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Day 5. Bootstrap

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Bootstrap - Topics Overview

- BS Get Started
- BS Grid Basic
- BS Tables
- BS Images
- BS Buttons
- BS Button Groups
- BS Pagination
- BS Forms
- BS Inputs
- BS Inputs 2
- BS Input Sizing

BS Get Started

- What is Bootstrap?
  - Bootstrap is a free front-end framework for faster and easier web development
  - Bootstrap 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
- **What is Responsive Web Design?**
  - Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.
- Bootstrap was developed by Mark Otto and Jacob Thornton at Twitter, and released as an open source product in August 2011 on GitHub.
  - **In June 2014 Bootstrap was the No.1 project on GitHub!**
-

BS Get Started- 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 3, mobile-first styles are part of the core framework

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

Where to Get Bootstrap?

There are two ways to start using Bootstrap on your own web site. You can:

- Download Bootstrap from - go to getbootstrap.com, and follow the instructions there.
- Include Bootstrap from a CDN

```html
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet"href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">

<!-- jQuery library -->
<scriptsrc="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>

<!-- Latest compiled JavaScript -->
<scriptsrc="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
```

BS Get Started- Create First Web Page With Bootstrap

1. Add the HTML5 doctype

- Bootstrap uses HTML elements and CSS properties that require the HTML5 doctype.
- Always 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">
```

2. Bootstrap 3 is mobile-first

- Bootstrap 3 is designed to be responsive to mobile devices. Mobile-first styles are part of the core framework.
- To ensure proper rendering and touch zooming, 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.

BS Grid Basic

- Bootstrap's grid system allows up to 12 columns across the page.

- If you do not want to use all 12 columns individually, you can group the columns together to create wider columns:

Grid Classes

The Bootstrap grid system has four classes:

- **xs** (for phones - screens less than 768px wide)
- **sm** (for tablets - screens equal to or greater than 768px wide)
- **md** (for small laptops - screens equal to or greater than 992px wide)
- **lg** (for laptops and desktops - screens equal to or greater than 1200px wide)

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

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											

Basic Structure of a Bootstrap Grid

- First; create a row (<div class="row">). Then, add the desired number of columns (tags with appropriate .col-*-* classes). Note that numbers in .col-*-* should always add up to 12 for each row.

