BootStrap

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introduction

- Bootstrap is open source front end development framework.
- First it was conceived and developed in Twitter by Mark Otto and Jacob Thornton
- It helps to quick start the frond end development work of the website.
- It include HTML, CSS and Javascript.
- They developed it to standardize the frontend toolsets of engineers across the company.

Brief history

Initially released in year 2011.

First version includes only framework of CSS.

It include CSS, HTML, JavaScript and icons needed to design form and buttons.

Latest version is Bootstrap v 5.* (at the time of developing this presentation)

Why bootstrap?

- One can includes following things in site using bootstrap.
  - ❖ navigation bar,
  - ❖ Stylish buttons,
  - ❖ nice typography,
  - ❖ placeholders for texts and images,
  - ❖ a big image slider, and more.
- This things can be done by writing few line of HTML code.
- Bootstrap is easy to learn and use.
- Twitter bootstrap create responsive website also called mobile first web site.

Lets see quick example, what we can do with twitter bootstrap

- We want to add button in website which should look like below.

Button created using Bootstrap

learn java @ The EasyLearn Academy	learn android @ The EasyLearn Academy	learn PHP @ The EasyLearn Academy

```
<body>
        <h1>Button created using Bootstrap</h1>

   <a href="http://www.google.com" class="btn btn-danger">learn java @ The
EasyLearn Academy</a>
   <a href="http://www.google.com" class="btn btn-default">learn android @ The
EasyLearn Academy</a>
   <a href="http://www.google.com" class="btn btn-primary">learn PHP @ The
EasyLearn Academy</a>
</body>
```

More about bootstrap

Bootstrap is more than just decorating links, images and typography.

most important features is the grid system.

grid system create a mobile-friendly and responsive website.

Bootstrap is customizable

Bootstrap is a build for a novice designer (fresher),

but its not restricted to novices.

Experts can also use Bootstrap's code as a base to create something new.

Overview of Responsive Web Design

- Responsive design can create a single design that works on any below of devices.
  - mobiles,
  - tablets,
  - smart TVs
  - and PCs.
- Sites designed responsively are called fluid designs.
- It re-adjust itself according to the size of the screen they are viewed in and are also compatible with the touch interfaces of mobile devices.
- Using responsive web design, developers can create powerful web apps that replace native apps on platforms such as iOS and Android.

Example of responsive layout

Get started with bootstrap ..

- To start using bootstrap , download zip file from below site
  - **https://getbootstrap.com/docs/5.0/getting-started/download/**
- Once downloaded, extract zip file on disk.
- And copy & paste below 2 folder into your project folder (project folder is folder where you will use **bootstrap**)
  - **css**
  - **js**
- Now create new html file, save it as template.html in same folder where above two folder are pasted & add below link in head section of the page
- **<link rel="stylesheet" type="text/css" href="css/bootstrap.min.css">**

- Then open below url in browser and save file as popper.js file from it into your js folder of project folder

- **https://cdn.jsdelivr.net/npm/@popperjs/core@2.9.2/dist/umd/popper.min.js**

- we have to include popper.js JavaScript file:

<script src="js/popper.min.js"></script>

- Now we have to include Bootstrap's JavaScript file into web page after above script tag:

<script src="js/bootstrap.min.js"></script>

- After doing all this things your page should look like following.

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>My First Bootstrap Application</title>
    <link rel="stylesheet" type="text/css"
href="css/bootstrap.css">
  </head>
  <body>
      <script src="js/popper.js"></script>
      <script src="js/bootstrap.js"></script>
  </body>
</html>
```

Make page compatible display text of any human language.

- to make Bootstrap completely compatible with every type of device, we need to include some necessary meta tags.

- First, we should tell browsers that our website contains characters from the Unicode character set, which is a superset of the ASCII character set.

- This is done using the following meta tag:

<meta charset="utf-8">

Lets make our page compatible with all types of devices

- To ensure proper rendering and touch zooming for all devices, **add the responsive viewport meta tag** to your web page.

- Put below into head section of page

- **<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">**

- initial-scale=1 in the code means scale it to 100%.

So final output will look like below.

