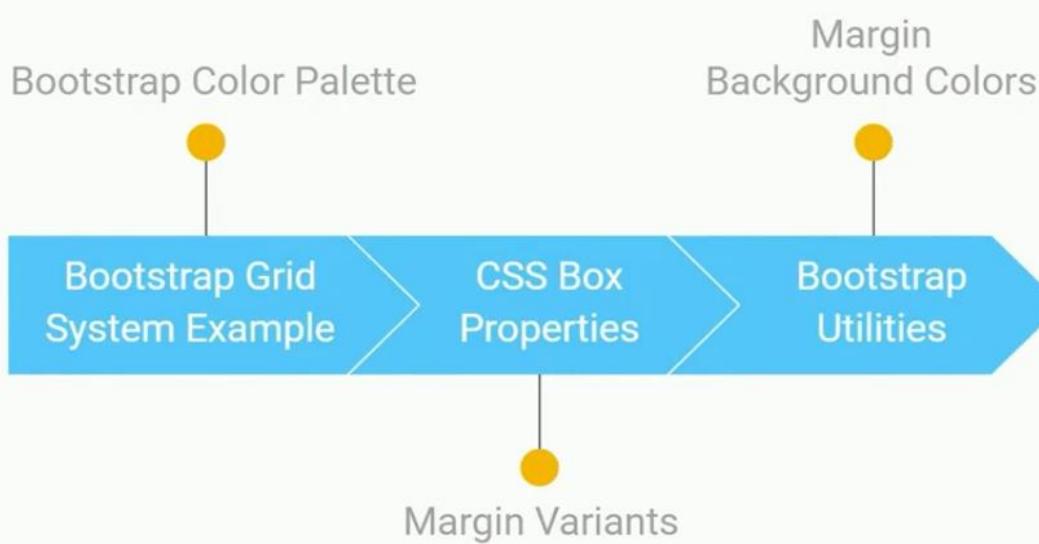


# Bootstrap Grid System

## Part 2

Agenda

### Bootstrap Grid System Part 2



Let's build a  
Bootstrap Color Palette

#### Bootstrap Color Palette

Primary

Secondary

Success

Info

Warning

Danger

## Extra Small & Small Devices

7143



### Bootstrap Color Palette

Primary

Secondary

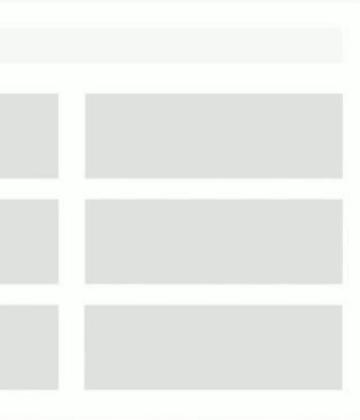
Success

Info

Warning

Danger

## Medium Devices



### Bootstrap Color Palette

Primary

Secondary

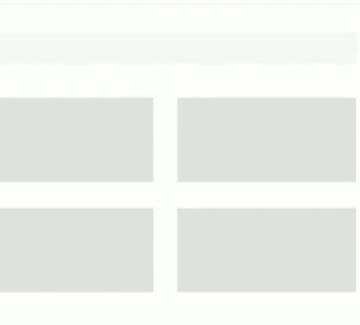
Success

Info

Warning

Danger

## Large Devices



### Bootstrap Color Palette

Primary

Secondary

Success

Info

Warning

Danger

# Extra Large Devices



Bootstrap Color Palette



Let's add a  
Heading  
to our Color Palette

**Bootstrap Color Palette**

Primary
Secondary
Success
Info
Warning
Danger

Bootstrap Color Palette

## Adding a Heading

```
<body>
  <h1 class="color-palette-heading">
    Bootstrap Color Palette
  </h1>
</body>
```

HTML

```
.color-palette-heading {
  font-size: 24px;
  text-align: center;
  font-weight: bold;
}
```

CSS

Bootstrap Color Palette

9774.45

# Let's add Color Boxes

Bootstrap Color Palette



Bootstrap Grid System

## Adding Container, Row and Column

HTML

```
<h1 class="color-palette-heading"> Bootstrap Color Palette </h1>
<div class="container">
  <div class="row">
    <div class="col-12">
      ...
    </div>
  </div>
</div>
```

Bootstrap Background Color Utility

## Class Names

bg-primary



bg-secondary



bg-light



bg-success



bg-dark



bg-info



bg-white



bg-warning



bg-danger



## Adding First Color Box

```

<div class="container">
  <div class="row">
    <div class="col-12">
      <div class="color-box bg-primary">
        <p class="color-name"> Primary </p>
      </div>
    </div>
  </div>
</div>

```

HTML

```

.color-box {
  padding: 30px;
}

.color-name {
  color: white;
  font-size: 20px;
}

```

CSS



Why is there a space on the  
Left and Right?

Bootstrap Color Palette

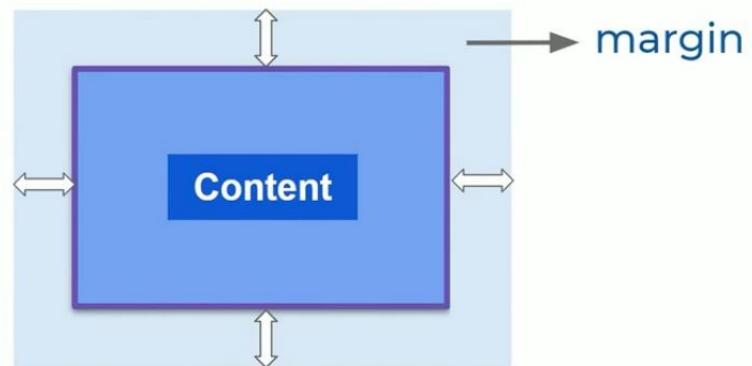


How to have Spacing after  
Each Bootstrap Grid Column?



## Margin

We can have spacing between two elements with CSS Box Property- **margin**



## Margin Variants

To get space only on one particular side, we use Margin Variants

- margin-top
- margin-right
- margin-bottom
- margin-left



## Adding Margin Bottom

```
...
<div class="row">
  <div class="col-12 column-spacing">...</div>
  <div class="col-12 column-spacing">...</div>
</div>
...
```

HTML

```
.column-spacing {
  margin-bottom: 30px;
}
```

CSS

## Margin

margin	m-*
margin-top	mt-*
margin-right	mr-*
<b>margin-bottom</b>	<b>mb-*</b>
margin-left	ml-*



The asterisk symbol can be **any number** in the range of 0 to 5.

