="nav-link active" href="#">  
      Topic 1</a>  
  </li>  
  <li class="nav-item">  
    <a class="nav-link" href="#">  
      Topic 2</a>  
  </li>  
</ul>
```

Topic 1

Topic 2

# Add Navigation Pills Under Tabs

```
<br/>
```

```
<ul class="nav nav-pills">
```

```
  <li class="nav-item">
```

```
    <a class="nav-link active" href="#">
```

```
      Topic 1</a>
```

```
  </li>
```

```
  <li class="nav-item">
```

```
    <a class="nav-link" href="#">Topic 2</a>
```

```
  </li>
```

```
</ul>
```

# Preview

**Module 1**

Part 1

Part 2

Module 2

**Topic 1**

Topic 2

Module 3

Module 4

# STYLING TABLES

# Table Styles

```
<table class="table"> ... </table>
```

```
<table class="table table-striped">
```

```
<table class="table table-bordered">
```

```
<table class="table table-hover">
```

```
<table class="table table-condensed">
```

# Highlighting Table Rows

```
<tr class="active">...</tr>
```

```
<tr class="success">...</tr>
```

```
<tr class="warning">...</tr>
```

```
<tr class="danger">...</tr>
```

```
<tr class="info">...</tr>
```

# Highlighting Table Cells

```
<tr>
```

```
  <td class="active">...</td>
```

```
  <td class="success">...</td>
```

```
  <td class="warning">...</td>
```

```
  <td class="danger">...</td>
```

```
  <td class="info">...</td>
```

```
</tr>
```





# TABLE DEMO

# Create User Admin Table

```
<table class="table">  
  <thead>  
    <tr> ... next slide ... </tr>  
  </thead>  
  <tbody>  
    <tr> ... slide after that ... </tr>  
  </tbody>  
</table>
```

# Add Headings

```
<table class="table">  
  <thead>  
    <tr>  
      <th>Title</th>  
      <th>Owned by</th>  
      <th>Last modified</th>  
      <th>&nbsp;</th>  
    </tr>  
  </thead>
```

# Add Rows

```
<tbody>
```

```
<tr>
```

```
<td>CS5500</td>
```

```
<td>me</td>
```

```
<td>6:45 PM</td>
```

```
<td>Delete</td>
```

```
</tr>
```

```
</tbody>
```

```
</table>
```

# Preview

Title	Owned by	Last modified	
CS5500	me	6:45 PM	Delete
CS5200	me	6:46 PM	Delete
CS5610	me	6:47 PM	Delete

# STYLING FORMS

# Forms

<form>

<div class="form-group">

<label for="email1">

Email address</label>

<input type="email"

class="form-control"

id="email1"/>

</div>

</form>



# Help Blocks

`<form>`

`<div class="form-group">`

`<label for="inputFile">File input`

`</label>`

`<input type="file" id="inputFile">`

`<p class="help-block">`

`Help text here.</p>`

`</div>`

`</form>`

# Checkboxes

```
<form>
```

```
  <div class="checkbox">
```

```
    <label>
```

```
      <input type="checkbox">
```

```
      Check me out
```

```
    </label>
```

```
  </div>
```

```
</form>
```

# Inline Forms

```
<form class="form-inline">
```

# Horizontal Responsive Forms

```
<form class="form-horizontal">
  <div class="form-group">
    <label for="email3"
      class="col-sm-2 control-label">
      Email</label>
    <div class="col-sm-10">
      <input type="email" class="form-control"
        id="email3" placeholder="Email"/>
    </div>
  </div>
</form>
```

# Form Offsets

```
<form class="form-horizontal">
  <div class="form-group">
    <div class="col-sm-offset-2 col-sm-10">
      <div class="checkbox">
        <label>
          <input type="checkbox"> Remember me
        </label>
      </div>
    </div>
  </div>
</form>
```

# Buttons

```
<a class="btn btn-default" href="#">Link</a>
```

```
<button class="btn btn-default"  
        type="submit">Button</button>
```

```
<input class="btn btn-default"  
        type="button" value="Input">
```

```
<input class="btn btn-default"  
        type="submit" value="Submit">
```

# Context Buttons

```
<button class="btn btn-default">Default</button>
```

```
<button class="btn btn-primary">Primary</button>
```

```
<button class="btn btn-success">Success</button>
```

```
<button class="btn btn-info">Info</button>
```

```
<button class="btn btn-warning">Warning</button>
```

```
<button class="btn btn-danger">Danger</button>
```

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

# Button Sizes

