Bootstrap

Class and grid structure in Bootstrap

Bootstrap Grid System

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
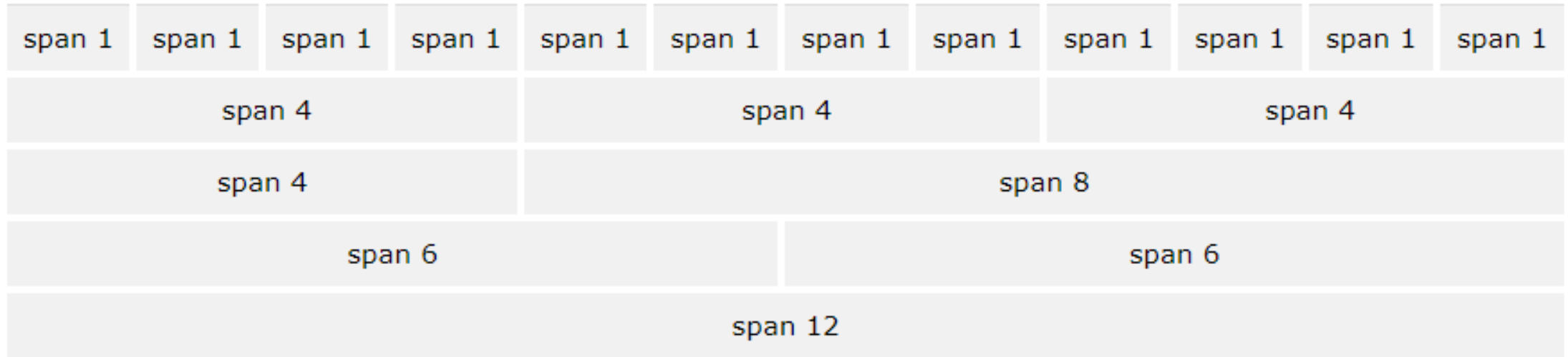
- Bootstrap's grid system allows up to 12 columns across the page.
- 12 columns can be used individually, or can be grouped together to create wider columns
- Bootstrap's grid system is responsive, and the columns will re-arrange automatically depending on the screen size

Grid Classes

The Bootstrap 3 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 Bootstrap 4 grid system has five 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

Basic Structure of a Bootstrap 4 Grid

```html
<!-- Control the column width, and how they should appear on different devices -->

<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>
```

- create a row (<div class="row">).

- Then, add the desired number of columns (tags with appropriate .col-*-* classes).

- 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.

```html
<!-- Or let Bootstrap automatically handle the layout -->
<div class="row">
   <div class="col"></div>
   <div class="col"></div>
   <div class="col"></div>
</div>
```

- Instead of adding a number to each col, let bootstrap handle the layout, to create equal width columns: two "col" elements = 50% width to each col. three cols = 33.33% width to each col. four cols = 25% width, etc.

- You can also use .col-sm|md|lg|xl to make the columns responsive

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Bootstrap 4 Default Settings

- Bootstrap 4 uses a default font-size of 16px, and its line-height is 1.5.
- The default font-family is "Helvetica Neue", Helvetica, Arial, sans-serif.
- In addition, all <p> elements have margin-top: 0 and margin-bottom: 1rem (16px by default).

<h1> - <h6>

Bootstrap 4 styles HTML headings (<h1> to <h6>) with a bolder font-weight and an increased font-size

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Display Headings

- Display headings are used to stand out more than normal headings (larger font-size and lighter font-weight), and there are four classes to choose from: .display-1, .display-2, .display-3, .display-4

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Bootstrap 4 Default Settings

<small>

In Bootstrap 4 the HTML <small> element is used to create a lighter, secondary text in any heading:

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<mark>

Bootstrap 4 will style the HTML <mark> element with a yellow background color and some padding:

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<abbr>

Bootstrap 4 will style the HTML <abbr> element with a dotted border bottom:

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<blockquote>

Add the .blockquote class to a <blockquote> when quoting blocks of content from another source:

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Bootstrap 4 Text Colors and background color

- Bootstrap 4 has some contextual classes that can be used to provide "meaning through colors".