For example **m-5**, **mr-2**, **mb-3**, etc.

## Bootstrap Utilities for Spacing **Margin Values**

**spacer** is a variable and by default it has a value of 16 pixels.

For example,

- $mb-3 = 1 * 16px = 16px$
  - $m-5 = 3 * 16px = 48px$

Size	Value
0	0
1	0.25 * spacer
2	0.5 * spacer
3	1 * spacer
4	1.5 * spacer
5	3 * spacer

## Bootstrap Utility: Spacing

# Adding Margin Class Names

HTML

Extra Small And Small Devices

## Output

Bootstrap Color Palette

Primary

Secondary

Success

Info

Warning

Danger

Color Palette

For

Medium Devices

Bootstrap Color Palette

Primary

Secondary

Success

Info

Warning

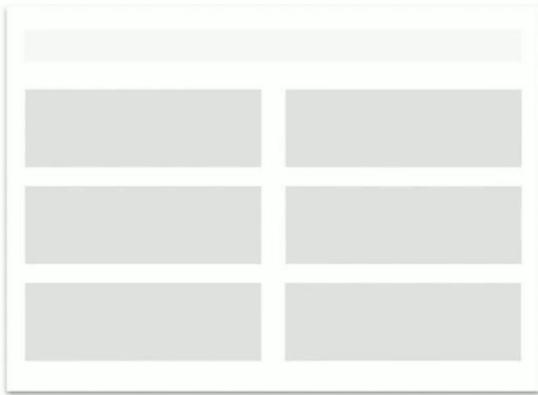
Danger

Bootstrap Grid System

Class Name Prefixes

Device	Device Size(width)	Class Name Prefix
Extra small devices	< 576px	col-
Small devices	>= 576px	col-sm-
Medium devices	>= 768px	col-md-
Large devices	>= 992px	col-lg-
Extra large devices	>= 1200px	col-xl-

## Layout



## Bootstrap Color Palette 377143 Medium Devices

HTML

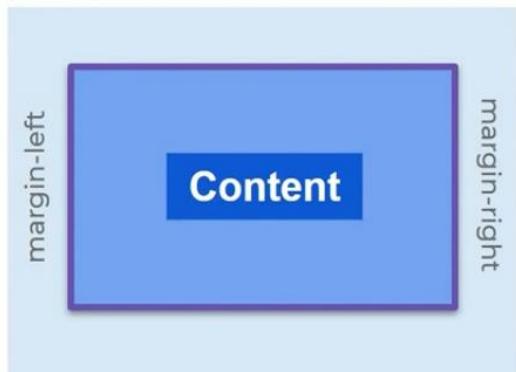
```
<div class="container">
  <div class="row">
    <div class="col-12 col-md-6 mb-3">...</div>
    <div class="col-12 col-md-6 mb-3">...</div>
  </div>
</div>
```

## CSS Box Properties

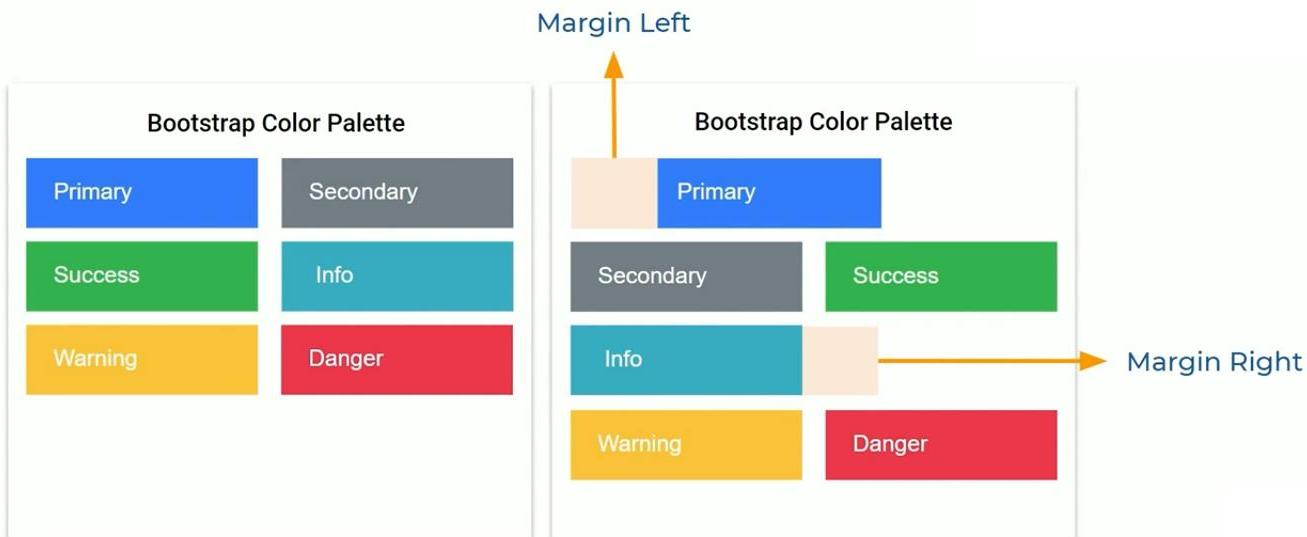
## Using Margin Variants in the Bootstrap Grid System

Avoid margin-left and margin-right properties for Bootstrap Columns

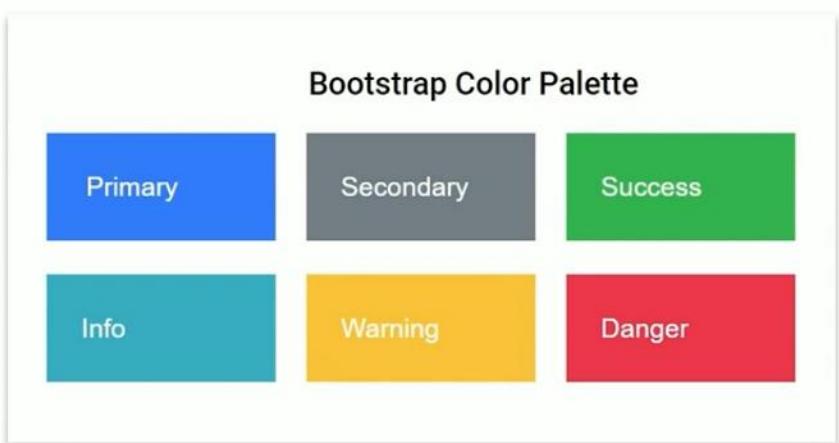
It disturbs Bootstrap Grid System and gives unexpected results



