Coding and Data Skills
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What's New in Bootstrap 4

Bootstrap 4 has been updated to use Flexbox. There are several new features and things to be aware of as you begin implementing it in projects.

Go to getbootstrap.com and download Bootstrap 4.

On the Getting Started page, you will find the Starter Template - https://getbootstrap.com/docs/4.0/getting-started/introduction/.

The Starter Template includes a link to the "slim" version of JQuery. If you have problems with certain features not working (for example, the Scroll to Anchor in the script I have here: http://webdesign.cindyroyal.net/files/custom.js), it's because the "slim" version has removed some ajax features and effects. Simply replace the JQuery script link at the bottom of your bootstrap pages with the minified version instead of the slim version. You can find links here: https://code.jquery.com/

```
<script
  src="https://code.jquery.com/jquery-3.3.1.min.js"
  integrity="sha256-FgpCb/KJQlLNfOu91ta32o/NMZxltwRo8QtmkMRdAu8="
  crossorigin="anonymous"></script>
```

The reason for this change is that there are CSS solutions for animations that were done with JQuery in the past. So, using the "slim" version allows you to have a lighter version of JQuery attached to your site, if you don't need the features of the regular "min" version.

Grid

Flexbox now allows you to create equal width columns without using numbers to create the 12-column grid. This means you can have any number of columns you need. The responsive breakpoints are used to determine when the layout will stack. Five grid breakpoints are available: extra small, small, medium, large, and extra large. https://getbootstrap.com/docs/4.1/layout/overview/#responsive-breakpoints.

For equal width columns, simply use the class names without a relative number.

```
<div class= "col-md "></div>
<div class= "col-md "></div>
<div class= "col-md "></div>
```

The above will create three columns of equal widths within the parent container. It will

break for stacking at the md level, which is 768px. Use col-sm for the new breakpoint at 576 px.

You can use col or col-4 (with a number) to not use breakpoints for stacking.

You can still use numbers with the col classes to create unequal widths. 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.

More information about Bootstrap grids at https://getbootstrap.com/docs/4.1/layout/grid/.

Display Class
Instead of having to create display styles (inline, none, etc), just use the d class.

<div id= "side " **class= "d-none">**

Images
For responsive images, now use img-fluid instead of img-responsive. You can use rounded and rounded-circle classes to achieve those effects on images.
  img-fluid
  rounded
  rounded-circle

Example:

Margin or Padding
You can now use m or p and a number as a class to implement margins or padding.
  mr – margin-right
  ml – margin-left
  mt – margin-top
  mb – margin-bottom
  pr – padding-right
  pl – padding-left
  pt – padding-top
  pb – padding-bottom

  mx-auto – this will accomplish margin auto left/right for centering.

Use relative numbers 1-5 to achieve spacing with margins or padding.

Example:
<div class="col-md mt-2">

Navbar

Navbars require a wrapping .navbar class with .navbar-expand{-sm|-md|-lg|-xl} to control responsive collapsing.

Use navbar-light for backgrounds with light colors (and dark text) and navbar-dark for backgrounds with dark colors (and light text). Then you can use bg-primary, bg-secondary, etc. to control the color. You can also style custom colors with CSS.

Navbar placement can be fixed-top, fixed-bottom or sticky-top (scrolls with the page until it reaches the top, then sticks).

Example:
<nav class="navbar navbar-expand-md navbar-dark sticky-top bg-primary">

Cards
A card is a flexible container in Bootstrap 4, replacing thumbnails. Use the following classes to create Cards on your site. You can style the width of the card with CSS.
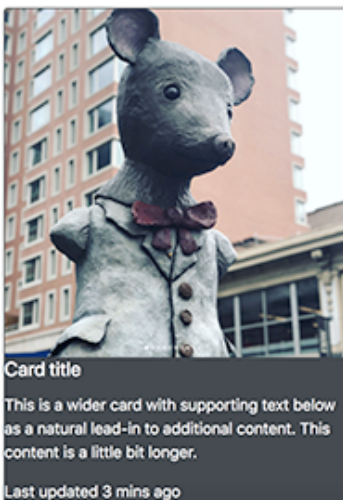 card
 card-body
 card-title
 card-text
 card-img (can add top or bottom for placement of image caps)

Example:


```
<div class="card">
  <img class="card-img-top" src="img/mouse.png" alt="My caption">
  <div class="card-body">
    <h5 class="card-title">Title</h5>
    <p class="card-text">Text for card.</p>
    <a href="#" class="btn btn-primary">Link</a>
  </div>
</div>
```

Wrap title and text in div with card-img-overlay class to overlay text on the image.

<div class="card-img-overlay">

You can use card-group to combine multiple cards in a flex layout.

<div class="card-group">

More on cards at https://getbootstrap.com/docs/4.0/components/card/.

Glyphicons
Bootstrap no longer includes glyphicons. You can include font awesome as a cdn link and then use their naming convention for icons. https://fontawesome.com/how-to-use/on-the-web/setup/getting-started?using=web-fonts-with-css.

These are just a few of the main changes in Bootstrap 4. Refer to the documentation for other changes and implementations. https://getbootstrap.com/docs/4.0/getting-started/introduction/.