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Morning Session: 9 am – 11 PM

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Today Topics: **Bootstrap**

Bootstrap official website: <https://getbootstrap.com/>

Bootstrap is nothing but a framework which consists of certain CSS classes and certain javascript.

Mobile First : means designing an online experience for mobile before designing it for the desktop Web—or any other device.

Bootstrap, the world's most popular front-end open source toolkit, featuring Sass variables and mixins, responsive grid system, extensive pre built components, and powerful JavaScript plugins

Included bootstrap css cdn link and js link into html file

Css link :

```
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css"
integrity="sha384-9aIt2nRpC12Uk9gS9baDl411NQApFmC26EwAOH8WgZl5MYYYxFfc+NcPb1dKGj7Sk"
crossorigin="anonymous">
```

Js:

```
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js"
integrity="sha384-Q6E9RHvbIyZFJoft+2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo"
crossorigin="anonymous"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/js/bootstrap.min.js"
integrity="sha384-OgVRvuATP1z7JjHLkuOU7Xw704+h835Lr+6QL9UvYjZE3Ipu6Tp75j7Bh/kR0JKI"
crossorigin="anonymous"></script>
```

Why javascript links?? : why because JS allows you to perform interactivity to your css elements.

Or else you can copy strater template code...

To download bootstrap

Link : <https://getbootstrap.com/docs/4.5/getting-started/download/>

Note: always use CDN links instead of downloading locally.

Layout:

1) Container: container is used to set the content's margin. It contains row elements and the row elements are container of columns. This is known as the grid system.

Bootstrap comes with different containers:

- 1) Container
- 2) Container-fluid
- 3) Container -{brakepoint}

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

1) **Container:** which sets a **max-width** at each responsive breakpoint

Min : 540px , max : 1140px

2) **Container-fluid:** which is width : 100% at all breakpoints

3) **Container - {break point} :** which is width : 100% until the specified breakpoint.

Resource : <https://getbootstrap.com/docs/4.5/layout/overview/>

Grid System:

Responsive: you call a website the responsive one, when it opens perfectly in any devices irrespective of the screen size.

In bootstrap every grid system by default have 12 columns

How it works

Bootstrap's grid system uses a series of containers, rows, and columns to layout and align content. It's built with flexbox and is fully responsive. Below is an example and an in-depth look at how the grid comes together.

XL - Extra Large , LG - Large , MD - Medium , SM - Small, XS - Extra Small (default size considering in bootstrap)

One of three columns

One of three columns

One of three columns

```
<div class="container">
  <div class="row">
    <div class="col-sm">
      One of three columns
    </div>
    <div class="col-sm">
      One of three columns
    </div>
    <div class="col-sm">
      One of three columns
    </div>
  </div>
</div>
```

Copy

Class ="col-sm" means until you reach 576px the column will be still the same.

Class ="col-md" means until you reach 768px the column will be still the same.

Class ="col-lg" means until you reach 992px the column will be still the same.

Class ="col-xl" means until you reach 1200px the column will be still the same.

In a grid layout, content must be placed within columns and only columns may be immediate children of rows.

Column classes indicate the number of columns you'd like to use out of the possible 12 per row. So, if you want three equal-width columns across, you can use `.col-4`.

Grid Options:

	Extra small <576px	Small ≥576px	Medium ≥768px	Large ≥992px	Extra large ≥1200px
Max container width	None (auto)	540px	720px	960px	1140px
Class prefix	<code>.col-</code>	<code>.col-sm-</code>	<code>.col-md-</code>	<code>.col-lg-</code>	<code>.col-xl-</code>
# of columns	12				
Gutter width	30px (15px on each side of a column)				
Nestable	Yes				
Column ordering	Yes				

- Gutter width means padding
- Nestable : having grid with in the grid

Equal Width :

1 of 2	2 of 2	
1 of 3	2 of 3	3 of 3

```
<div class="container">
  <div class="row">
    <div class="col">
      1 of 2
    </div>
    <div class="col">
      2 of 2
    </div>
  </div>
  <div class="row">
    <div class="col">
      1 of 3
    </div>
    <div class="col">
      2 of 3
    </div>
    <div class="col">
      3 of 3
    </div>
  </div>
</div>
```