## Applying Margin Variants



Color Palette  
For  
Large Devices

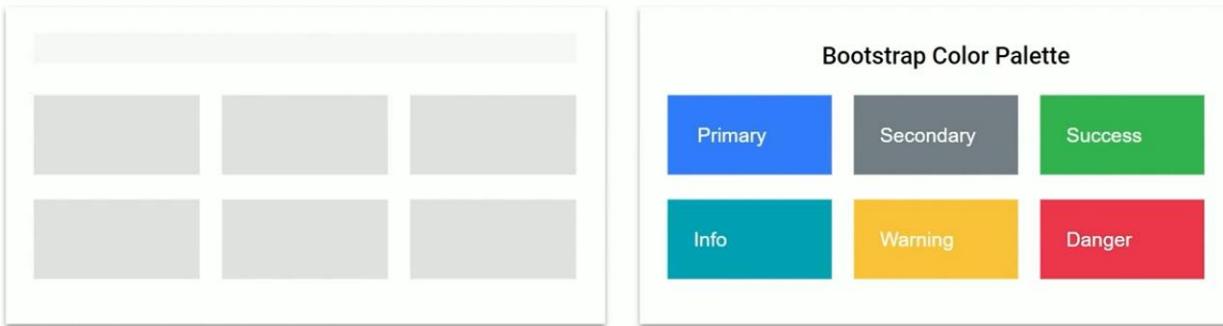


<sup>143</sup>  
Bootstrap Grid System

## Class Name Prefixes

Device	Device Size(width)	Class Name Prefix
Extra small devices	< 576px	col-
Small devices	≥ 576px	col-sm-
Medium devices	≥ 768px	col-md-
Large devices	≥ 992px	col-lg-
Extra large devices	≥ 1200px	col-xl-

## Layout



Bootstrap Color Palette

## Large Devices

HTML

```
<div class="container">
  <div class="row">
    <div class="col-12 col-md-6 col-lg-4 mb-3">...</div>
    <div class="col-12 col-md-6 col-lg-4 mb-3">...</div>
  </div>
</div>
```

Large devices

## Output



# Color Palette For Extra Large Devices

Bootstrap Color Palette



## Bootstrap Grid System Class Name Prefixes

Device	Device Size(width)	Class Name Prefix
Extra small devices	< 576px	col-
Small devices	>= 576px	col-sm-
Medium devices	>= 768px	col-md-
Large devices	>= 992px	col-lg-
Extra large devices	>= 1200px	col-xl-

## Bootstrap Color Palette Layout



Bootstrap Color Palette



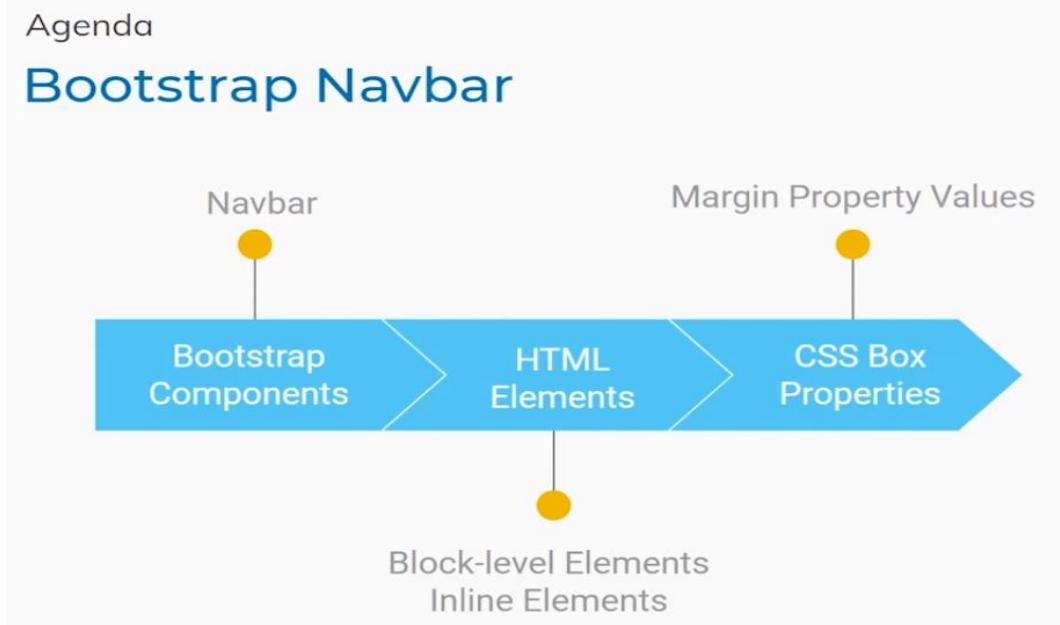
## Bootstrap Color Palette Extra Large Devices

HTML

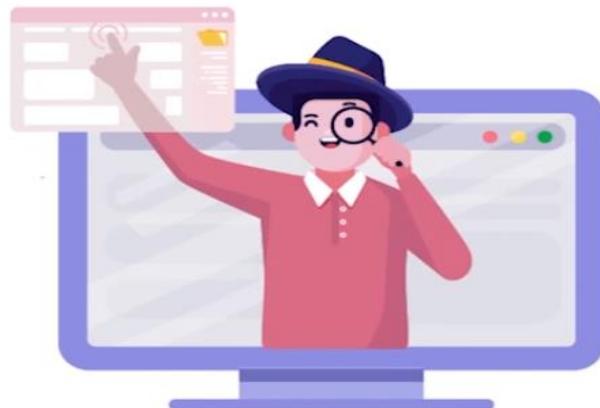
```
<div class="container">
  <div class="row">
    <div class="col-12 col-md-6 col-lg-4 col-xl-3 mb-3">...</div>
    <div class="col-12 col-md-6 col-lg-4 col-xl-3 mb-3">...</div>
  </div>
</div>
```

377143

## Bootstrap Navbar



## Let's see few Website Navigation Bars



Extra Small and Small Devices

### Example Website

The image shows two versions of a website's navigation bar side-by-side. On the left is a mobile view, and on the right is a desktop view. Both versions feature a logo icon and a three-line menu icon. The desktop version's menu is expanded, showing links for 'Home', 'About Me', 'Projects', and 'Testimonials'. Below the navigation, both versions show a portrait of a man in a suit, his name 'Rahul Attuluri', a brief bio, and a 'Contact Me' button.