```
<!doctype html>
<html>
<head>
<meta charset="utf-8">
<title></title>
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-
    fit=no">
<link rel="stylesheet" type="text/css"  href="css/bootstrap.min.css">
</head>

<body>

<script src="js/popper.js"></script>
<script src="js/bootstrap.js"></script>
</body>
</html>
```

Containers in bootstreap

- Bootstrap recommends that we should place all the **rows** and **columns** inside a **container** to ensure proper alignment and padding.
- There are two types of container classes in Bootstrap:
  - container &
  - container-fluid.
- Container creates a **fixed-width container** in the browser window, while the container-fluid creates a **full-width fluid container**.
- The **fixed-width** container is styled to appear at the center of the screen, omitting extra space on both sides.
- Hence, it is a good practice to wrap all the contents within a **container**.

Grid System in bootstrap

Grid System in bootstreap

- Grid system is used to arrange content in web page according to device's screen size and arrange the content in tabular form.

- It arrange content in terms of rows and column.

- **Bootstrap page can have any number of rows in page but it can have at most 12 resizable columns in each row.**

- column size automatically change according to screen size.

- So entire grid system in bootstrap is responsive.

Columns in bootstrap

- As stated before there can be 12 maximum column in each row.
- As per requirement you can span the particular column upto 12 in row.
- Suppose we need only two column in row then each column should span to 6 column in a row.
- If we need just a single column in row then whole column should span to 12 column in row.
- In bootstrap one can use 5 different types of column in any combination as given below.
  1. **col-(1-12) (screen width < auto) extra small screen - mobile**
  2. **col-sm-(1-12) (screen width > 540px) tablet**
  3. **col-md-(1-12) (screen width >= 720px) //medium size laptop macbook air**
  4. **col-lg-(1-12) (screen width >= 960px) //laptop or monitor**
  5. **col-xl-(1-12) (screen width >= 1140px) // large screen device tv**
- If you apply multiple class from above list to div tag then which them will apply depends on size of screen.

Typography

- Typography means formatting we applies to text like text color, text size, alignment, letter spacing, word spacing, line height, fonts, text style (bold, italic, underline, strikeout) etc

- You can define all HTML headings, <h1> through <h6> In the same way you use it in simple HTML document.

- To apply heading on other tag you can use .h1 to h6 tag.

- Bootstrap default font size 16px and line height 1.428. it applies to all content in paragraph.

- You can easily align text inside a paragraph and other elements using text alignment classes.
  - text-left
  - text-end (right alignment)
  - text-center

- **There is no class for justify alignment in bootstrap version 5.**

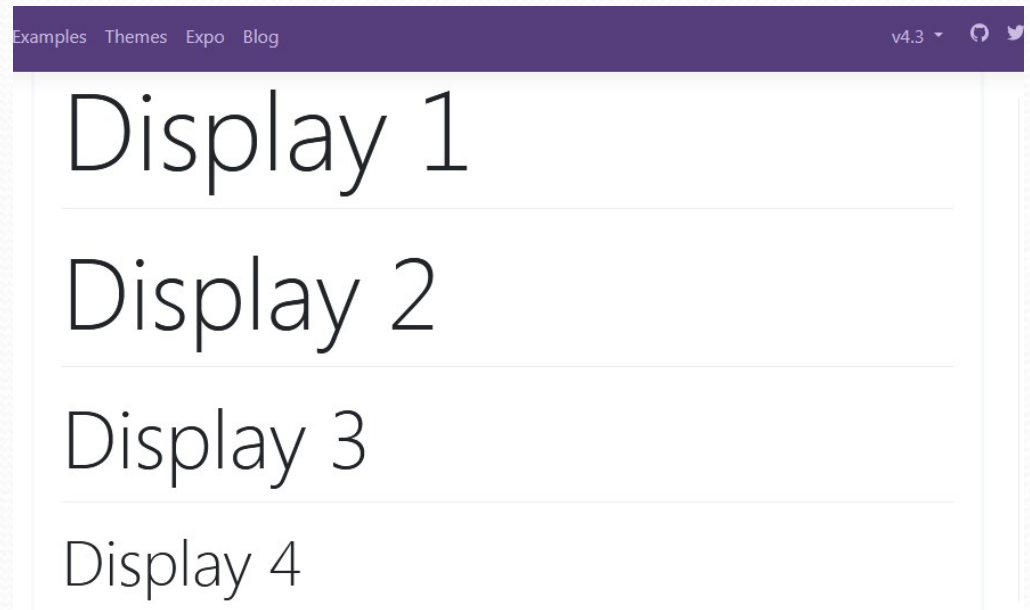# Text transformation classes

- text-lowercase
  - show text in lower case
- text-uppercase
  - SHOW TEXT IN UPPER CASE
- text-capitalize
  - Show Text In Capitalize

Display headings

- One can display important heading in the web page using heading related useful classes given below.

- These heading's font size are responsive by default.

Example
```
<h1 class="display-1">Display 1</h1>
<h1 class="display-2">Display 2</h1>
<h1 class="display-3">Display 3</h1>
<h1 class="display-4">Display 4</h1>
```

Examples Themes Expo Blog   v4.3 ▾ ○ ✇

Display 1

Display 2

Display 3

Display 4

Lead

- Lead is class and it can be applied to paragraph tag to display paragraph different from other paragraph.

