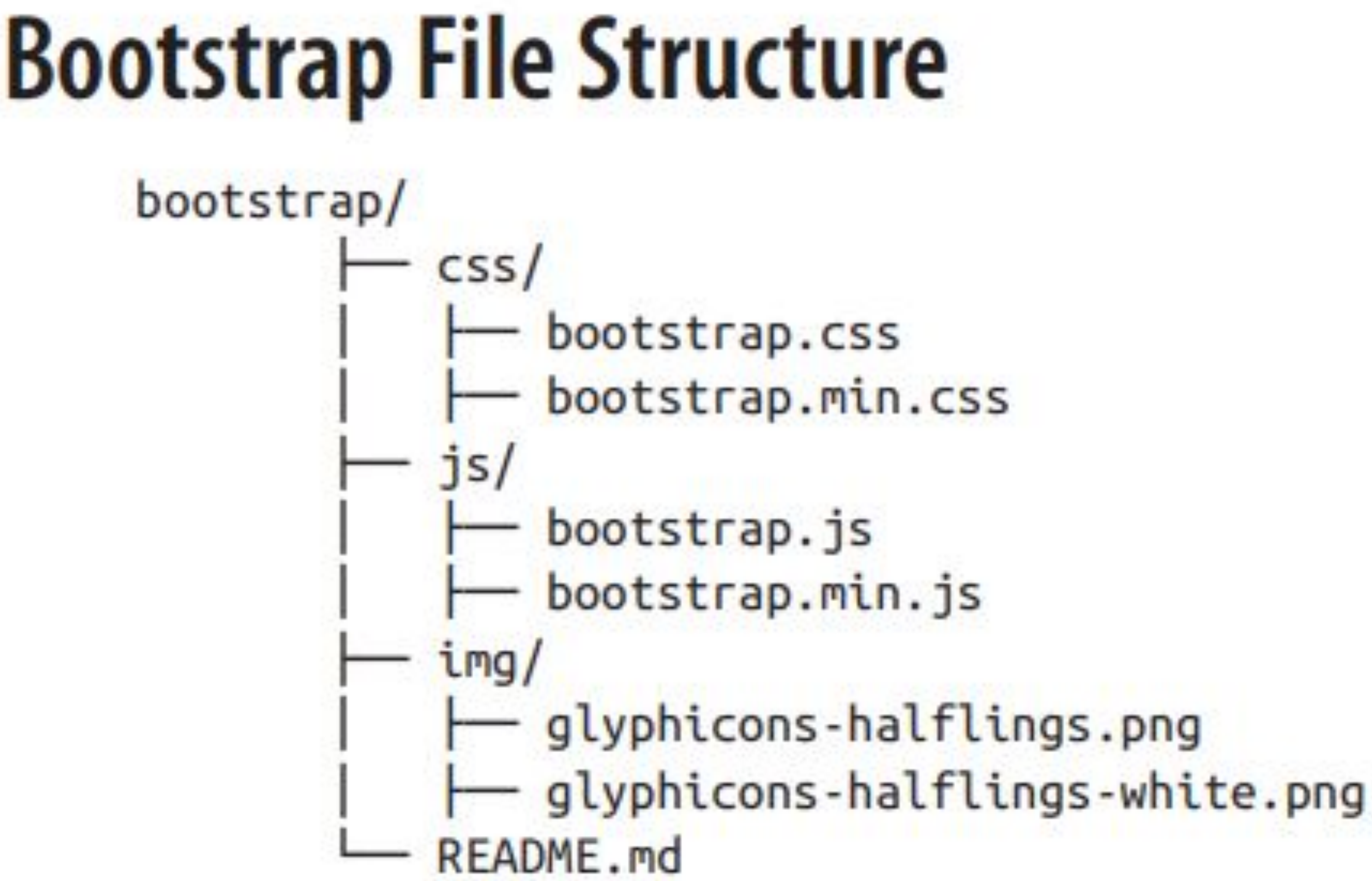
Bootstrap Fundamentals

- Bootstrap is an open source product from Mark Otto and Jacob Thornton
- In the earlier days of Twitter, engineers used almost any library they were familiar with to meet front-end requirements.
- Inconsistencies among the individual applications made it difficult to scale and maintain them.
- Bootstrap began as an answer to these challenges and quickly accelerated during Twitter’s first Hackweek.
- By the end of Hackweek, we had reached a stable version that engineers could use across the company

- Since Bootstrap launched in August 2011, it has taken off in popularity.
- It has evolved from being an entirely CSS-driven project to include a host of JavaScript plugins and icons that go hand in hand with forms and buttons.
- At its base, it allows for responsive web design and features a robust 12-column, 940px-wide grid.
- One of the highlights is the build tool on Bootstrap's website, where you can customize the build to suit your needs, choosing which CSS and JavaScript features you want to include on your site.
- All of this allows frontend web development to be catapulted forward, building on a stable foundation of forward-looking design and development.