```html
<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>
```

BS Tables

- A basic Bootstrap table has a light padding and only horizontal dividers.The **.table** class adds basic styling to a table:

Firstname	Lastname	Email
Smita	Kumar	smitakumar@synergetics-india.com
Meenal	Uphale	meenal@synergetics-india.com
Amit	Mahadik	amit@synergetics-india.com

- **Striped Rows**
  - The **.table-striped** class adds zebra-stripes to a table: ***<table class="table table-striped">***
- **Bordered Table**
  - The **.table-bordered** class adds borders on all sides of the table and cells
- **Hover Rows**
  - The **.table-hover** class adds a hover effect (grey background color) on table rows.
- **Condensed Table**
  - The **.table-condensed** class makes a table more compact by cutting cell padding in half.

- **Contextual Classes**
  - Contextual classes can be used to color table rows (<tr>) or table cells (<td>)

Class	Description
.active	Applies the hover color to the table row or table cell
.success	Indicates a successful or positive action
.info	Indicates a neutral informative change or action
.warning	Indicates a warning that might need attention
.danger	Indicates a dangerous or potentially negative action

- **Responsive Tables**
  - The .table-responsive class creates a responsive table. The table will then scroll horizontally on small devices (under 768px). When viewing on anything larger than 768px wide, there is no difference.

BS Button

- Bootstrap provides different styles of buttons.
  - .btn
  - .btn-default
  - .btn-primary
  - .btn-success
  - .btn-info
  - .btn-warning
  - .btn-danger
  - .btn-link
  - The button classes can be used on an <a>, <button>, or <input> element.

BS Button

- Bootstrap provides four button sizes:
  - .btn-lg
  - .btn-md
  - .btn-sm
  - .btn-xs
- Block Level Buttons
  - A block level button spans the entire width of the parent element.
  - Add class .btn-block to create a block level button.
- Active/Disabled Buttons
  - A button can be set to an active (appear pressed) or a disabled (unclickable) state.
  - The class .active makes a button appear pressed, and the class .disabled makes a button unclickable.

BS Button-Groups

- Bootstrap allows you to group a series of buttons together (on a single line) in a button group.
  - Use a <div> element with class .btn-group to create a button group.
  - **Tip**: Instead of applying button sizes to every button in a group, use class .btn-group-lg|sm|xs to size all buttons in the group.
- **Vertical Button Groups**
  - Bootstrap also supports vertical button groups.
  - Use the class .btn-group-vertical to create a vertical button group.
- **Justified Button Groups**
  - To span the entire width of the screen, use the .btn-group-justified class
- **Nesting Button Groups & Dropdown Menus**
  - Nest button groups to create dropdown menus.
- **Split Button Dropdowns**

Note: *check out the example in notes sections*

BS Pagination

- **Basic Pagination**
  - If you have a web site with lots of pages, you may wish to add some sort of pagination to each page.
  - To create a basic pagination, add the .pagination class to an <ul> element.
- **Active State**
  - The active state shows what is the current page.
  - Add class .active to let the user know which page he/she is on.
- **Disabled State**
  - A disabled link cannot be clicked.
  - Add class .disabled if a link for some reason is disabled.
- **Pagination Sizing**
  - Pagination blocks can also be sized to a larger size or a smaller size.
  - Add class .pagination-lg for larger blocks or .pagination-sm for smaller blocks.
- **Breadcrumbs**
  - Another form for pagination, is breadcrumbs.
  - The .breadcrumb class indicates the current page's location within a navigational hierarchy.

BS Forms

- Bootstrap's Default Settings
  - Form controls automatically receive some global styling with Bootstrap:
  - All textual <input>, <textarea>, and <select> elements with class .form-control have a width of 100%.

- Bootstrap provides three types of form layouts:
  - Vertical form (this is default)
  - Horizontal form
  - Inline form

- Standard rules for all three form layouts:
  - Wrap labels and form controls in <div class="form-group"> (needed for optimum spacing)
  - Add class .form-control to all textual <input>, <textarea>, and <select> elements
  - Checout the example in notes section to creates a vertical form with two input fields, one checkbox, and a submit button
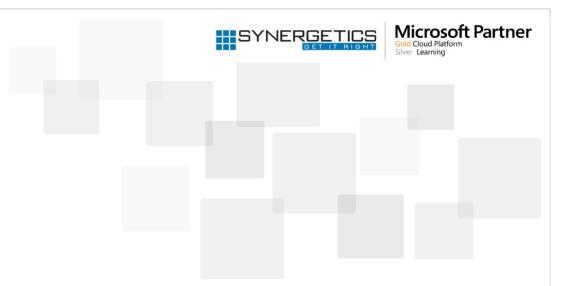
- Bootstrap Inline Form
    - In an inline form, all of the elements are inline, left-aligned, and the labels are alongside.
    - **Note: This only applies to forms within viewports that are at least 768px wide!**
    - Additional rule for an inline form:
    - Add class .form-inline to the <form> element

- Bootstrap Horizontal Form
    - A horizontal form means that the labels are aligned next to the input field (horizontal) on large and medium screens. On small screens (767px and below), it will transform to a vertical form (labels are placed on top of each input).
    - Additional rules for a horizontal form:
        - Add class .form-horizontal to the <form> element
        - Add class .control-label to all <label> elements
    - Tip: Use Bootstrap's predefined grid classes to align labels and groups of form controls in a horizontal layout.
    - The following example creates a horizontal form with two input fields, one checkbox, and one submit button.
    - Example : <form class="form-horizontal" action="">

BS Inputs

Bootstrap supports the following form controls:

- input
- textarea
- checkbox
- radio
- select

- Bootstrap supports all the HTML5 input types: text, password, datetime, datetime-local, date, month, time, week, number, email, url, search, tel, and color.
  - **Note:** Inputs will NOT be fully styled if their type is not properly declared!

- Bootstrap Textarea

- Bootstrap Checkboxes -Checkboxes are used if you want the user to select any number of options from a list of preset options.

- Bootstrap Radio Buttons-Radio buttons are used if you want to limit the user to just one selection from a list of preset options.

- Bootstrap Select List-Select lists are used if you want to allow the user to pick from multiple options.

- Check out the example in notes section.

Bootstrap Form Inputs 2 (more)

- ## Static Control
  - If you need to insert **plain text** next to a form label within a horizontal form, use the .form-control-static class on a <p> element

