Instructor Notes:

Add instructor notes here.

Bootstrap
Bootstrap Basics

Capgemini

Instructor Notes:

Add instructor notes
here.

Lesson Objectives

> Bootstrap Grid System

> Bootstrap Basic components

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Instructor Notes:

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2.1: Bootstrap grid system
Grid System in Bootstrap

➢Grid systems are used for creating page layouts through a series of rows and columns to wrap the site content.

➢Primarily grids are about providing structure. For web designers a grid defines the horizontal and vertical guidelines for arranging content and enforcing margins.

➢Grids also define an intuitive structure for viewers because it's easy to follow a left to right or a right to left flow of content moving down the page.

➢The grid won't be visible with border like table, but it exists behind the scenes to provide order alignment and consistency.

➢Bootstrap includes a grid system amongst its features.

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2.1: Bootstrap grid system
Bootstrap grid system

➢Bootstrap includes a responsive, mobile first fluid grid system that appropriately scales up to 12 columns as the device or viewport size increases.

➢Every row in Bootstrap consists of 12 columns.

➢Rows must be placed within a *.container* class for proper alignment and padding.

➢Use rows to create horizontal groups of columns.

➢Content should be placed within columns, and only columns may be immediate children of rows.

➢Predefined grid classes like *.row* and .col-4 are available for quickly making grid layouts.

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Grid System in Bootstrap 4:
Bootstrap's grid system is built with **flexbox** and allows up to 12 columns across the page.(In general this means a move away from floats and more across bootstrap's components.)
It uses a series of containers, rows, and columns to layout and align content.

Instructor Notes:

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2.1: Bootstrap grid system
Bootstrap grid system – Contd...

➢Grid columns are created by specifying the number of twelve available columns you wish to span. For example, three equal columns would use three .col

➢Columns create gutters (gaps between column content) via padding. That padding is offset in rows for the first and last column via negative margin on .rows

➢**Grid has 5 sizes**

▪ **xl** : indicates that the extra large grid displaying. The grid stacks horizontally >= 1200px.

▪ **lg**: : indicates that the extra large grid displaying. The grid stacks horizontally >=992px

▪ **md** : indicates that the medium grid displaying. The grid stacks horizontally >=768px
   sm : indicates that the small grid displaying. The grid stacks horizontally >=576px

▪ No infix to specify extra small grid displaying(-xs is removed from classes). This is now by default and stacks horizontally addressing smaller devices at 576px and below .

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2.1: Bootstrap grid system
Grid Options

	Extra small devices (<576px)	Small devices (≥576px)	Medium devices (≥768px)	Large devices (≥992px)	Extra Large devices (≥1200px)
Grid behavior	Horizontal at all times	Collapsed to start, horizontal above breakpoints	Collapsed to start, horizontal above breakpoints	Collapsed to start, horizontal above breakpoints	Collapsed to start, horizontal above breakpoints
Max container width	None (auto)	540px	720px	960px	1140px
Class classes	.col-	.col-sm-	.col-md-	.col-lg-	.col-xl-
# of columns	12	12	12	12	12
Gutter width	30px (15px on each side of a column)	30px (15px on each side of a column)	30px (15px on each side of a column)	30px (15px on each side of a column)	30px (15px on each side of a column)
Nestable	Yes	Yes	Yes	Yes	Yes
Column ordering	Yes	Yes	Yes	Yes	Yes

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The slide shows new revamped grid structure(5 tier) details in Bootstrap 4.

Instructor Notes:

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2.1: Bootstrap grid system
Basic Grid Structure

```html
<div class = "container">
    <div class = "row">
        <div class = "col-*-*"></div>
        <div class = "col-*-*"></div>
    </div>

    <div class = "row">
        <div class = "col-*-*"></div>
        <div class = "col-*-*"></div>
        <div class = "col-*-*"></div>
    </div>

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

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Basic Grid Structure Bootstrap 4:
The first star (*) represents the responsiveness: sm, md, lg or xl, while the second star represents a number, which should add up to 12 for each row.

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2.1: Bootstrap grid system
Bootstrap grid sizes

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Demo

> GridSizes

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2.1: Bootstrap grid system
Bootstrap grid sizes – using Offset

Note: Offset will be added to the left.

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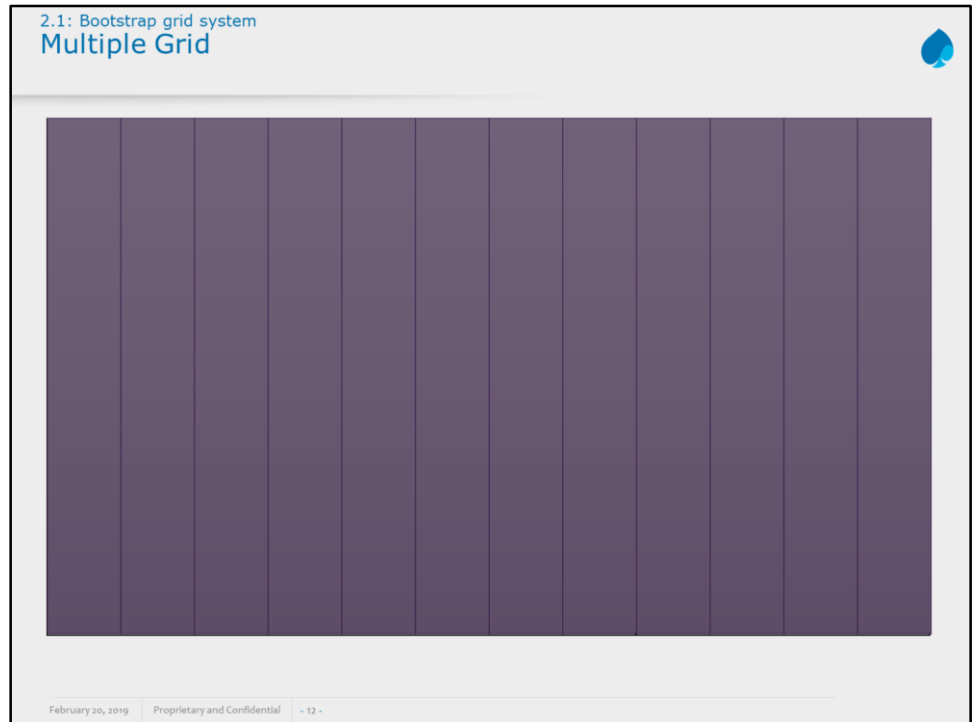**Instructor Notes:**

Add instructor notes
here.

Demo

➢GridSizes-Offset

Instructor Notes:

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2.1: Bootstrap grid system
Multiple Grid

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Demo

➢MultipleGrid
➢Layout

Instructor Notes:

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here.

2.2: Bootstrap Basic Components
Helper Classes & Responsive Utilities

➤Close Icon ₓ: It is used to dismiss models and alerts

- `<button type="button" class="close" aria-hidden="true">×</button>`

- Dropdown toggles no longer require an explicit `<span class="caret"></span>`; this is now provided automatically via CSS's ::after on .dropdown-toggle.

➤Quick floats : To float an element left or right with a class

➤Added .float-{sm,md,lg,xl}-{left,right,none} classes for responsive floats and removed .pull-left and .pull-right since they're redundant to .float-left and .float-right.

➤ Showing and hiding content

- Made display utilities responsive (e.g., .d-none and d-{sm,md,lg,xl}-none).

- Dropped the bulk of .hidden-* utilities for new display utilities. For example, instead of .hidden-sm-up, use .d-sm-none.

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Utilities: Bootstrap 4 is a major rewrite of the entire project. Most of the existing classes are rewritten to match up with the new flexbox support.

2.2: Bootstrap Basics
Helper Classes & Responsive Utilities

➢Work with Images   : We can apply simple styles to images like rounded corners, circle images & padding with gray border which fits all sizes

- `<img src="images/image.jpg" alt="Image" class="rounded"/>`
- `<img src="images/image.jpg" alt="Image" class="rounded-circle"/>`
- `<img src="images/image.jpg" alt="Image" class="img-thumbnail"/>`
- `<img src="images/image.jpg" alt="Image" class="img-fluid"/>`

➢Center content blocks : To set an element to center

- `<div class=" mx-auto" style="width:150px;">Centered-Content</div>`

➢Responsive utilities : It is used for showing and hiding content by device via media query combined with extra large, large, medium, small & extra small devices

- Use class .d-block and .d-{sm,md,lg,xl}-block to se visibility as per breakpoints.

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Instructor Notes:

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Demo

➢ HelperClasses-ResponsiveUtilities

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2.2: Bootstrap Basics
Working with Buttons

> We can use <a>, <button> or <input type="button"/> with 'btn' class to create a bootstrap button.

- Link Button

- <button class="btn">Button</button>

<!-- recommended for browser consistency -->

- <input type="button" class="btn" value="button"/>

| Link Button | Button | button |

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Instructor Notes:

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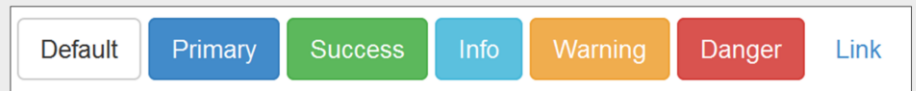here.

2.2: Bootstrap Basics
Working with Buttons

➤Bootstrap provides following options to apply styles to the button

- <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>

| Default | Primary | Success | Info | Warning | Danger | Link |

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Instructor Notes:

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2.2: Bootstrap Basics
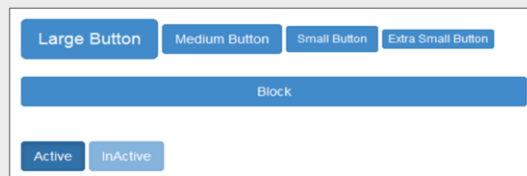## Working with Buttons

➢Button has following sizes and states

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

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

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

- `<button class="btn btn-primary btn-xs">Extra Small Button</button>`

- `<button class="btn btn-primary btn-block">Block</button>`

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

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

Large Button	Medium Button	Small Button	Extra Small Button

Block

Active	InActive

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Instructor Notes:

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here.

Demo

> Buttons

Instructor Notes:

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here.

2.2: Bootstrap Basics
Icon Font

➢ Until version 3 Bootstrap was having support for Glyphicons (a library of

monochromatic icons and symbols).

➢ Bootstrap 4 has dropped the support for Glyphicons icon font. If you need

icons, some options are:
- the upstream version of Glyphicons
- Octicons
- Font Awesome

- Font Awesom is most popular icon set and toolkit. You can easily download,
  configure the relative path with project and start using them.