Bootstrap File Structure

```
bootstrap/
        ├── css/
        │   ├── bootstrap.css
        │   ├── bootstrap.min.css
        ├── js/
        │   ├── bootstrap.js
        │   ├── bootstrap.min.js
        ├── img/
        │   ├── glyphicons-halflings.png
        │   ├── glyphicons-halflings-white.png
        └── README.md
```

Normally, a web project looks something like this:

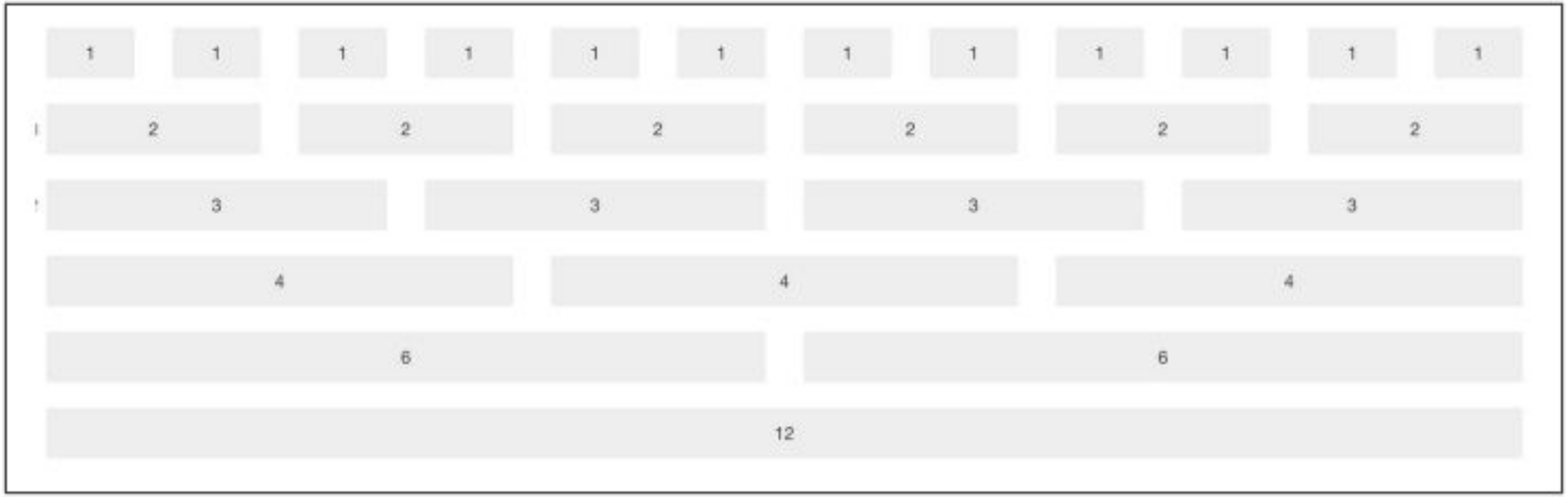
```
<!DOCTYPE html>
<html>
        <head>
                <title>Bootstrap 101 Template</title>
        </head>
        <body>
                <h1>Hello, world!</h1>
        </body>
</html>
```

With Bootstrap, we include the link to the CSS stylesheet and the JavaScript:

```
<!DOCTYPE html>
<html>
        <head>
                <title>Bootstrap 101 Template</title>
                <link href="css/bootstrap.min.css" rel="stylesheet">
        </head>
        <body>
                <h1>Hello, world!</h1>
                <script src="js/bootstrap.min.js"></script>
        </body>
</html>
```

Grid System

- The default Bootstrap grid system utilizes 12 columns, making for a 940px-wide container without responsive features enabled.
- With the responsive CSS file added, the grid adapts to be 724px or 1170px wide, depending on your viewport.
- Below 767px viewports, such as the ones on tablets and smaller devices, the columns become fluid and stack vertically.
- At the default width, each column is 60 pixels wide and offset 20 pixels to the left. An example of the 12 possible columns is in Figure 1-1.