- ## Bootstrap Input Groups
  - The .input-group class is a container to enhance an input by adding an icon, text or a button in front or behind it as a "help text".
  - The .input-group-addon class attaches an icon or help text next to the input field.
  - The .input-group-btn attaches a button next to an input. This is often used together with a search bar

Bootstrap Form Inputs 2 (more)

- **Bootstrap Form Control States**
    - **INPUT FOCUS** - The outline of the input is removed and a box-shadow is applied on focus
    - **DISABLED INPUTS** - Add a disabled attribute to disable an input field
    - **DISABLED FIELDSETS** - Add a disabled attribute to a fieldset to disable all controls within
    - **READONLY INPUTS** - Add a readonly attribute to an input to prevent user input
    - **VALIDATION STATES** - Bootstrap includes validation styles for error, warning, and success messages. To use, add .has-warning, .has-error, or .has-success to the parent element
    - **ICONS** - You can add feedback icons with the .has-feedback class and an icon
    - **HIDDEN LABELS** - Add a .sr-only class on non-visible labels

- form control states in an **Inline form**

- <form class="form-inline">

Bootstrap Input Sizing

Input Sizing in Forms

- Set the heights of input elements using classes like .input-lg and .input-sm.
- Set the widths of elements using grid column classes like .col-lg-*and .col-sm-*.
- You can quickly size labels and form controls within a **Horizontal form** by adding .form-group-* to the <div class="form-group"> element.
- You can also quickly size all inputs and other elements inside an .input-groupwith the .input-group-sm or .input-group-lg classes

Column Sizing

- The following examples shows input elements with different widths using different .col-xs-* classes

Help Text

- Use the .help-block class to add a block level help text in forms
- Check out the example in notes section

Bootstrap Carousel Plugin

- The Carousel plugin is a component for cycling through elements, like a carousel (slideshow).
  - **Tip:** Plugins can be included individually (using Bootstrap's individual "carousel.js" file), or all at once (using "bootstrap.js" or "bootstrap.min.js").
- **Note:** Carousels are not supported properly in Internet Explorer 9 and earlier (because they use CSS3 transitions and animations to achieve the slide effect).
- Check out the example in notes section

Bootstrap Carousel Plugin-Example Explanation

The outermost <div>:

Carousels require the use of an id (in this case `id="myCarousel"`) for carousel controls to function properly.

The `class="carousel"` specifies that this `<div>` contains a carousel.

The `.slide` class adds a CSS transition and animation effect, which makes the items slide when showing a new item. Omit this class if you do not want this effect.

The `data-ride="carousel"` attribute tells Bootstrap to begin animating the carousel immediately when the page loads.

The "Indicators" part:

The indicators are the little dots at the bottom of each slide (which indicates how many slides there is in the carousel, and which slide the user are currently viewing).

The indicators are specified in an ordered list with class `.carousel-indicators`.

The `data-target` attribute points to the id of the carousel.

The `data-slide-to` attribute specifies which slide to go to, when clicking on the specific dot.

The "Wrapper for slides" part:

The slides are specified in a `<div>` with class `.carousel-inner`.

The content of each slide is defined in a `<div>` with class `.item`. This can be text or images.

The `.active` class needs to be added to one of the slides. Otherwise, the carousel will not be visible.

The "Left and right controls" part:

This code adds "left" and "right" buttons that allows the user to go back and forth between the slides manually.

The `data-slide` attribute accepts the keywords `"prev"` or `"next"`, which alters the slide position relative to its current position.

Bootstrap Carousel Plugin-Add Captions to Slides

- Add `<div class="carousel-caption">` within each `<div class="item">` to create a caption for each slide.

- Check out the example in notes sections

Bootstrap Modal Plugin

- The Modal plugin is a dialog box/popup window that is displayed on top of the current page
- **Tip:** Plugins can be included individually (using Bootstrap's individual "modal.js" file), or all at once (using "bootstrap.js" or "bootstrap.min.js").
- The example in the notes section shows how to create a login(Sign-In) modal.

Modal Size

- Change the size of the modal by adding the .modal-sm class for small modals or .modal-lg class for large modals.

Example Explained

- **The "Trigger" part:**
  - To trigger the modal window, you need to use a button or a link.
  - Then include the two data-* attributes:
  - data-toggle="modal" opens the modal window
  - data-target="#myModal" points to the id of the modal

Example Explained

- **The "Modal" part:**
  - The parent <div> of the modal must have an ID that is the same as the value of the data-target attribute used to trigger the modal ("myModal").
  - The .modal class identifies the content of <div> as a modal and brings focus to it.
  - The .fade class adds a transition effect which fades the modal in and out. Remove this class if you do not want this effect.
  - The attribute role="dialog" improves accessibility for people using screen readers.
  - The .modal-dialog class sets the proper width and margin of the modal.

- **The "Modal content" part:**
  - The <div> with class="modal-content" styles the modal (border, background-color, etc.). Inside this <div>, add the modal's header, body, and footer.
  - The .modal-header class is used to define the style for the header of the modal. The <button> inside the header has a data-dismiss="modal"attribute which closes the modal if you click on it. The .close class styles the close button, and the .modal-title class styles the header with a proper line-height.
  - The .modal-body class is used to define the style for the body of the modal. Add any HTML markup here; paragraphs, images, videos, etc.
  - The .modal-footer class is used to define the style for the footer of the modal. Note that this area is right aligned by default.

Q & A

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Thank You

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