```
<p class="lead">
Vivamus sagittis lacus vel augue laoreet rutrum faucibus dolor
  auctor. Duis mollis, est non commodo luctus.
</p>
```

Vivamus sagittis lacus vel augue laoreet rutrum faucibus dolor auctor. Duis mollis, est non commodo luctus.

How to change text color?

- To change color of text inside any tag one can use any one following class.
    1. text-muted (grey)
    2. text-primary (blue)
    3. text-success (green)
    4. text-info (cyan)
    5. text-warning (orange)
    6. text-danger (red)
    7. Text-white (white)
    8. Text-secondary (gray)

Bootstrap Tables

- The HTML tables are used to present data in grid manner like row and columns.
- Using Bootstrap you can greatly improve the appearance of table in a simple way.
- Important classes to use with table tag
  - **Table (base class) means we have to apply this class to the table tag**
  - table-striped
  - table-bordered
  - table-borderless
  - table-hover
  - table-sm
  - Table-dark (it will display text in white and background in black color)
- Important classes to use with tr or with td tag
- **To make table responsive wrap table tag inside div tag which has .table-responsive class**

  - ✓ table-primary (blue)
  - ✓ table-secondary (dark gray)
  - ✓ table-success (green)
  - ✓ table-info (cyan)
  - ✓ table-warning (orange)
  - ✓ table-danger (red)
  - ✓ table-dark (black)
  - ✓ table-light (off-white)

  Below classes are used to change background color of row
  - ✓ bg-primary
  - ✓ bg-secondary
  - ✓ bg-success
  - ✓ bg-info
  - ✓ bg-warning
  - ✓ bg-danger

List ....

- Bootstrap support 2 types of list which can be style using bootstrap.
  - Ordered list
  - Un ordered list
- One can apply attractive style to both types of list using list related classes.

Displaying list without bullets or number

- To display list item without any bullets or number we need to use list-unstyled class along ul or ol tag like below