1 1 1 1 1 1 1 1 1 1 1 1

2 2 2 2 2 2

3 3 3 3

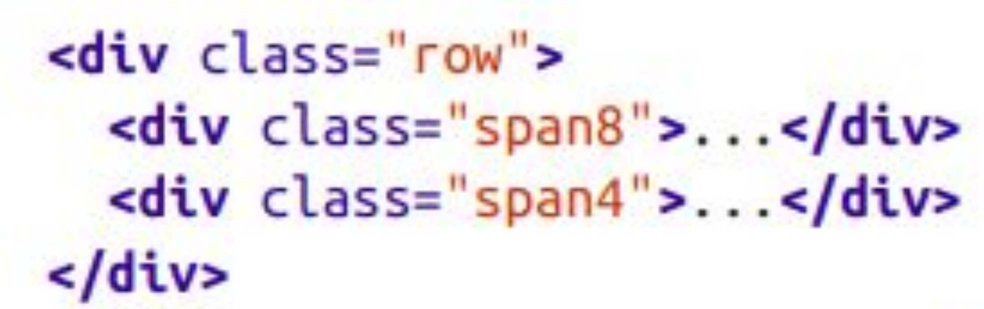
4 4 4

6 6

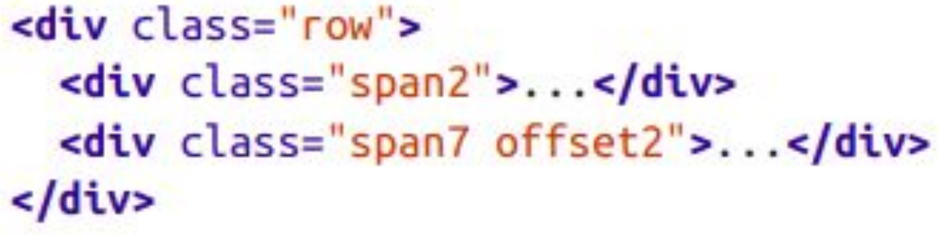
12

Figure 1-1. Default grid

- To create a simple layout, create a container with a that has a class of .row and add the appropriate amount of .span* columns.
- Since we have a 12-column grid, we just need the amount of .span* columns to equal 12.
- We could use a 3-6-3 layout, 4-8, 3-5-4, 2-8-2… we could go on and on, but I think you get the gist. The following code shows .span8 and .span4, which adds up to 12.



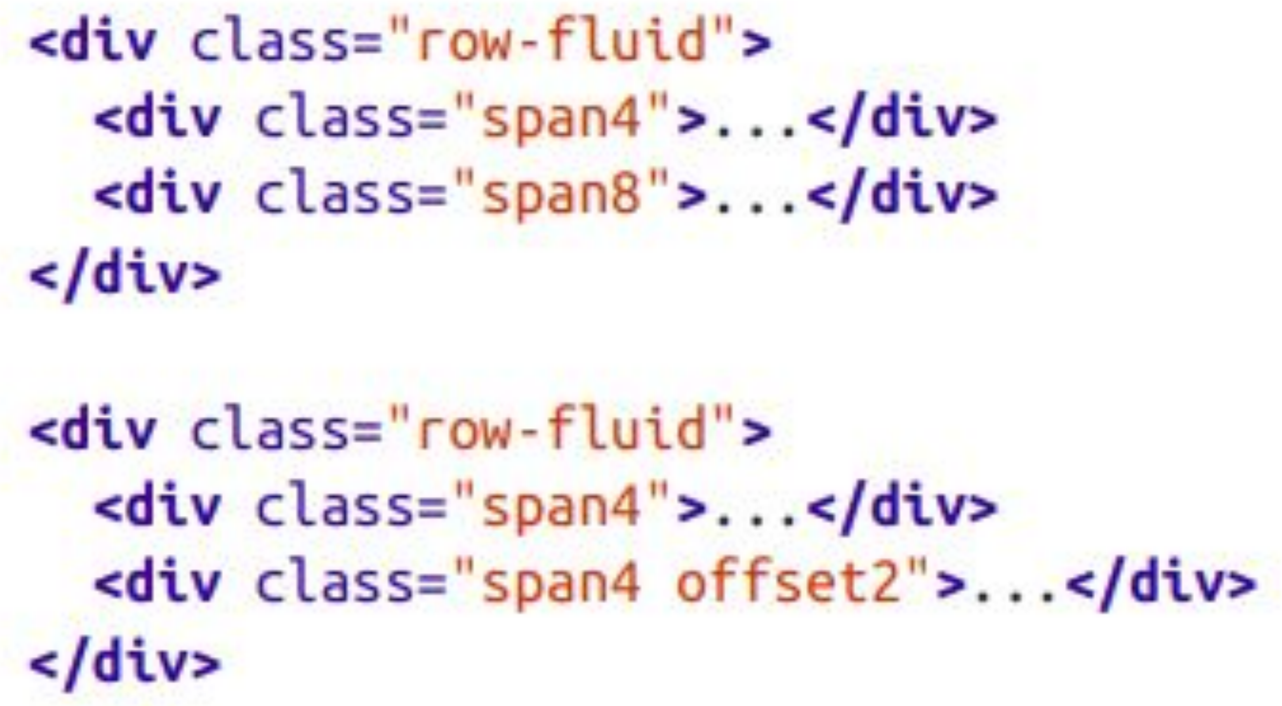
```
<div class="row">
  <div class="span8">...</div>
  <div class="span4">...</div>
</div>
```



```
<div class="row">
  <div class="span2">...</div>
  <div class="span7 offset2">...</div>
</div>
```