Medium Devices

## Example Website

A screenshot of a website for a frontend developer. At the top left is a logo consisting of three orange overlapping circles. At the top right is a menu icon. Below the logo, the text "Hi, I'm" appears in orange, followed by the name "Rahul Attuluri" in a large, bold, dark blue font. Underneath the name is a short bio: "I'm a frontend developer, with the ability to Solve Problems and make everyone's life better." To the right of the bio is a black rectangular portrait of a man in a suit. The background features a subtle pattern of yellow dots.

Large and Extra Large Devices

## Example Website

A screenshot of the same website on a larger device screen. The layout remains consistent with the medium device view, featuring the logo at the top left, the developer's name in the center, and the portrait on the right. The menu icon is now visible in the top right corner. The background with the yellow dot pattern is also present.

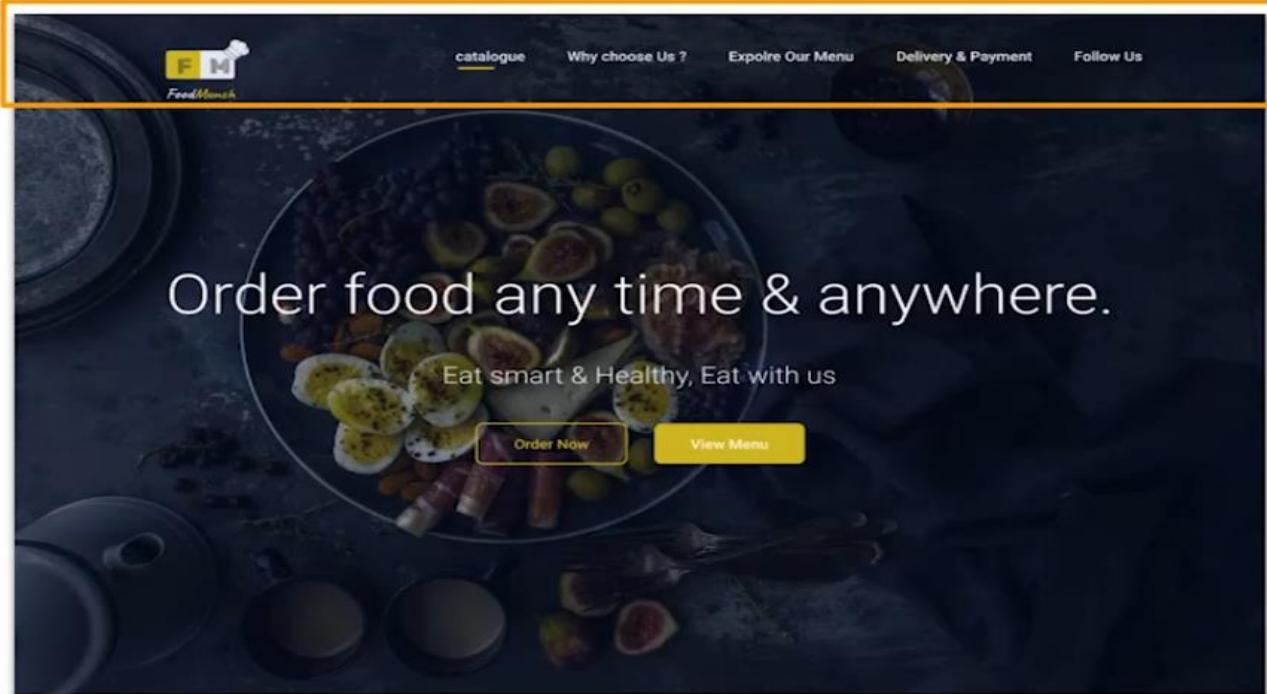
Extra Small and Small Devices

## Example Website

A screenshot of a food delivery application. At the top left is a logo with the letters "FH" and the text "FoodHaven". At the top right is a menu icon. The central part of the screen features a circular image of a salad. Overlaid on the image is the text "Order food any time & anywhere." Below this, smaller text reads "Eat smart & Healthy, Eat with us". At the bottom are two buttons: a yellow one labeled "View Menu" and a white one labeled "Order Now".

Large and Extra Large Devices

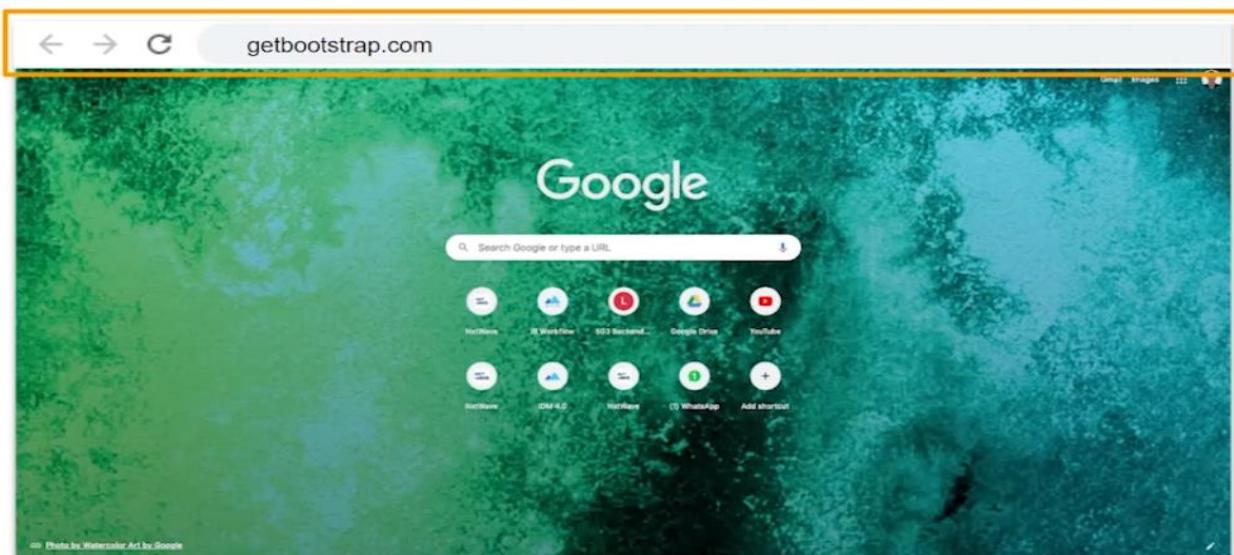
## Example Website



Let's add a simple Navigation Bar to our Website

Desktop View

[getbootstrap.com](http://getbootstrap.com)



