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CES

Computer Engineering Society

BOOTSTRAP

WHAT IS TWITTER BOOTSTRAP ?

BOOTSTRAP IS A SLEEK, INTUITIVE, AND POWERFUL, MOBILE FIRST FRONT-END FRAMEWORK FOR FASTER AND EASIER WEB DEVELOPMENT. IT USES HTML, CSS, AND JAVASCRIPT.
BOOTSTRAP WAS DEVELOPED BY *MARK OTTO* AND *JACOB THORNTON* AT *TWITTER*. IT WAS RELEASED AS AN OPEN SOURCE PRODUCT IN AUGUST 2011 ON GITHUB.

WHY USE BOOTSTRAP?

> MOBILE FIRST APPROACH

> EASY TO GET STARTED

>RESPONSIVE DESIGN

Bootstrap – Environment Setup

Download Bootstrap

You can download the latest version of Bootstrap from http://getbootstrap.com/.
And follow the instructions there.

Bootstrap CDN

If you don't want to download and host Bootstrap yourself, you can include it from a CDN (Content Delivery Network).
MaxCDN provides CDN support for Bootstrap's CSS and JavaScript. You must also include jQuery:

```
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/boots
trap.min.css">
<!-- jQuery library -->
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></scrip
t>
<!-- Latest compiled JavaScript -->
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></sc
ript>
```

Bootstrap Grid System

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, Bootstrap's grid system is responsive, and the columns will re-arrange automatically depending on the screen size.

Grid Classes

The Bootstrap grid system has four classes:

- `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)
- xs (for phones - screens less than 768px wide)

BASIC STRUCTURE OF A BOOTSTRAP GRID

THE FOLLOWING IS A BASIC STRUCTURE OF A BOOTSTRAP GRID:

```
<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>
```

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.

THREE EQUAL COLUMNS

```
<DIV CLASS="ROW">
  <DIV CLASS="COL-SM-4">.COL-SM-4</DIV>
  <DIV CLASS="COL-SM-4">.COL-SM-4</DIV>
  <DIV CLASS="COL-SM-4">.COL-SM-4</DIV>
</DIV>
```

BOOTSTRAP TEXT/TYPOGRAPHY

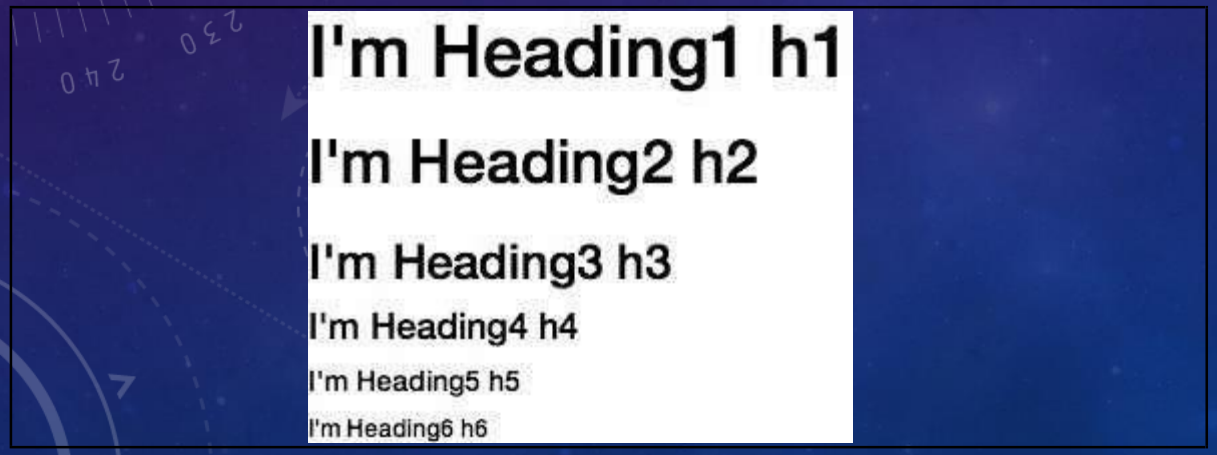
Bootstrap's Default Settings

Bootstrap's global default font-size is 14px, with a line-height of 1.428.
This is applied to the <body> element and all paragraphs (<p>).
In addition, all <p> elements have a bottom margin that equals half their computed line-height (10px by default).