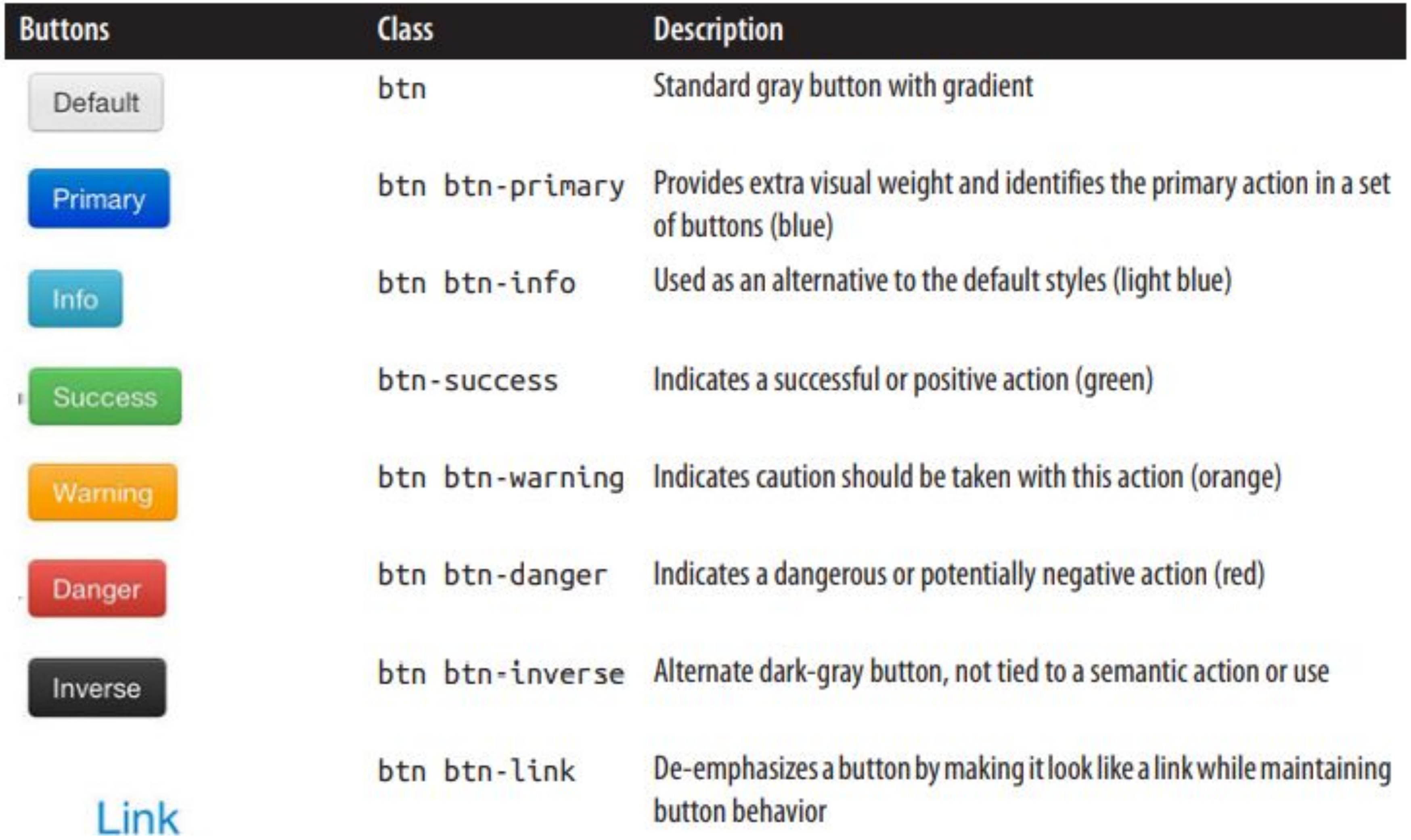
Fluid Grid System

- The fluid grid system uses percentages instead of pixels for column widths.
- It has the same responsive capabilities as our fixed grid system, ensuring proper proportions for key screen resolutions and devices. You can make any row “fluid” by changing .row to .row-fluid.
- The column classes stay exactly the same, making it easy to flip between fixed and fluid grids.
- To offset, you operate in the same way as the fixed grid system— add .offset* to any column to shift by your desired number of columns:



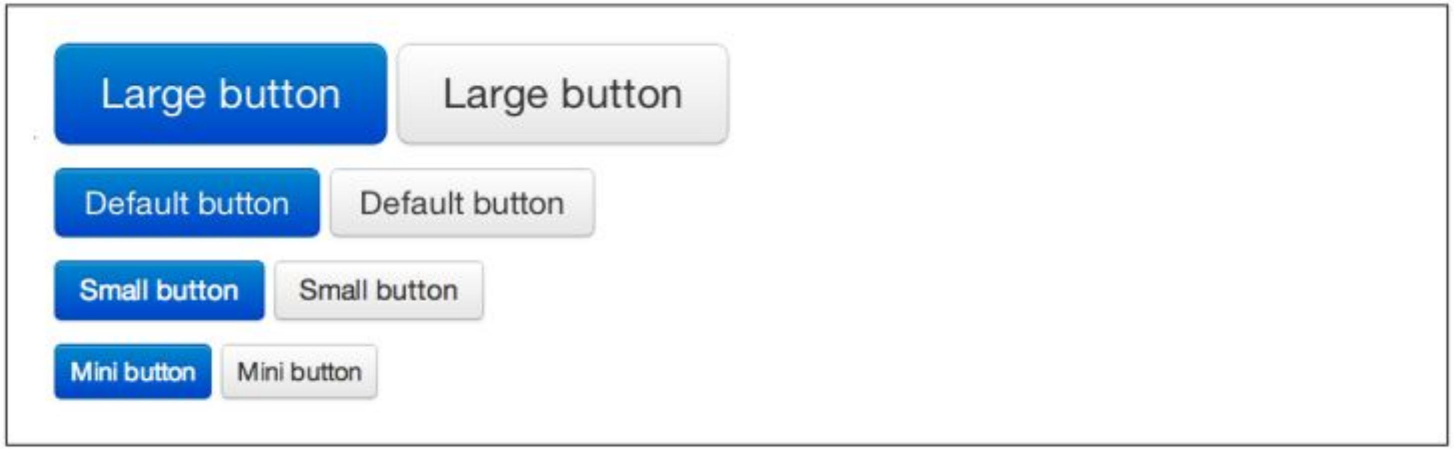
```
<div class="row-fluid">
  <div class="span4">...</div>
  <div class="span8">...</div>
</div>

<div class="row-fluid">
  <div class="span4">...</div>
  <div class="span4 offset2">...</div>
</div>
```