```
<div>
<span class="fas fa-search"></span>          Q
      <button class="btn btn-primary">
      <span class="fas fa-sync"/> Refresh
      </button>
</div>                                    C  Refresh
```

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Using Web Fonts with CSS
Download font awesome package. Unzip the downloaded file and expand to see the structure.
The /css/all.css file contains the core styling plus all of the icon styles that you'll need when using Font Awesome. The /webfonts folder contains all of the typeface files that the above CSS references and depends on.
Copy the entire /webfonts folder and the /css/all.css into your project's static assets directory (or where ever you prefer to keep front end assets or vendor stuff).
Add a reference to the copied /css/all.css file into the <head> of each template or page that you want to use Font Awesome on.(Please refer the demo)

)

Demo

➢ FontAwesom

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here.

2.2: Bootstrap Basics
List

> Bootstrap provides following options to apply styles to the List

- Use the class *.list-unstyled* to remove numbering / bullet in the <ol> or <ul> element

- Use the class *.list-inline* to <ul> create single list then use class *.list-inline-item* to place the items.

- To create a list group use the class *.list-group* to <ul> and *.list-group-item* element

- To add a badge component to any list group item add the ** with in the <li> element with as per required positioning.(place it on either left or right side of the element)

> Use the .badge-pill modifier class to make badges more rounded (with a larger border-radius and additional horizontal padding).

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Light - .badge-light
modifier class helps to understand context of use. Otherwise badges may
seem like
                                    random additional words or numbers at the
end of a sentence, link, or button

Instructor Notes:

2.2: Bootstrap Basics
List

- We can add custom content to the list group using the following code snippet