Headings

ALL HTML HEADINGS (H1 TO H6) ARE STYLED IN BOOTSTRAP. AN EXAMPLE IS SHOWN BELOW:

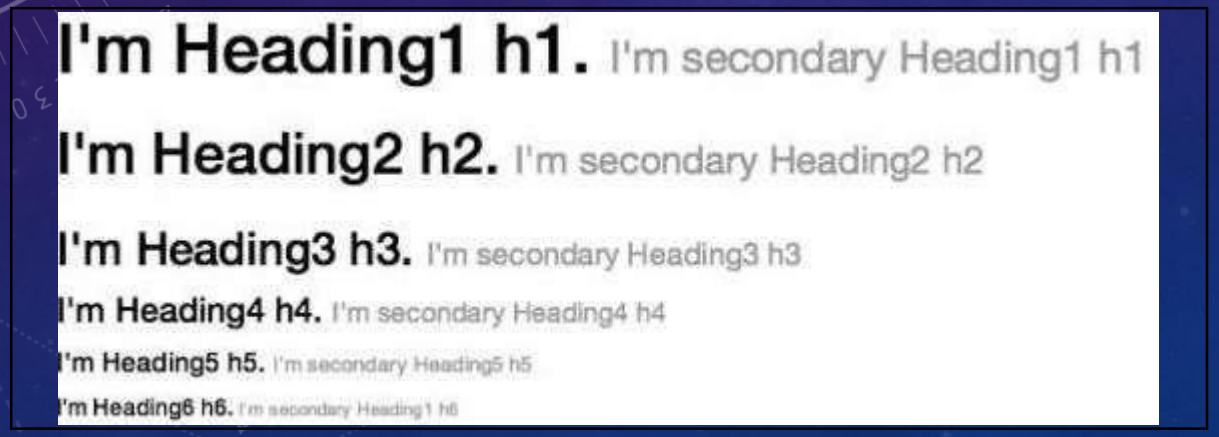
```
<H1>I'M HEADING1 H1</H1>
<H2>I'M HEADING2 H2</H2>
<H3>I'M HEADING3 H3</H3>
<H4>I'M HEADING4 H4</H4>
<H5>I'M HEADING5 H5</H5>
<H6>I'M HEADING6 H6</H6>
```



INLINE SUBHEADINGS

TO ADD AN INLINE SUBHEADING TO ANY OF THE HEADINGS, SIMPLY ADD <SMALL> AROUND ANY OF THE ELEMENTS OR ADD **.SMALL** CLASS AND YOU WILL GET SMALLER TEXT IN A LIGHTER COLOR AS SHOWN IN THE EXAMPLE BELOW:

```
<H1>I'M HEADING1 H1. <SMALL>I'M SECONDARY HEADING1 H1</SMALL></H1>
<H2>I'M HEADING2 H2. <SMALL>I'M SECONDARY HEADING2 H2</SMALL></H2>
<H3>I'M HEADING3 H3. <SMALL>I'M SECONDARY HEADING3 H3</SMALL></H3>
<H4>I'M HEADING4 H4. <SMALL>I'M SECONDARY HEADING4 H4</SMALL></H4>
<H5>I'M HEADING5 H5. <SMALL>I'M SECONDARY HEADING5 H5</SMALL></H5>
<H6>I'M HEADING6 H6. <SMALL>I'M SECONDARY HEADING1 H6</SMALL></H6>
```



BOOTSTRAP TABLES

Bootstrap Basic Table:

A basic Bootstrap table has a light padding and only horizontal dividers.

The `.table` class adds basic styling to a table:

Striped Rows

The `.table-striped` class adds zebra-stripes to a table:

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>`):

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:

Bootstrap Alerts

Alerts

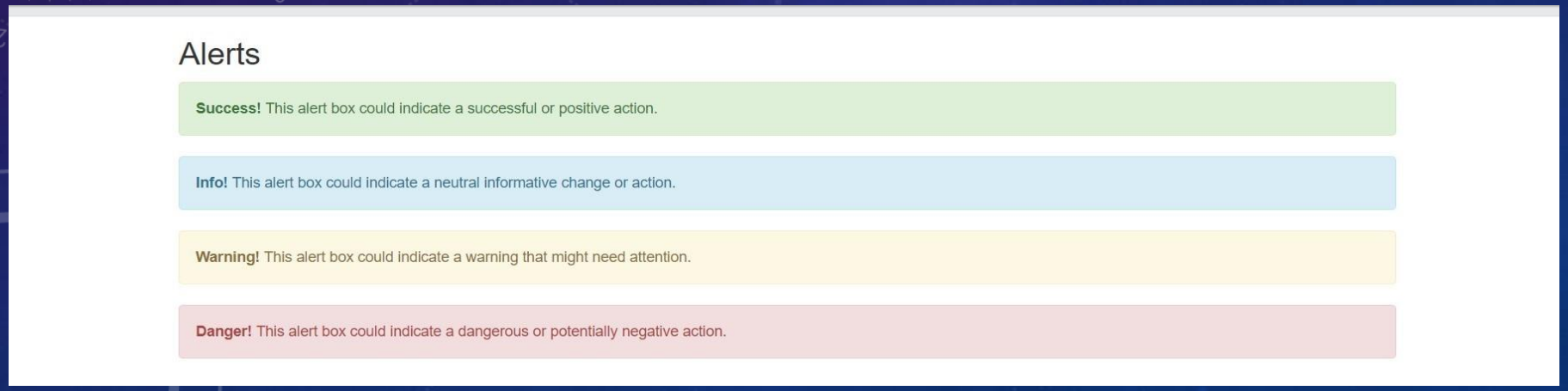
Bootstrap provides an easy way to create predefined alert messages:

```
<div class="alert alert-success">
  <strong>Success!</strong> Indicates a successful or positive action.
</div>

<div class="alert alert-info">
  <strong>Info!</strong> Indicates a neutral informative change or action.
</div>

<div class="alert alert-warning">
  <strong>Warning!</strong> Indicates a warning that might need attention.
</div>

<div class="alert alert-danger">
  <strong>Danger!</strong> Indicates a dangerous or potentially negative action.
</div>
```



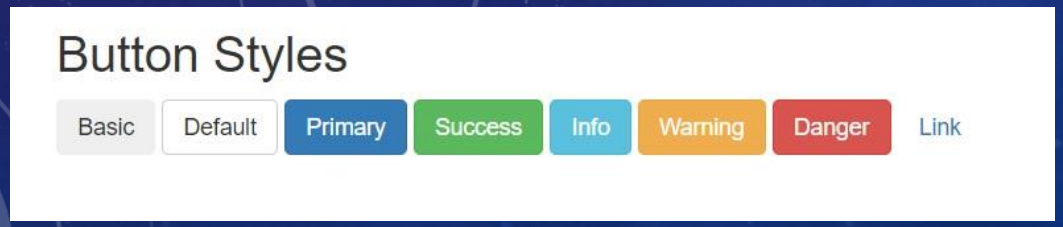
Bootstrap Buttons

Button Styles

Bootstrap provides different styles of buttons:

- .btn
- .btn-default
- .btn-primary
- .btn-success
- .btn-info
- .btn-warning
- .btn-danger
- .btn-link
- The following example shows the code for the different button styles:

```
<button type="button" class="btn">Basic</button>
<button type="button" class="btn btn-default">Default</button>
<button type="button" class="btn btn-primary">Primary</button>
<button type="button" class="btn btn-success">Success</button>
<button type="button" class="btn btn-info">Info</button>
<button type="button" class="btn btn-warning">Warning</button>
<button type="button" class="btn btn-danger">Danger</button>
<button type="button" class="btn btn-link">Link</button>
```



Button Sizes

Bootstrap provides four button sizes:
The classes that define the different sizes are:

- `.btn-lg`
- `.btn-sm`
- `.btn-xs`

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:

Bootstrap Button Groups

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:

```
<div class="container">
  <h2>Button Group</h2>
  <p>The .btn-group class creates a button group:</p>
  <div class="btn-group">
    <button type="button" class="btn btn-primary">Apple</button>
    <button type="button" class="btn btn-primary">Samsung</button>
    <button type="button" class="btn btn-primary">Sony</button>
  </div>
</div>
```

Bootstrap Navigation Bar

Navigation Bars

A navigation bar is a navigation header that is placed at the top of the page:

With Bootstrap, a navigation bar can extend or collapse, depending on the screen size.