Bootstrap Buttons



Buttons	Class	Description
Default	`btn`	Standard gray button with gradient
Primary	`btn btn-primary`	Provides extra visual weight and identifies the primary action in a set of buttons (blue)
Info	`btn btn-info`	Used as an alternative to the default styles (light blue)
Success	`btn-success`	Indicates a successful or positive action (green)
Warning	`btn btn-warning`	Indicates caution should be taken with this action (orange)
Danger	`btn btn-danger`	Indicates a dangerous or potentially negative action (red)
Inverse	`btn btn-inverse`	Alternate dark-gray button, not tied to a semantic action or use
Link	`btn btn-link`	De-emphasizes a button by making it look like a link while maintaining button behavior

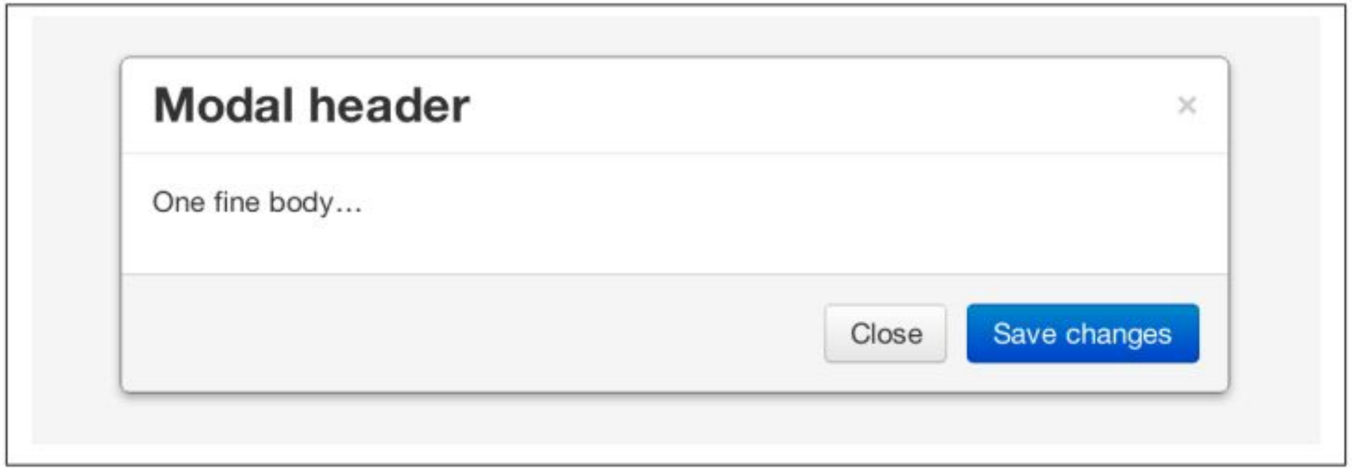
```
<p>
 <button class="btn btn-large btn-primary" type="button">Large button</button>
 <button class="btn btn-large" type="button">Large button</button>
</p>
<p>
 <button class="btn btn-primary" type="button">Default button</button>
 <button class="btn" type="button">Default button</button>
</p>
<p>
 <button class="btn btn-small btn-primary" type="button">Small button</button>
</p>
```



Modal

- A modal is a child window that is layered over its parent window Typically, the purpose is to display content from a separate source that can have some interaction without leaving the parent window.
- Child windows can provide information, interaction, or more.
- It is used them as a window for holding slideshows and login/ registration information.
- The modal plugin is probably is one of the favorite Bootstrap features.

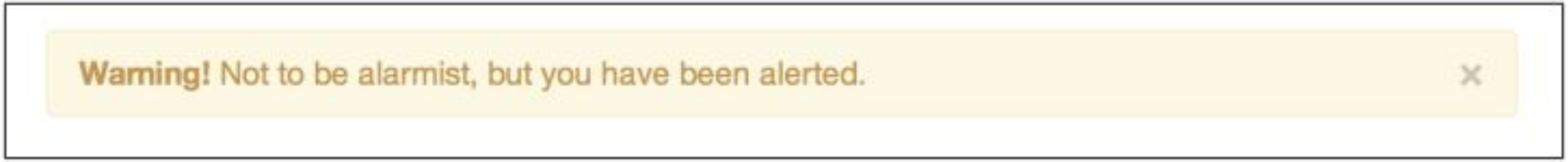
```
<div class="modal hide fade">
 <div class="modal-header">
 <button type="button" class="close" data-dismiss="modal" aria-hidden="true"> &times;</button>
 <h3>Modal header</h3>
 </div>
 <div class="modal-body">
 <p>One fine body…</p>
 </div>
 <div class="modal-footer">
 <a href="#" class="btn">Close</a>
 <a href="#" class="btn btn-primary">Save changes</a>
 </div>
</div>
```