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- 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:

- You can also add 50% opacity **Click me** xt with the .text-black-50 or .text-white-50 classes:

Background Colors

- The classes for background colors are: .bg-primary, .bg-success, .bg-info, .bg-warning, .bg-danger, .bg-secondary, .bg-dark and .bg-light.

- Note that background colors do not set the text color, so in some cases you'll want to use them together with a .text-* class.

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Bootstrap 4 Jumbotron and Images

- A jumbotron indicates a big grey box for calling extra attention to some special content or information.

- Full-width Jumbotron

- If you want a full-width jumbotron without rounded borders, add the .jumbotron-fluid class and a .container or .container-fluid inside of it:

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- Rounded Corners- The .rounded class adds rounded corners to an image

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

- Thumbnail- The .img-thumbnail class shapes the image to a thumbnail (bordered)

- Image alignment- Center an image by adding the utility classes .mx-auto (ma   Click me   -block (display:block) to the image

- .float-right and .float-left can be used to align the images respectively

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Bootstrap 4 Responsive Images

- Images come in all sizes. So do screens. Responsive images automatically adjust to fit the size of the screen.

- Create responsive images by adding an .img-fluid class to the <img> tag. The image will then scale nicely to the parent element.

- The .img-fluid class applies max-width: 100%; and height: auto; to the image:

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Bootstrap 4 Basic Tables

- A basic Bootstrap 4 table has a light padding and horizontal dividers.
- The .table class adds basic styling to a table [Click me]

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

- Striped Rows- The .table-striped class adds zebra-stripes to a table: [Click me]

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

Bootstrap 4 Basic Tables

- Bordered Table- The .table-bordered class adds borders on all sides of the table and cells:

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

- Hover Rows- The .table-hover class adds a hover effect (grey background color) on table rows:

- Black/Dark Table- The .table-dark class adds a black background to the table:

- Dark Striped Table-Combine .table-dark and .table-striped to create a ble:

Bootstrap 4 Basic Tables

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- Hoverable Dark Table- The .table-hover class adds a hover effect (grey background color) on table rows:

- Borderless Table- The .table-borderless class removes borders from the table:

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- Contextual Classes- Contextual classes can be used to color the whole table (<table>), the table rows (<tr>) or table cells (<td>).

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Bootstrap 4 Button Styles

- Bootstrap 4 provides different styles of buttons:
  1. Button elements
  2. Button outline
  3. Button sizes
     i. Large
     ii. Default
     iii. Small
  4. Block level button
     i. Block level buttons
     ii. Large block level buttons
     iii. Small block level buttons

Bootstrap 4 Button Styles

5. Button states
    i.   Primary button
    ii.   Active primary button
    iii. Disabled primary button
    iv.   Disabled link
6. Spinner buttons
    i.   Spinner border
    ii.   Spinner grow

-- spinner buttons are designed using two tag

      ❓ button tag with btn-primary class attribute

      ❓ span tag with spinner-border and spinner-grow class attribute

Note to students: try to explore spinner in detail.

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Bootstrap 4 Badges

- Badges are used to add additional information to any content.
- Use the .badge class together with a contextual class (like .badge-secondary) within <span> elements to create rectangular badges.
- Note that badges scale to match the size of the parent element (if any)
- Contextual Badges- Use any of the contextual classes (.badge-*) to change the color of a badge
- Pill Badges- Use the .badge-pill class to make the badges more round
- Badge inside an Element- An example of using a badge inside a button

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Bootstrap 4 Progress Bars

- Basic Progress Bar- A progress bar can be used to show a user how far along he/she is in a process.

- To create a default progress bar, add a .progress class to a container element and add the .progress-bar class to its child element.

- Use the CSS width property to set the width of the progress bar

- The height of the progress bar is 16px by default.

- Use the CSS height property to change it. Note that you must set the same height for the progress container and the progress bar

- Progress Bar Labels- Add text inside the progress bar to show the visible percentage

Bootstrap 4 Progress Bars

- Colored Progress Bars-By default, the progress bar is blue (primary). Use any of the Bootstrap 4 contextual background classes to its color

- Striped Progress Bars-Use the .progress-bar-striped class to add stripes to the progress bars

- Animated Progress Bar-Add the .progress-bar-animated class to animate the progress bar

- Multiple Progress Bars- Progress bars can also be stacked

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