Desktop View

# Home

The screenshot shows the official Bootstrap website's home page. At the top, there's a purple navigation bar with the 'B' logo, 'Home' (which is highlighted with a yellow box), 'Documentation', 'Examples', 'Icons', 'Themes', 'Expo', 'Blog', a version dropdown set to 'v4.5', and social media links. To the right of the bar is a 'Download' button. Below the navigation, a large hero section features the text 'Build fast, responsive sites with Bootstrap'. To the right of the text is a large, stylized purple button with a white 'B' on it. Below the hero section are two buttons: 'Get started' (purple) and 'Download' (white). A note says 'Currently v4.5.3'. At the bottom left, there's a small advertisement for Adobe Stock.

Desktop View

## Click on Documentation

This screenshot shows the 'Documentation' page of the Bootstrap website. The layout is identical to the home page, with the 'Documentation' tab highlighted in the purple navigation bar. The main content area contains the same 'Build fast, responsive sites with Bootstrap' message and the large purple 'B' button. Below these are the 'Get started' and 'Download' buttons, the 'v4.5' note, and the Adobe Stock advertisement.

Desktop View

## Click on Components

This screenshot shows the 'Components' page, specifically the 'Alerts' section. The navigation bar at the top has the 'Components' tab highlighted. The main content area is titled 'Alerts' and includes a sub-section titled 'Provide contextual feedback messages for typical user actions with the handful of available and flexible alert messages.' Below this is another Adobe Stock advertisement. To the right, there's a sidebar with links to 'Examples', 'Link color', 'Additional content', 'Dismissing', 'JavaScript behavior', 'Triggers', 'Methods', and 'Events'. At the bottom, there's a section titled 'Examples' with a sample alert message: 'A simple primary alert—check it out!'.

## Desktop View

# Click on Navbar

The screenshot shows the Bootstrap documentation for the 'Alerts' component. The left sidebar has 'Navbar' highlighted with a yellow box. The main content area shows an example of an alert message with a close button and some text. A sidebar on the right lists various documentation links.

## Desktop View

# Navbar without List-based Approach

The screenshot shows the Bootstrap documentation for the 'Navbars' component. The left sidebar has 'Navbar' highlighted with a yellow box. The main content area shows an example of a navbar with a dropdown menu. A code block in the center shows the HTML and CSS for the navbar. A sidebar on the right lists various documentation links.

## Bootstrap Navbar

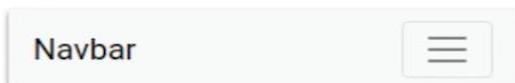
# Code

HTML

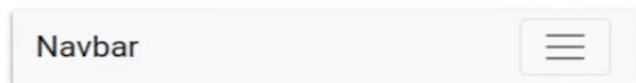
```
<nav class="navbar navbar-expand-lg navbar-light bg-light">
  <a class="navbar-brand" href="#">Navbar</a>
  <button class="navbar-toggler" type="button" data-toggle="collapse"
    data-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup"
    aria-expanded="false" aria-label="Toggle navigation">
    <span class="navbar-toggler-icon"></span>
  </button>
  <div class="collapse navbar-collapse" id="navbarNavAltMarkup">
    <div class="navbar-nav">
      <a class="nav-link active" href="#">Home <span class="sr-only">(current)</span></a>
      <a class="nav-link" href="#">Features</a>
      <a class="nav-link" href="#">Pricing</a>
      <a class="nav-link disabled" href="#" tabindex="-1" aria-disabled="true">Disabled</a>
    </div>
  </div>
</nav>
```

## Output

Small & Extra Small Devices



Medium Devices

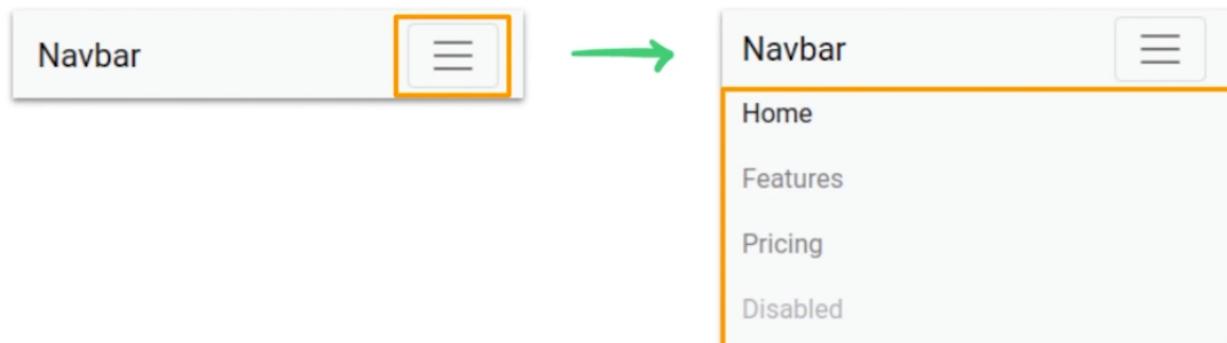


Large & Extra Large Devices



Extra Small and Small Devices

## Output



HTML Element

## Nav

HTML

```
<nav class="navbar navbar-expand-lg navbar-light bg-light">  
  ...  
</nav>
```

The **nav** element is a **container** element similar to **div** element. We use nav element to add a Navigation Bar to our Website