Alerts

- Like the modals alerts provide a way to style messages to the user. The default alert is added by creating a wrapper and adding a class of .alert.

```
<div class="alert">
 <a href="#" class="close" data-dismiss="alert">&times;</a>
 <strong>Warning!</strong> Not to be alarmist, but you have now been alerted.
```



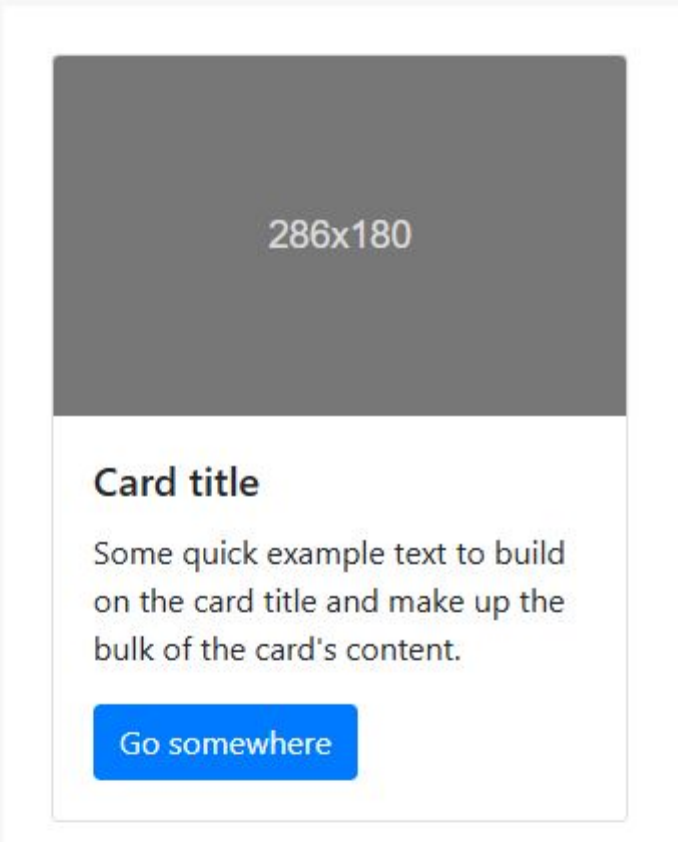
Warning! Not to be alarmist, but you have been alerted. ×

Cards

- A **card** is a flexible and extensible content container.
- It includes options for headers and footers, a wide variety of content, contextual background colors, and powerful display options.
- Cards replaces old panels, wells, and thumbnails from Bootstrap 3.
- Similar functionality to those components is available as modifier classes for cards.

- Cards are built with as little markup and styles as possible, but still manage to deliver a ton of control and customization.
- Built with flexbox, they offer easy alignment and mix well with other Bootstrap components.
- They have no margin by default, so use spacing utilities as needed.

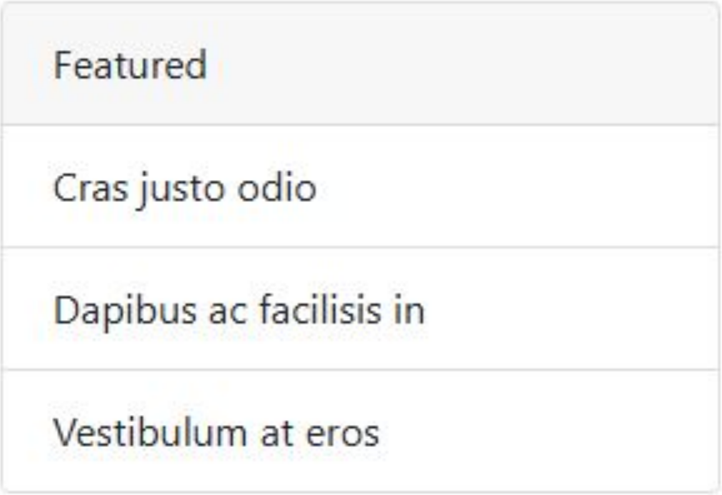
```
<div class="card" style="width: 18rem;">
  <img class="card-img-top" src="..." alt="Card image cap">
  <div class="card-body">
    <h5 class="card-title">Card title</h5>
    <p class="card-text">Some quick example text to build on the card title and make up the bulk of the card's content.</p>
    <a href="#" class="btn btn-primary">Go somewhere</a>
  </div>
</div>
```



Card title

Some quick example text to build on the card title and make up the bulk of the card's content.

```
<div class="card" style="width: 18rem;">
 <div class="card-header">
  Featured
 </div>
 <ul class="list-group list-group-flush">
  <li class="list-group-item">Cras justo odio</li>
  <li class="list-group-item">Dapibus ac facilisis in</li>
  <li class="list-group-item">Vestibulum at eros</li>
 </ul>
</div>
```