```
<div class='list-group'><a href='#' class='list-group-item active'>
<h4 class='list-group-item-heading'>IGATE Corporate University</h4>
<p class='list-group-item-text'/>IGATE Training Division</p></a></div>
```

IGATE Corporate University
IGATE Training Division

Add instructor notes
here.

Demo

➢List

Instructor Notes:

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2.2: Bootstrap Basics
Tables

➢Bootstrap provides a clean layout for building tables. Following classes can be used to apply styles over the table.

- **table** : To create a basic Bootstrap style table which takes 100% of the width of its container, and it also adds in some horizontal dividers.

- **table-striped** : Provides a striping effect for the alternate rows in a table.

- **table-bordered** : Provide a border to the table

- **table-hover :** To add a slight hover effect as the mouse moves over a table row.

- **table-sm** : It removes most of the cell padding and make the table a little more streamlined.

- **table-responsive :** It makes the table scroll horizontally to view the contents in small devices

➢Contextual classes : table-active, table-success, table-warning and table-danger is used to apply background color for the table rows or individual cells.

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here.

Demo

➢Tables

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2.2: Bootstrap Basics
Forms

> Bootstrap 4 provides 2 types of form layouts

- Stacked (full-width) form

- Inline Form

> Vertical Form

- Add a role form to the parent <form> element

- Add the class *.form-control* to form elements and wrap labels and controls in
  a <div> with class *.form-group*

> Inline Form

- Add the class *.form-inline* to the <form> elements

- Add the class *.form-control* to form elements and wrap labels and form
  elements in a <div> with class *.form-group*

- Add the class *.sr-only* to hide the labels of the inline forms

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.form-horizontal class has been dropped in Bootstrap 4. You can use
Bootstrap's grid classes to create horizontal forms. Just specify how many
columns each element should span. Specifically, add a .row class to the .form-
group and a .col-*-* or .col-* class for each column.
You should also add Bootstrap's .col-form-label class to the <label> element in
order to vertically center the label in relation to textual input elements.

Instructor Notes:

Add instructor notes
here.

2.2: Bootstrap Basics
Forms

> Horizontal form

- .form-horizontal class has been dropped in Bootstrap 4.

- You can use Bootstrap's grid classes to create horizontal forms. Just specify how many columns each element should span. Specifically, add a .row class to the .form-group and a .col-*-* or .col-* class for each column.

- You should also add Bootstrap's .col-form-label class to the <label> element in order to vertically center the label in relation to textual input elements.

> Validation States : Bootstrap includes validation styles for error, and success message. To use add the classes .is-valid and .is-invalid respectively.

> Help Text : Use *.form-text (previously known as .help-block in v3)*class to have block level help text for the form input controls.

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Associating help text with form controls
Help text should be explicitly associated with the form control it relates to using the aria-describedby attribute. This will ensure that assistive technologies – such as screen readers – will announce this help text when the user focuses or enters the control.
For example:
 <label for="inputPassword">Password</label> <input type="password" id="inputPassword" class="form-control" aria-describedby="passwordHelpBlock"> <p id="passwordHelpBlock" class="form-text text-muted"> Your password must be 8-20 characters long, contain letters and numbers, and must not contain spaces, special characters, or emoji. </p>

Instructor Notes:

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here.

Demo

➢Forms

Instructor Notes:

Add instructor notes here.

2.2: Bootstrap Basics
Typography

➢Using typography feature of Bootstrap we can create headings, paragraphs, lists and other inline elements.

- All html headings(h1 to h6) are styled in bootstrap.

- By adding *.lead* class to the paragraph, we can have a larger font size, lighter weight, and a taller line height.

- **<em>** tag emphasizes a text in italics and **<strong>** tag makes the text bold

- **<small>** tag sets text at 85% the size of the parent

- **<abbr>** styles the element with a light border along the bottom and reveals the full text on hover

- **<address>** styles the contact information on web page. We need to use line breaks to break the lines because <address> default to display:block

- *text-left, text-center, text-right, text-muted, text-primary, text-success, text-info,text-warning* and *text-danger* class used to apply the styles to the text

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Instructor Notes:

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Demo

➢Typography

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Summary

➢Bootstrap includes a responsive, mobile first fluid grid system that appropriately scales up to 12 columns as the device or viewport size increases.

➢Bootstrap provides 2 form layouts Vertical Form (default), Inline Form. Horizontal Form can be created by using grid system.

➢Bootstrap provides a clean layout for building tables

➢Using typography feature of Bootstrap we can create headings, paragraphs, lists and other inline elements.

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