```
<button class="btn btn-lg">Large</button>
```

```
<button class="btn">Default</button>
```

```
<button class="btn btn-sm">Small</button>
```

```
<button class="btn btn-xs">Extra small</button>
```



# Block Buttons

```
<button type="button"  
        class="btn btn-primary  
              btn-block">
```

Block level button

```
</button>
```

# Active and Disabled Buttons

```
<button class="btn btn-primary  
      active">Button</button>
```

```
<a href="#" class="btn btn-primary  
      active">Link</a>
```

```
<button class="btn btn-primary"  
      disabled="disabled">Button</button>
```

```
<a href="#" class="btn btn-primary  
      disabled">Link</a>
```

**FORM**

**DEMO**

# Creating a Login Form

```
<form>  
  <div class="form-group row">  
    ... next slide ...  
  </div>  
  <div class="form-group row">  
    ... slide after that ...  
  </div>  
</form>
```





# Sign in Button

```
<form>  
  <div class="form-group row">  
    ... previous slide ...  
  </div>  
  <button type="button"  
    class="btn btn-primary">  
    Sign in</button>  
</form>
```

# Preview

Username

alice

Password

!@#\$QWERzxc

Sign in



**SHOW/HIDE**

**DEMO**

# Contextual Text

<p class="text-muted">...</p>

<p class="text-primary">...</p>

<p class="text-success">...</p>

<p class="text-info">...</p>

<p class="text-warning">...</p>

<p class="text-danger">...</p>

# Contextual Background

<p class="*bq-primary*">...</p>

<p class="*bq-success*">...</p>

<p class="*bq-info*">...</p>

<p class="*bq-warning*">...</p>

<p class="*bq-danger*">...</p>



# Show and Hide Content

```
<div class="show">...</div>
```

```
<div class="hidden">...</div>
```



# Expand Right Side on Small Screens

```
<div class="col-md-10 col-12">  
  <ul class="nav nav-tabs">  
    <li class="nav-item">  
      <a class="nav-link" href="#">  
        Part 1</a>  
    </li>  
  </ul>  
</div>
```

# Show Left Side Content on Menu

```
<ul class="navbar-nav">
  <li class="nav-item d-block d-md-none active">
    <a class="nav-link" href="#">Module 1</a>
  </li>
  <li class="nav-item d-block d-md-none">
    <a class="nav-link" href="#">Module 2</a>
  </li>
```



# Preview

WhiteBoard



Module 1

Part 1

Part 2

Module 2

Topic 1

Topic 2

Module 3

WhiteBoard



Part 1

Part 2

Topic 1

Topic 2

WhiteBoard



Module 1

Module 2

Module 3

# POSITIONS & SPACING



# Arrange Elements

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

Examples:

top-0, top-50, top-100,

start-0, start-50,

end-0, end-50, end-100

property	
top	vertical top
start	horizontal left
bottom	vertical bottom
end	horizontal right

position	
0	0%
50	50%
100	100%

# Margins and Paddings

Class name format: ***{property}{sides}-{size}*** for xs and ***{property}{sides}-{breakpoint}-{size}*** for sm, md, lg, xl, and xxl

Where property is ***m*** for ***margin*** and ***p*** for ***padding***

Examples:

mt-0, mb-1, ms-2, me-3

mx-auto, my-5

pt-0, pb-1, ps-2, pe-3

px-auto, py-5

sides	
t	vertical top
b	vertical bottom
s	horizontal start
e	horizontal right
x	both left and right
y	both top and bottom

size	
0	+0%
1	+25%
2	+50%
3	+100%
4	+150%
5	+300%

**MISCEL  
LANEOUS**

# Text Alignment

```
<p class="text-left">Left text.</p>
```

```
<p class="text-center">Center text.</p>
```

```
<p class="text-right">Right text.</p>
```

```
<p class="text-justify">Justified.</p>
```

```
<p class="text-nowrap">No wrap text.</p>
```

# Text Transformations

```
<p class="text-lowercase">
```

Lowercased

```
</p>
```

```
<p class="text-uppercase">
```

Uppercased

```
</p>
```

```
<p class="text-capitalize">
```

Capitalized

```
</p>
```





# Button Group

```
<div class="btn-group">  
  <button class="btn btn-default">Left</button>  
  <button class="btn btn-default">Middle</button>  
  <button class="btn btn-default">Right</button>  
</div>
```

# Input Group

```
<div class="input-group">  
  <input type="text" class="form-control"  
    placeholder="Recipient's username">  
  <span class="input-group-addon"  
    id="basic-addon2">@example.com</span>  
</div>
```