Featured

Cras justo odio

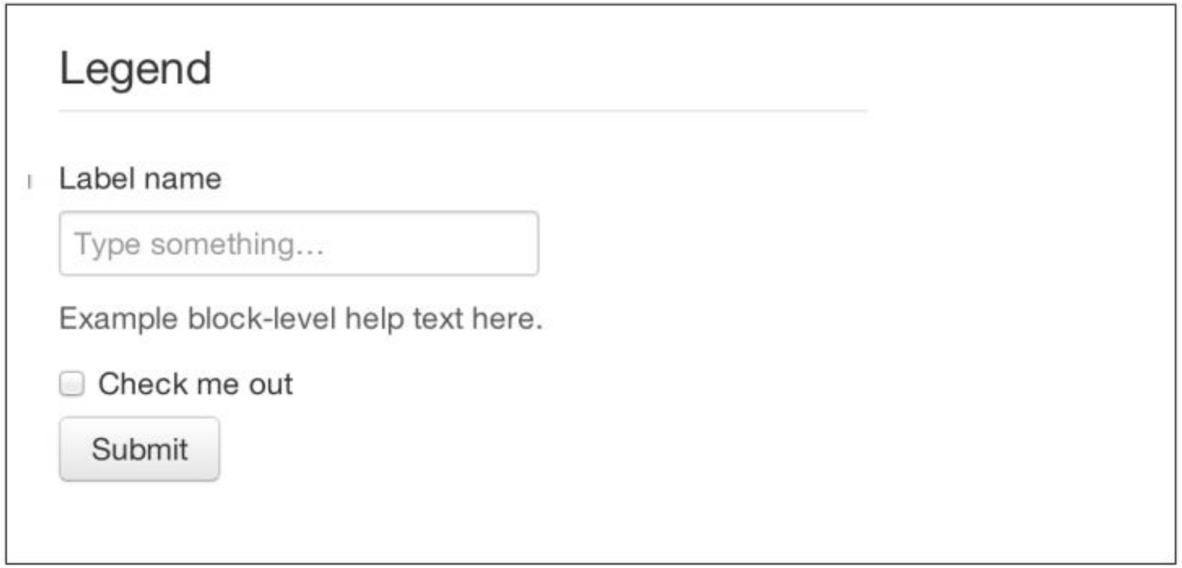
Dapibus ac facilisis in

Vestibulum at eros

Forms

- Another one of the highlights of using Bootstrap is the ability to create forms with ease.
- As a web developer, styling forms is one of my least favorite tasks.
- Bootstrap makes it easy with the simple HTML markup and extended classes for different styles of forms.
- The basic form structure comes with Bootstrap; there is no need to add any extra helper classes.
- If you use the placeholder, keep in mind that it is only supported in newer browsers. In older browsers, no placeholder text will be displayed:

```
<form>
 <fieldset>
 <legend>Legend</legend>
 <label for="name">Label name</label>
 <input type="text" id="name“ placeholder="Type something…">
 <span class="help-block">Example block-level help text here.</span>
 <label class="checkbox" for="checkbox">
 <input type="checkbox" id="checkbox">
 Check me out
 </label>
 <button type="submit" class="btn">Submit</button>
 </fieldset>
</form>
```

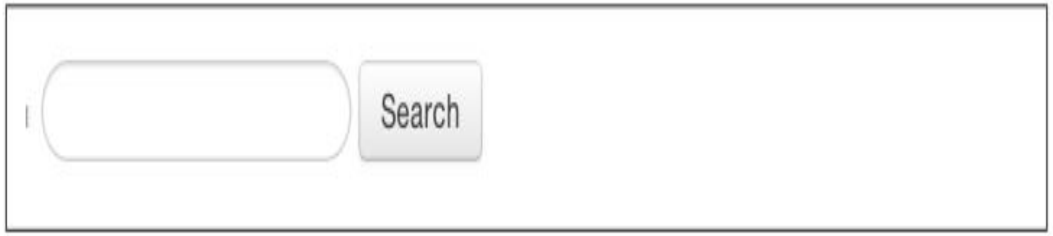


Example block-level help text here.

Optional Form Layouts

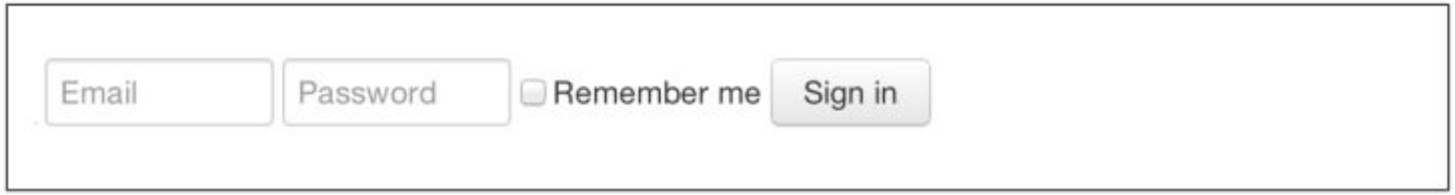
- **Form Search**

```
<form class="form-search">
 <input type="text" class="input-medium search-query">
 <button type="submit" class="btn">Search</button>
</form>
```