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If you want have a fixed column structure irrespective of any size simply put `class="col"`

Equal-width multi-line

Create equal-width columns that span multiple lines by inserting a **.w-100** where you want the columns to break to a new line. Make the breaks responsive by mixing **.w-100** with some [responsive display utilities](#).

col	col
col	col

```
<div class="container">
  <div class="row">
    <div class="col">col</div>
    <div class="col">col</div>
    <div class="w-100"></div>
    <div class="col">col</div>
    <div class="col">col</div>
  </div>
</div>
```

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Setting one column width

Auto-layout for flexbox grid columns also means you can set the width of one column and have the sibling columns automatically resize around it. You may use predefined grid classes (as shown below), grid mixins, or inline widths. Note that the other columns will resize no matter the width of the center column.

1 of 3	2 of 3 (wider)	3 of 3
1 of 3	2 of 3 (wider)	3 of 3

```
<div class="container">
  <div class="row">
    <div class="col">
      1 of 3
    </div>
    <div class="col-6">
      2 of 3 (wider)
    </div>
    <div class="col">
      3 of 3
    </div>
  </div>
  <div class="row">
    <div class="col">
      1 of 3
    </div>
    <div class="col-5">
      2 of 3 (wider)
    </div>
    <div class="col">
      3 of 3
    </div>
  </div>
</div>
```

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If you are mentioning one column to grab the number of columns it will automatically decide how much column each should contain.

Ex: there are 12 columns so if one column has all 6 columns that particular column itself then equally distribute for other columns.

Variable width content

Use **col-{breakpoint}-auto** classes to size columns based on the natural width of their content.

1 of 3	Variable width content	3 of 3
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1 of 3	Variable width content	3 of 3
--------	------------------------	--------

```
<div class="container">
  <div class="row justify-content-md-center">
    <div class="col col-lg-2">
      1 of 3
    </div>
    <div class="col-md-auto">
      Variable width content
    </div>
    <div class="col col-lg-2">
      3 of 3
    </div>
  </div>
  <div class="row">
    <div class="col">
      1 of 3
    </div>
    <div class="col-md-auto">
      Variable width content
    </div>
    <div class="col col-lg-2">
      3 of 3
    </div>
  </div>
</div>
```

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Note: after reaching particular size of class justify-content is available

Gutters :Gutters can be responsively adjusted by breakpoint-specific padding and negative margin utility classes.

Custom column padding

Custom column padding

```
<div class="container px-lg-5">
  <div class="row mx-lg-n5">
    <div class="col py-3 px-lg-5 border bg-light">Custom column padding</div>
    <div class="col py-3 px-lg-5 border bg-light">Custom column padding</div>
  </div>
</div>
```

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Note: py = padding top - bottom (each side same of column) , px- padding left - right (each side same of column)

Column wrapping:

If more than 12 columns are placed within a single row, each group of extra columns will, as one unit, wrap onto a new line.

.col-9

.col-4

Since $9 + 4 = 13 > 12$, this 4-column-wide div gets wrapped onto a new line as one contiguous unit.

.col-6

Subsequent columns continue along the new line.

```
<div class="container">
  <div class="row">
    <div class="col-9">.col-9</div>
    <div class="col-4">.col-4<br>Since 9 + 4 = 13 > 12, this 4-column-wide div gets wrapped onto a new line as one contiguous uni
    <div class="col-6">.col-6<br>Subsequent columns continue along the new line.</div>
  </div>
</div>
```

Copy

Resource : <https://getbootstrap.com/docs/4.5/layout/grid/>

Other resource: <https://hackerthemes.com/bootstrap-cheatsheet/>

Coding challenge:

https://docs.google.com/document/d/1uXzsnP_lgl7uwaDYmYBqVSi3TfxCbRO-IEdE4GLRwCA/edit?usp=sharing

Assignment :

https://docs.google.com/document/d/16tZawz2SukbW143y0bAmqYW6KB5JANk_4km6-doF9B8/edit?usp=sharing

Session - End

Thank you