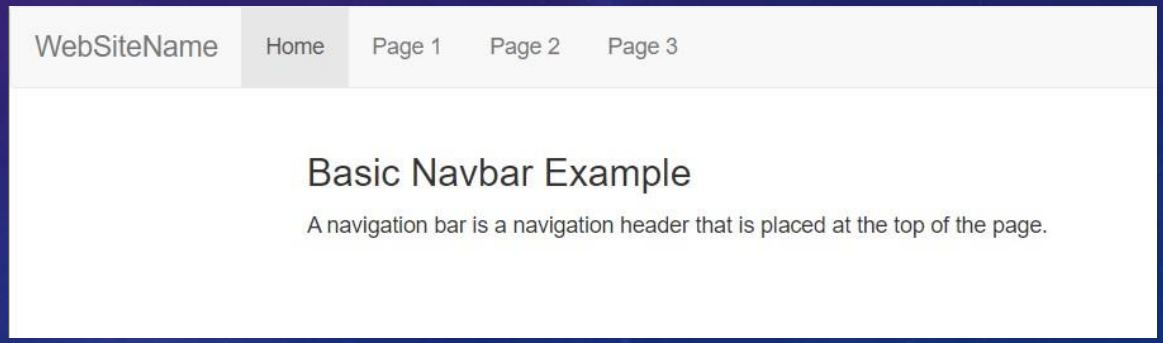
A standard navigation bar is created with `<nav class="navbar navbar-default">`.

The following example shows how to add a navigation bar to the top of the page:

Example-

```
<nav class="navbar navbar-default">
  <div class="container-fluid">
    <div class="navbar-header">
      <a class="navbar-brand" href="#">WebSiteName</a>
    </div>
    <ul class="nav navbar-nav">
      <li class="active"><a href="#">Home</a></li>
      <li><a href="#">Page 1</a></li>
      <li><a href="#">Page 2</a></li>
      <li><a href="#">Page 3</a></li>
    </ul>
  </div>
</nav>

<div class="container">
  <h3>Basic Navbar Example</h3>
  <p>A navigation bar is a navigation header that is placed at the top of the page.</p>
</div>
```



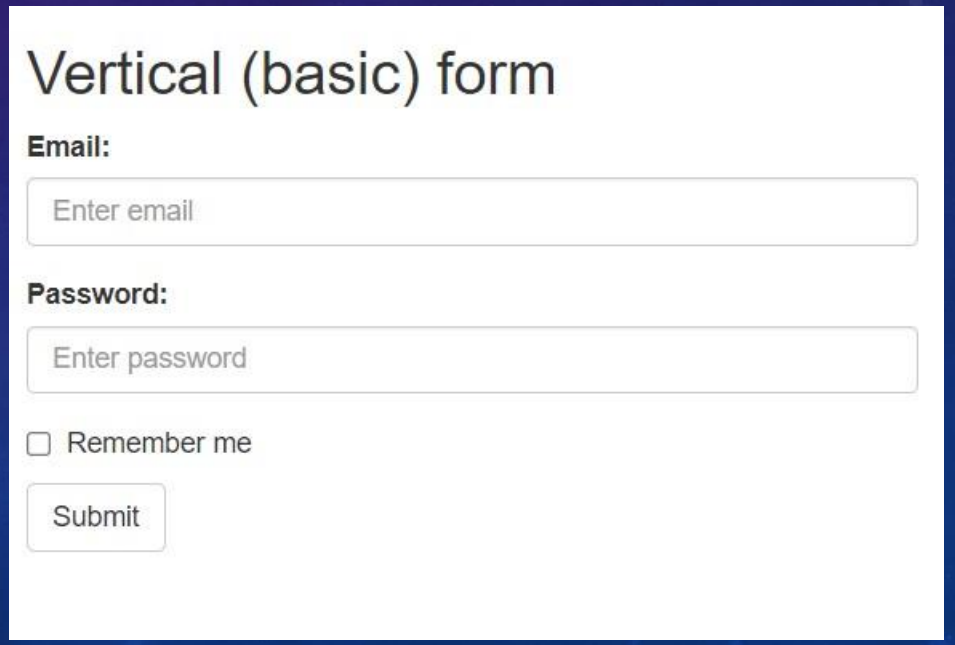
Bootstrap Forms

Bootstrap Form Layouts

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

```
<div class="container">
 <h2>Vertical (basic) form</h2>
 <form action="/action_page.php">
  <div class="form-group">
   <label for="email">Email:</label>
   <input type="email" class="form-control" id="email“
  placeholder="Enter email" name="email">
  </div>
  <div class="form-group">
   <label for="pwd">Password:</label>
   <input type="password" class="form-control" id="pwd“
    placeholder="Enter password" name="pwd">
  </div>
  <div class="checkbox">
   <label><input type="checkbox" name="remember"> Remember me</label>
  </div>
  <button type="submit" class="btn btn-default">Submit</button>
 </form>
</div>
```