```
<ul class="list-unstyled">
        <li >Android</li>
        <li >Java</li>
        <li >PHP</li>
 </ul>
```

Bootstrap List Groups

- The list groups are very useful for displaying lists of items in a beautiful manner.

- In basic form a list group is simply an unordered list with list items and proper classes.

- To created list group
  - Apply **list-group** class to **ul** or **ol** tag
  - Apply **list-group-item** class to **li** tag of ul or ol tag.
  - Apply following class along with list-group-item to li to styled them further
    - list-group-item-danger
    - list-group-item-info
    - list-group-item-success
    - List-group-item-warning

Displaying list horizontally instead of vertically

- To display list horizontally instead of vertically, use list list-line class with ul or ol tag like below

  <ul class="**list-inline**">

  <li class="**list-inline-item**">Android

  <li class="**list-inline-item**">Java

  <li class="**list-inline-item**">PHP

Using icon with bootstrap

- We can create nice counter in bootstrap using 3rd part CDNs.
- Some of the popular 3rd part CDNs are following
  - Font awesome
  - Iconic
  - Octicons
- To get font awesome icon refer to below link.

  <script src="https://kit.fontawesome.com/20994dd270.js" crossorigin="anonymous"></script>

- This is example of how you will use icon
- <i class="fa-solid fa-camera"></i>

Adding Icon to button

- We can add Fontawesome icons to button to make button more attractive by using below snippets

  ```
  <button class="btn btn-primary"><i class="fa fa-save"></i>  Save</button>
  ```

  ```
  <button class="btn btn-primary"><i class="fa fa-edit"></i> Edit</button>
  ```

  ```
  <button class="btn btn-primary"><i class="fa fa-print"></i> print</button>
  ```

  Use below cdn

  ```
  <link rel="stylesheet" type="text/css" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.12.1/css/all.css" />
  ```

Cards

- A card is a bordered box with some padding around its content. It includes options for headers, footers, content, colors etc.
- It can include almost anything like table, forms, div, paragraph etc.
- A basic card is created with the **.card** class, and content inside the card has a **.card-body** class:
- Example

  ```
  <div class="card">
   <div class="card-body">this is simple card </div>
   </div>
  ```
- You can optionally add .card-header class for a heading to the card and the .card-footer class adds for footer to the card:

  ```
  <div class="card">
     <div class="card-header">this is header</div>
     <div class="card-body">This is content</div>
     <div class="card-footer">This is footer</div>
  </div>
  ```
- To add a background color the card, use contextual classes (.bg-primary, .bg-success, .bg-info, .bg-warning, .bg-danger, .bg-secondary, .bg-dark and .bg-light.

More about cards

- 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) inside .card-body.
- The .card-link class adds a blue color to any link, and a hover effect.

```
<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>
```

Card Images

- You can display images inside cards to showcase product with image and its details . You can also show package with price.

- example

```
<div class="card">

  <img class="card-img-top" src="tshirt.png" alt="Card image">

  <div class="card-body">

    <h4 class="card-title">T-Shirt</h4>

    <p class="card-text">Rs </p>

    <a href="#" class="btn btn-primary">Add to cart</a>

  </div>

</div>
```

Card groups

- Use card groups to render cards as a single, attached element with equal width and height columns.

```
<div class="card-group">
  <div class="card">
    <img class="card-img-top" src="..." alt="Card image cap">
    <div class="card-body">
      <h5 class="card-title">Card title</h5>
      <p class="card-text">Card Content.</p>
    </div>
  </div>
  <div class="card">
    <img class="card-img-top" src="..." alt="Card image cap">
    <div class="card-body">
      <h5 class="card-title">Card title</h5>
      <p class="card-text">Card Content.</p>
    </div>
  </div>
</div>
```

Image Sliders

- The Image Slider means slideshow or **Carousel** can be used to show the huge amount of contents (text + images) within a small space on the web pages.

- It cycles through several items.

```html
<style>
    img { height:175px !important; width:100% !important; }
</style>
<div id="carouselExampleInterval" class="carousel slide" data-ride="carousel">
    <!-- indicator -->
    <ol class="carousel-indicators">
            <li data-target="# carouselExampleInterval "data-slide-to="0" class="active"></li>
            <li data-target="# carouselExampleInterval " data-slide-to="1"></li>
            <li data-target="# carouselExampleInterval " data-slide-to="2"></li>
    </ol>
    <!-- indicator -->
  <div class="carousel-inner">
   <div class="carousel-item active" data-interval="3000">
    <img src=" http://via.placeholder.com/1200X200" class="d-block w-100" alt="...">
   </div>
   <div class="carousel-item" data-interval="2000">
     <img src=" http://via.placeholder.com/1200X200" class="d-block w-100" alt="...">
   </div>
   <div class="carousel-item">
     <img src=" http://via.placeholder.com/1200X200" class="d-block w-100" alt="...">
   </div>
  </div>
  <a class="carousel-control-prev" href="#carouselExampleInterval" role="button" data-slide="prev">
   <span class="carousel-control-prev-icon" aria-hidden="true"></span>
</a>
  <a class="carousel-control-next" href="#carouselExampleInterval" role="button" data-slide="next">
   <span class="carousel-control-next-icon" aria-hidden="true"></span>
</a>
</div>
```

Styling Images with Bootstrap

- Images in bootstrap should use Img-fluid class to avoid overflow of image outside its parent.

- One can use Img-thumbnail class to display small white border around it.

