Bootstrap

What is Bootstrap?

• Bootstrap is a free ==front-end framework== for faster and easier web development.

• Bootstra==p 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 (creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops).

Bootstrap 4 is the newest version of Bootstrap; with new components, faster stylesheet and more responsiveness..
Bootstrap 4 supports the latest, stable releases of all major browsers and platforms.

Why Use Bootstrap?

- **Easy to use**: Anybody with just basic knowledge of HTML and CSS can start using Bootstrap.

- **Responsive features:** Bootstrap's responsive CSS adjusts to phones, tablets, and desktops.

- **Mobile-first approach**: In Bootstrap, mobile-first styles are part of the core framework.

- **Browser compatibility**: Bootstrap 4 is compatible with all modern browsers (Chrome, Firefox, Internet Explorer 10+, Edge, Safari, and Opera)

Bootstrap 4

There are two ways to start using Bootstrap 4 on your own web site.
You can:
•Include Bootstrap 4 from a CDN (Content Delivery Network)

```
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
```

•Download Bootstrap 4 from getbootstrap.com

Create web page

1. **Add the HTML5 doctype :** include the HTML5 doctype at the beginning of the page, along with the lang attribute and the correct character set:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
  </head>
</html>
```

2. To make your webpage responsive : add the following <meta> tag inside the <head> element

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

The **width=device-width** part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).

The **initial-scale=1** part sets the initial zoom level when the page is first loaded by the browser.

3. Containers: Bootstrap 4 also requires a containing element to wrap site contents. There are two container classes to choose from:

The **.container class** provides a responsive fixed width container

The **.container-fluid class** provides a full width container, spanning the entire width of the viewport

Create web page

.container

.container-fluid

Bootstrap 4 Grid System

Allows up to 12 columns across the page.
The columns can be grouped together to create wider columns:

span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1
span 4				span 4				span 4			
span 4				span 8							
span 6						span 6					
span 12											

Grid 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)
The classes above can be combined to create more dynamic and flexible layouts.

Bootstrap 4 Colors

- The classes for **text colors** are: .text-muted, .text-primary, .text-success, .text-info, .text-warning, .text-danger, .text-secondary, .text-white, .text-dark, .text-body (default body color/often black) and .text-light:

- **Background Colors:** **.bg-primary, .bg-success, .bg-info, .bg-warning, .bg-danger, .bg-secondary, .bg-dark and .bg-light.**

Bootstrap 4 Tables

- The .table class adds basic styling to a table

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

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

- .table-hover class adds a hover effect (grey background color) on table rows

- .table-dark class adds a black background to the table

- .table-borderless class removes borders from the table

- .table-sm class makes the table smaller by cutting cell padding in half

- .table-responsive class adds a scrollbar to the table when needed

Bootstrap 4 Images

- .rounded class adds rounded corners to an image.

- `<img src="cinqueterre.jpg" class="rounded" alt="Cinque Terre">`

- .rounded-circle class shapes the image to a circle.

- .img-thumbnail class shapes the image to a thumbnail

- .float-right and .float-left to align the right and left respectively.

- .mx-auto (margin:auto) and .d-block (display:block) to center align the image

- .img-fluid class to the <img> tag: to create responsive images

Bootstrap 4 Alert

- .alert class, followed by one of the contextual classes .alert-success, .alert-info, .alert-warning, .alert-danger, .alert-primary, .alert-secondary, .alert-light or .alert-dark

- ```html
<div class="alert alert-success">
    Success! Indicates a successful or
positive action.
</div>
```

- ```html
  <button type="button" class="btn">Basic</button>
  <button type="button" class="btn btn-primary">Primary</button>
  <button type="button" class="btn btn-secondary">Secondary</button>
  <button type="button" class="btn btn-success">Success</button>
  <button type="button" class="btn btn-info">Info</button>
  <button type="button" class="btn btn-warning">Warning</button>
  <button type="button" class="btn btn-danger">Danger</button>
  <button type="button" class="btn btn-dark">Dark</button>
  <button type="button" class="btn btn-light">Light</button>
  <button type="button" class="btn btn-link">Link</button>
  ```

Bootstrap 4 Navigation Bars

- A navigation bar is a navigation header that is placed at the top of the page

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

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

- Vertical Navbar: Remove the .navbar-expand-xl|lg|md|sm class to create a vertical navigation bar

- .bg-color classes to change the background color of the navbar (.bg-primary, .bg-success, .bg-info, .bg-warning, .bg-danger, .bg-secondary, .bg-dark and .bg-light)

Useful Reference Links

- https://www.w3schools.com/bootstrap4