# How to change Navbar Items Inside the Bootstrap Navbar?

Navbar Home Features Pricing Disabled



Navbar Home About Me Projects Testimonials

Bootstrap Navbar

## Nav Items Inside Navbar

HTML

```
...
<div class="navbar-nav">
  <a class="nav-link active" href="#">
    Home <span class="sr-only">(current)</span>
  </a>
  <a class="nav-link" href="#">Features</a>
  <a class="nav-link" href="#">Pricing</a>
  <a class="nav-link disabled" href="#" tabindex="-1"
     aria-disabled="true">
    Disabled
  </a>
</div>
...
```

Bootstrap Navbar

## Remove Unwanted Nav Item

HTML

```
...
<div class="navbar-nav">
  <a class="nav-link active" href="#">
    Home <span class="sr-only">(current)</span>
  </a>
  <a class="nav-link" href="#">Features</a>
  <a class="nav-link" href="#">Pricing</a>
  <a class="nav-link disabled" href="#" tabindex="-1"
     aria-disabled="true">
    Disabled
  </a>
</div>
```

## Output

Navbar Home Features Pricing

Bootstrap Navbar

## Copy Paste and Add New Nav Items

HTML

```
...
<div class="navbar-nav">
  <a class="nav-link active" href="#">
    Home
    <span class="sr-only">(current)</span>
  </a>
  <a class="nav-link" href="#">Features</a>
  <a class="nav-link" href="#">Pricing</a>
  <a class="nav-link" href="#">Pricing</a>
</div>
...
```

Bootstrap Navbar

## Change the Nav Link texts

HTML

```
...
<div class="navbar-nav">
  <a class="nav-link active" href="#">
    Home
    <span class="sr-only">(current)</span>
  </a>
  <a class="nav-link" href="#">Features</a>
  <a class="nav-link" href="#">Pricing</a>
  <a class="nav-link" href="#">Pricing</a>
</div>
...
```

## Change the Nav Link texts

HTML

```
...
<div class="navbar-nav">
  <a class="nav-link active" href="#">
    Home
    <span class="sr-only">(current)</span>
  </a>
  <a class="nav-link" href="#">About Me</a>
  <a class="nav-link" href="#">Projects</a>
  <a class="nav-link" href="#">Testimonials</a>
</div>
...
...
```

## Output

Navbar Home About Me Projects Testimonials

Let's add a Logo  
to our Navbar



## Logo in Navbar



Bootstrap Navbar

## Adding Logo and Styling it

HTML

```
<nav class="navbar navbar-expand-md navbar-light bg-white">  
  <a class="navbar-brand" href="#"> Navbar </a>  
  ...  
</nav>
```

Bootstrap Navbar

## Adding Logo and Styling it

HTML

```
<nav class="navbar navbar-expand-md navbar-light bg-white">  
  <a class="navbar-brand" href="#">  
      
  </a>  
  ...  
</nav>
```

CSS

```
.navbar-image {  
  width: 40px;  
  height: 40px;  
  padding: 5px;  
}
```

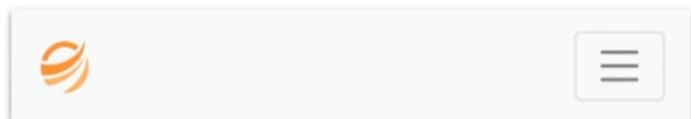
<sup>7142</sup> Adding Logo and Styling it

## Output

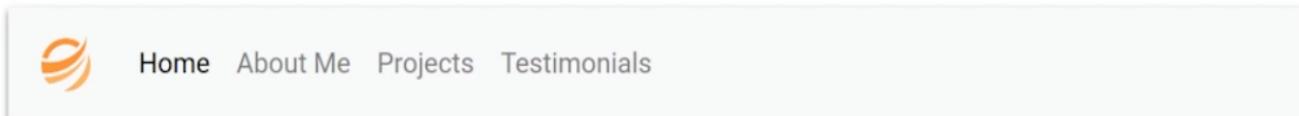
Small & Extra Small



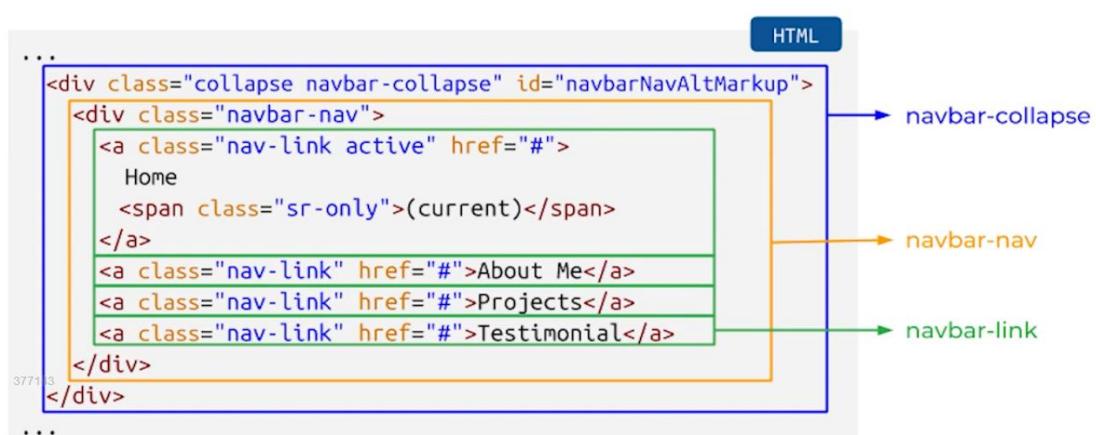
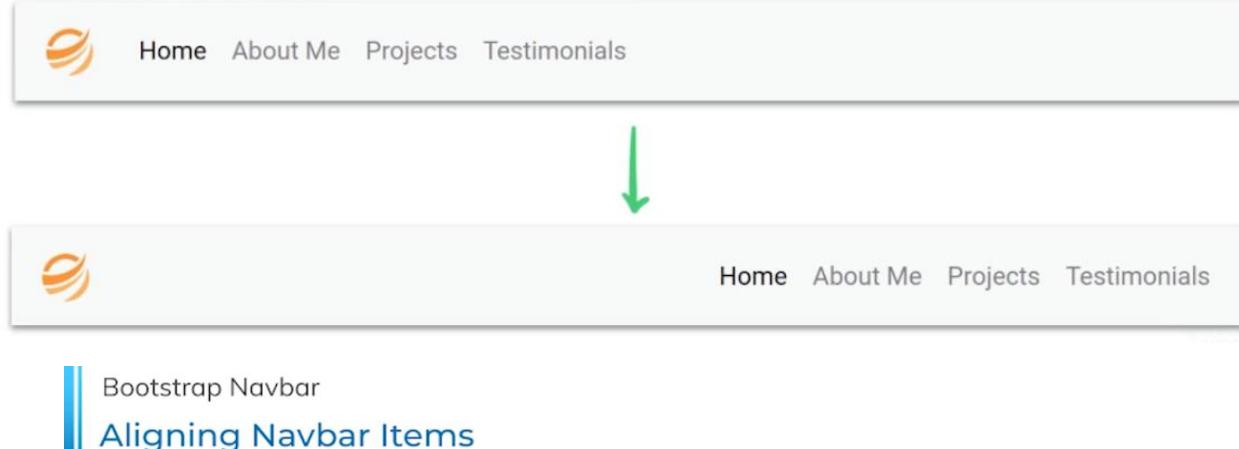
Medium