```
<div class="col-lg-4">
<img src="images/one.jpg" class="img-fluid" />
</div>
<div class="col-lg-4">
<img src="images/one.jpg" class="img-fluid img-thumbnail" />
</div>
```

Creating Forms with Bootstrap

- HTML forms are the important part of the web pages,
- Bootstrap simplifies the styling process of form controls like input-boxes, select-boxes, textareas, etc.
- Bootstrap provides three different types of form layouts:
  - Vertical Form (default form layout)
  - Horizontal Form
  - Inline Form

Creating vertical form

- Create form tag
- Create a separate div tag for each message and input control pair, apply class form-group
- Use label tag and input tag within above div tag.
- Apply class form-control to input tag and value for the for attribute of label tag and id attribute of input tag must be same like below

<form>
<div class="**form-group**">
<label for="**inputEmail**">Email</label>
<input type="email" class="**form-control**" id="**inputEmail**" placeholder="Email">
</div>
</form>

Creating inline radio button (horizontal)

```
<div class="radio">
          <label><input type="radio"
  name="optradio">Option 1</label>
          <label><input type="radio"
  name="optradio">Option 2</label>
          <label><input type="radio"
  name="optradio" disabled>Option 3</label>
</div>
```

Creating vertical radio button

```
<div class="radio">
   <label><input type="radio" name="optradio">Option 1</label>
 </div>
 <div class="radio">
   <label><input type="radio" name="optradio">Option 2</label>
 </div>
 <div class="radio disabled">
   <label><input type="radio" name="optradio" disabled>Option 3</label>
 </div>
```

Creating horizontal checkbox

```
<div class="checkbox">
         <label><input type="checkbox"
value="">Option 1</label>
         <label><input type="checkbox"
value="">Option 2</label>
         <label><input type="checkbox" value=""
disabled>Option 3</label>
</div>
```

Creating vertical checkbox

```
<div class="checkbox">
    <label><input type="checkbox" value="">Option 1</label>
 </div>
 <div class="checkbox">
    <label><input type="checkbox" value="">Option 2</label>
 </div>
 <div class="checkbox disabled">
    <label><input type="checkbox" value="" disabled>Option 3</label>
 </div>
```

Creating dropdown list

```
<div class="form-group">
    <label for="dropdownlist">Select list:</label>
    <select class="form-control" id=" dropdownlist ">
     <option>android</option>
     <option>java</option>
     <option>php</option>
     <option>phonegap</option>
    </select>
   </div>
```

Creating textarea

```
<div class="form-group">
    <label for="address">Address:</label>
    <textarea class="form-control" rows="5" id=" address "></textarea>
 </div>
```

Adding buttons

```
<div class="form-group">
            <button class="btn btn-primary"
  type="submit">Register me</button>
            <button class="btn btn-danger"
  type="reset">Skip</button>
            <button class="btn btn-default"
  type="button">remind later</button>
            <button class="btn btn-success"
  type="button">no thanks</button>
</div>
```

Creating Horizontal Form Layout

- In horizontal form layout labels are right aligned and floated to left to appear on the same line as form controls.

- To create horizontal form layout.
  - Add labels and form controls in a <div> element and apply the class **.form-group** and **row**
  - Add the class **.col-form-label** to the <label> element.
  - Add the class **.form-control** to the <input> element.

Example