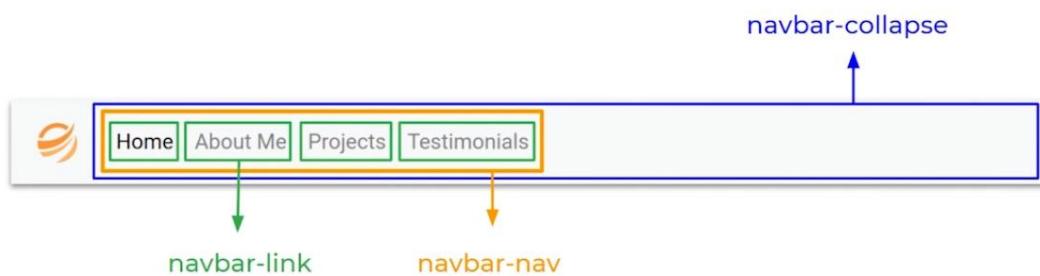
Large & Extra Large Devices



# How to align Navbar Items to the right?

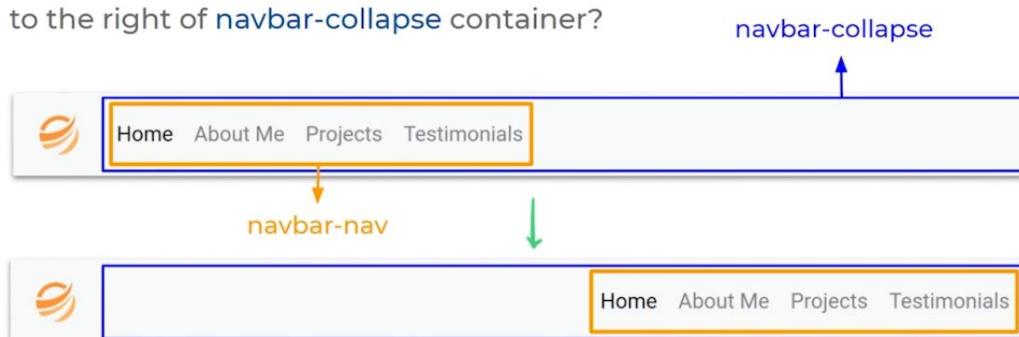


Bootstrap Navbar  
Aligning Navbar Items



Bootstrap Navbar  
Aligning Navbar Items

How to align navbar-nav container  
to the right of navbar-collapse container?



## Using text-align Property

```
...  
<div class="collapse navbar-collapse navbar-items-alignment"  
     id="navbarNavAltMarkup">  
  <div class="navbar-nav">  
    ...  
  </div>  
</div>
```

HTML

```
.navbar-items-alignment {  
  text-align: right;  
}
```

CSS



Why text-align Property  
does not work here?

## HTML Block-level and Inline Elements



HTML  
Elements

In general, HTML elements can be divided into two categories

- Block-level Elements
- Inline Elements

## Block-level Elements

These Elements always start in a new line and take up the **full width** available

Examples:

- h1 Element
- p Element
- div Element

many more...



## Block-level Elements

```
<h1 class="heading">
    The Seven Wonders Of the World
</h1>
<p class="paragraph">
    The taj Mahal is one of the Seven Wonders of
    The World
</p>
```

The Seven Wonders Of the World

The Taj Mahal is one of the Seven Wonders of The World

HTML

CSS

```
.heading {
    font-size: 24px;
    background-color: lightblue;
    padding: 20px;
}

.paragraph {
    background-color: lightblue;
    padding: 20px;
}
```

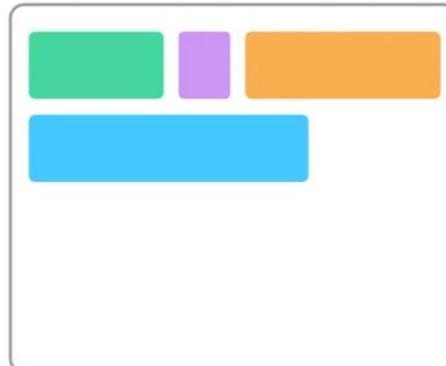
## Inline Elements

These Elements do not start in a new line and only take up **as much width as necessary**.

Examples:

- Button Element
- Image Element
- Anchor Element

many more...



## Inline Elements inside Block-level Elements

```
...
<p class="paragraph">
    The <a class="link-text"
        href="https://en.wikipedia.org/wiki/Taj_Mahal">
        Taj Mahal</a> is one of the Seven Wonders of
        The World
    </p>
...

```

HTML

CSS

```
.link-text {
    background-color: yellow;
}
```

The Seven Wonders Of the World

The Taj Mahal is one of the Seven Wonders of The World

## Inline Elements

```


```

HTML

```
.image {
    margin: 10px;
    width: 150px;
    height: 100px;
}
```

CSS



## CSS Property

### CSS text-align Property

The text-align property is used to specify the horizontal alignment of **text** or **Inline Elements** such as Images, hyperlinks etc.

We **can't align** Block-level Elements using this property.

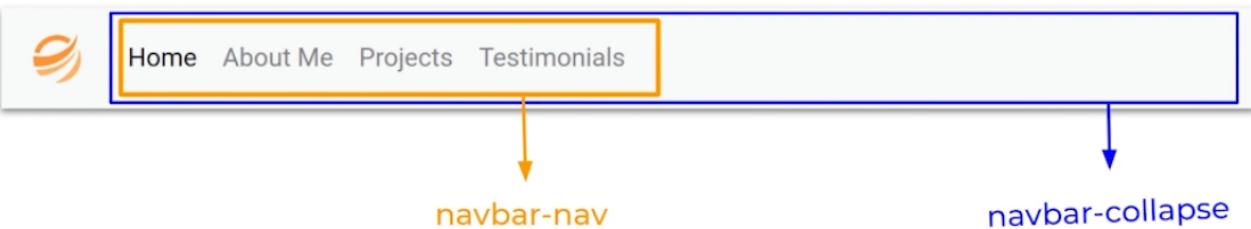
## Aligning Navbar Items

HTML

```
...  
<div class="collapse navbar-collapse" id="navbarNavAltMarkup">  
  <div class="navbar-nav">  
    ...  
  </div>  
</div>  
...
```

## Bootstrap Navbar

### Aligning Navbar Items

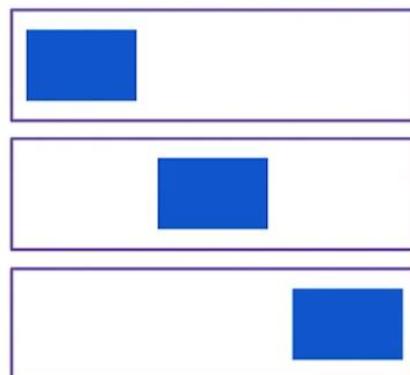


## CSS Box Properties

### Margin

We can align  
Block-level Elements horizontally  
using **margin** Property.

Apart from values which are  
specified in pixels it also accepts  
**auto** keyword as value.



## Margin

Element will be **horizontally centered** inside the Container

**margin: auto;**

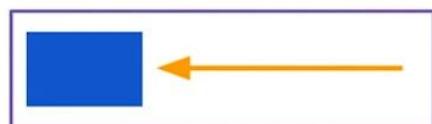


## CSS Box Properties

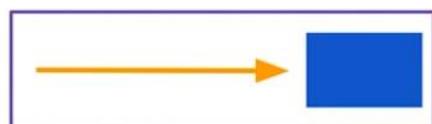
### Using auto with margin variants

Using **auto** as value for right margin or left margin takes up all the available space, and element gets aligned to either **right end** or **left end**

**margin-right: auto;**



**margin-left: auto;**



## Bootstrap Utility

### Margin

Apart from 0-5 numbers, margin can also take another value **auto**

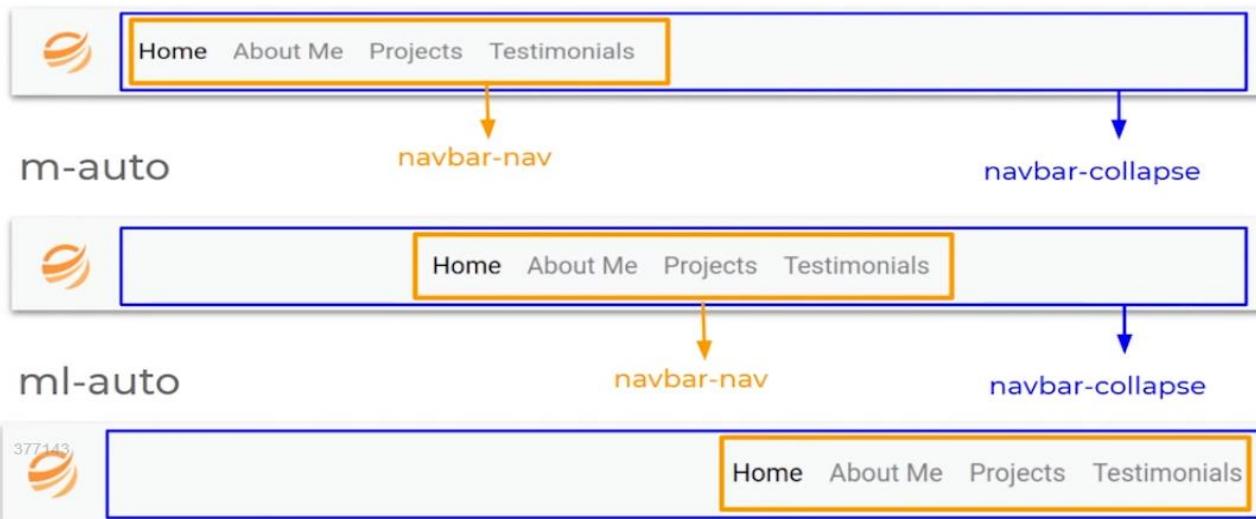
Possible Values:

- m-auto
- ml-auto
- mr-auto

Size	Value
0	0
1	0.25 * spacer
2	0.5 * spacer
3	1 * spacer
4	1.5 * spacer
5	3 * spacer

## Margin Values

mr-auto



Bootstrap Navbar

## Aligning Navbar Items

HTML

```
<nav class="navbar navbar-expand-sm navbar-light bg-white">
  ...
  <div class="collapse navbar-collapse" id="navbarNavAltMarkup">
    <div class="navbar-nav ml-auto">
      ...
    </div>
  </div>
</nav>
```

In Bootstrap 5, **ml-auto** has been replaced with **ms-auto** to align elements to the right side.

## How to change the Background Color of Bootstrap Navbar?



## Class Names

bg-primary		bg-light	
bg-secondary		bg-dark	
bg-success		bg-white	
bg-info			
bg-warning			
bg-danger			

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Bootstrap Navbar

## Changing Background Color

HTML

```
<nav class="navbar navbar-expand-lg navbar-light bg-white">  
  ...  
</nav>
```

Changing Background Color

## Output

Small &amp; Extra Small Devices



Medium Devices



Large &amp; Extra Large Devices



## Key Takeaways - I

- Developing Layouts for 5 Responsive Breakpoints
- CSS Box Properties
  - Margin Variants



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## Key Takeaways - II

- Bootstrap Utilities
  - Background Colors
  - Spacing
  - Margin



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## Bootstrap Navbar

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## Key Takeaways - I

- Bootstrap Navbar
  - Adding Links
  - Adding Logo
  - Aligning Nav Items
  - Changing Navbar Background Color