```
<form>
  <div class="form-group row">
   <label for="staticEmail" class="col-sm-2 col-form-label">Email</label>
   <div class="col-sm-10">
    <input type="text" readonly class="form-control-plaintext"
    id="staticEmail" value="email@example.com">
   </div>
  </div>
  <div class="form-group row">
   <label for="inputPassword" class="col-sm-2 col-form-
   label">Password</label>
   <div class="col-sm-10">
    <input type="password" class="form-control" id="inputPassword"
    placeholder="Password">
   </div>
  </div>
</form>
```

Creating Inline Form Layout

- to place the form controls side-by-side to compact the layout.
- You can do this easily by adding the Bootstrap class .form-inline to the <form> element.

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

The inline form layout is rendered as default vertical form layout if the viewport width is less than 768px.

```
        <div class="container-fluid">
        <div class="row bg-light p-3 justify-content-between">
                <h3>The EasyLearn Academy</h3>
                        <form class="form-inline">
                                <input class="form-control mr-3" name="txtemail"
    type="email" placeholder="Your Email Address" />
                                <input class="form-control mr-3              "
    name="txtpassword" type="Password" placeholder="Your Password" />
                                <input type="submit" name="btnsubmit" value="Login"
                                class="btn btn-info mr-3" />
                        </form>
        </div>
</div>
```

Creating menus in bootstrap

- Bootstrap provides an easy way to create basic menu(nav) components like as tabs and pills.

- All the Bootstrap's nav components—tabs and pillss— share the same base markup and styles through the .nav class.

Non responsive horizontal menus

```
<div class="row">
    <div class="col-12">
            <ul class="nav nav-pils">
 <li class="nav-item">
  <a class="nav-link active" href="#">Active</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="#" tabindex="-1" aria-disabled="true">Disabled</a>
 </li>
</ul>
 </div>
   </div>
```

Adding Icons to Pills Nav

```
<div class="row">
    <div class="col-xs-12">
    <ul class="nav nav-tabs">
        <li class="active"><a href="#"><i class="fa fa-home"></i>  Home</a></li>
        <li><a href="#"><i class="fa fa-user"></i> Profile</a></li>
        <li><a href="#"><i class="fa fa-envelope"></i> Messages</a></li>
    </ul>
    </div>
    </div>
```

Creating stacked Pills Nav (vertical menu bar)

```
<div class="row">
      <div class="col-3">
    <ul class="nav flex-column">
      <li class="nav-item">
        <a class="nav-link active" href="#">Active</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="#" tabindex="-1" aria-
        disabled="true">Disabled</a>
      </li>
    </ul>
  </div>
</div>
```

Bootstrap Tabs and Pills Nav with Dropdown Menus

```html
<ul class="nav nav-tabs">
  <li class="nav-item"> <a class="nav-link active" aria-current="page" href="#">Active</a>  </li>
  <li class="nav-item dropdown">
   <a class="nav-link dropdown-toggle" data-bs-toggle="dropdown" href="#" role="button" aria-
    expanded="false">Dropdown</a>
   <ul class="dropdown-menu">
    <li><a class="dropdown-item" href="#">Action</a></li>
    <li><a class="dropdown-item" href="#">Another action</a></li>
    <li><hr class="dropdown-divider"></li>
    <li><a class="dropdown-item" href="#">Separated link</a></li>
   </ul>
  </li>
  <li class="nav-item">
   <a class="nav-link" href="#">Link</a>
  </li>
  <li class="nav-item">
   <a class="nav-link disabled">Disabled</a>
  </li>
</ul>
```

Creating Pills with Dropdowns

```
<ul class="nav nav-pills">
        <li class="nav-item active"><a href="#" class="nav-link">Home</a></li>
        <li class="nav-item "><a href="#" class="nav-link">Profile</a></li>
        <li class="dropdown">
        <a href="#" data-toggle="dropdown" class="dropdown-toggle nav-
   link">Messages <b class="caret"></b></a>
        <ul class="dropdown-menu">
           <li class="nav-item "><a href="#" class="nav-link">Inbox</a></li>
           <li class="nav-item "><a href="#" class="nav-link">Drafts</a></li>
           <li class="nav-item "><a href="#" class="nav-link">Sent Items</a></li>
           <li class="nav-item "><a href="#" class="nav-link">Trash</a></li>
        </ul>
        </li>
        <li class="nav-item "><a href="#" class="nav-link">Contact us</a></li>
        <li class="nav-item "><a href="#" class="nav-link">Privacy Policy</a></li>
        <li class="nav-item "><a href="#" class="nav-link">Terms and conditions</a></li>
   </ul>
```

How to create responsive Menu

```html
<!-- responsive menu -->
                        <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="#navbarSupportedContent" aria-
controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle navigation">
      <span class="navbar-toggler-icon"></span>
    </button>

    <div class="collapse navbar-collapse" id="navbarSupportedContent">
      <ul class="navbar-nav mr-auto">
        <li class="nav-item active">
          <a class="nav-link" href="#">Home <span class="sr-only">(current)</span></a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#">Link</a>
        </li>
        <li class="nav-item dropdown">
          <a class="nav-link dropdown-toggle" href="#" id="navbarDropdown" role="button" data-toggle="dropdown" aria-haspopup="true"
aria-expanded="false">
            Dropdown
          </a>
          <div class="dropdown-menu" aria-labelledby="navbarDropdown">
            <a class="dropdown-item" href="#">Action</a>
            <a class="dropdown-item" href="#">Another action</a>
            <div class="dropdown-divider"></div>
            <a class="dropdown-item" href="#">Something else here</a>
          </div>
        </li>
        <li class="nav-item">
          <a class="nav-link disabled" href="#" tabindex="-1" aria-disabled="true">Disabled</a>
        </li>
      </ul>
      <form class="form-inline my-2 my-lg-0">
        <input class="form-control mr-sm-2" type="search" placeholder="Search" aria-label="Search">
        <button class="btn btn-outline-success my-2 my-sm-0" type="submit">Search</button>
      </form>
    </div>
  </nav>
```

Contextual Backgrounds

- one can use the contextual background color classes to set the background-color of an element to apply extra focus on them
- <div class="alert alert-primary" role="alert">
- A simple primary alert—check it out!
- </div>
- <div class="alert alert-secondary" role="alert">
- A simple secondary alert—check it out!
- </div>
- <div class="alert alert-success" role="alert">
- A simple success alert—check it out!
- </div>
- <div class="alert alert-danger" role="alert">
- A simple danger alert—check it out!
- </div>
- <div class="alert alert-warning" role="alert">
- A simple warning alert—check it out!
- </div>
- <div class="alert alert-info" role="alert">
- A simple info alert—check it out!
- </div>
- <div class="alert alert-light" role="alert">
- A simple light alert—check it out!
- </div>
- <div class="alert alert-dark" role="alert">
- A simple dark alert—check it out!
- </div>

Closeable contextual background message

- Bootstrap provides a generic close icon that can be used for dismissing modals and alerts.

- **Example**

```
<div class="alert alert-warning alert-dismissible fade show"
   role="alert">
  <strong>Warning!</strong> You should check in on some of those fields
  below.
  <button type="button" class="btn-close" data-bs-dismiss="alert" aria-
  label="Close"></button>
</div>
```

Accordion

- Accordion widgets and menus are widely used on the websites to manage the large amount of content and navigation lists.

- **It is mainly used to show foldable content in webpage to reduce overall size of webpage.**

- Let us see how we can use it

Example

Let us see live example from official documentation.

Some useful links

for ready made code

- https://bootsnipp.com

for cheetsheet

- https://bootstrap-cheatsheet.themeselection.com/

- official documentation of bootstrap 5
- https://getbootstrap.com/docs/

Bootstrap 4 V/s Bootstrap 5

- https://ourtechroom.com/tech/bootstrap4-vs-boostrap5-migrate-differences/