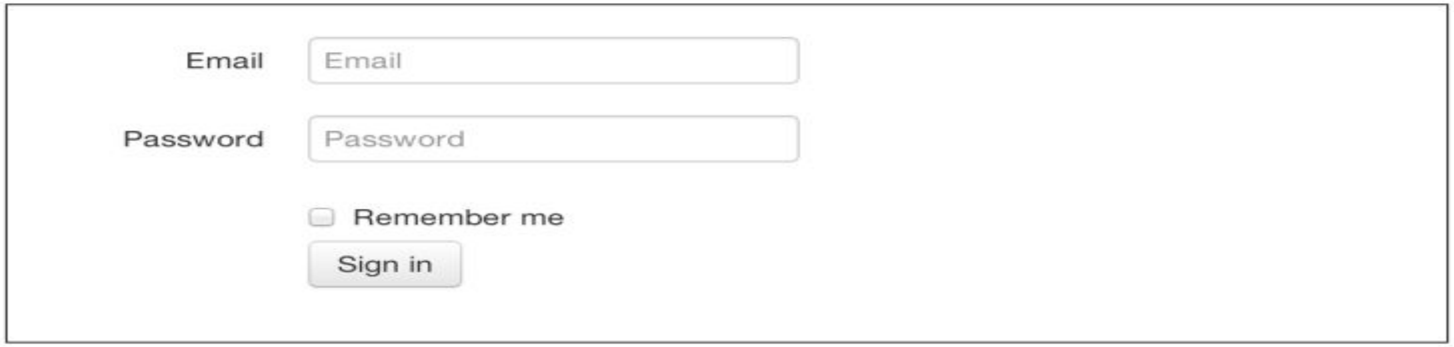


- **Inline form**

```
<form class="form-inline">
 <input type="text" class="input-small" placeholder="Email">
 <input type="password" class="input-small" placeholder="Password">
label class="checkbox">
 <input type="checkbox"> Remember me
 </label>
 <button type="submit" class="btn">Sign in</button>
</form>
```

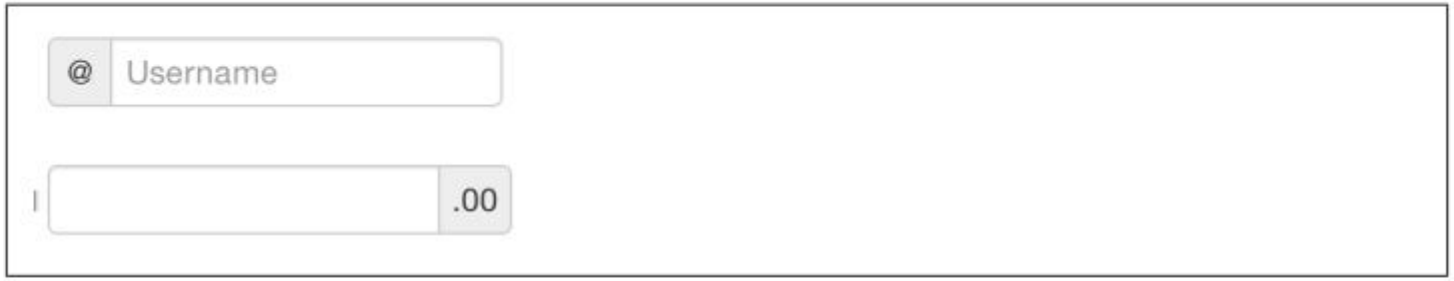


- Horizontal form

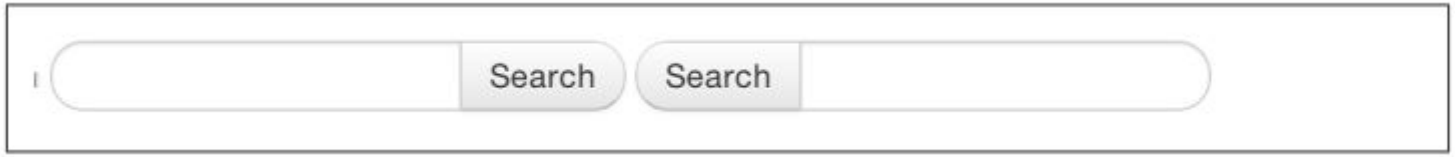


- Supported Form Controls : input, textarea, checkbox, radio, and select.
- Extended Form Controls : Prepended and appended inputs

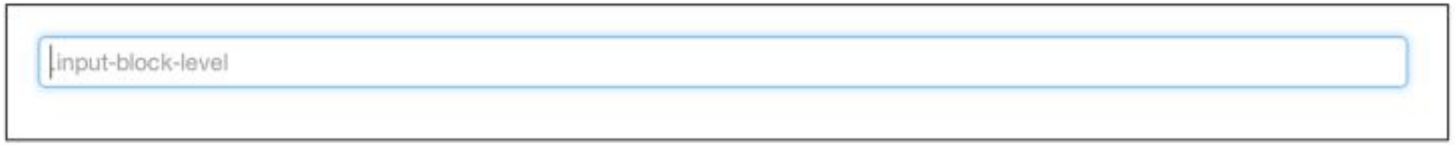
Attach multiple buttons to an input



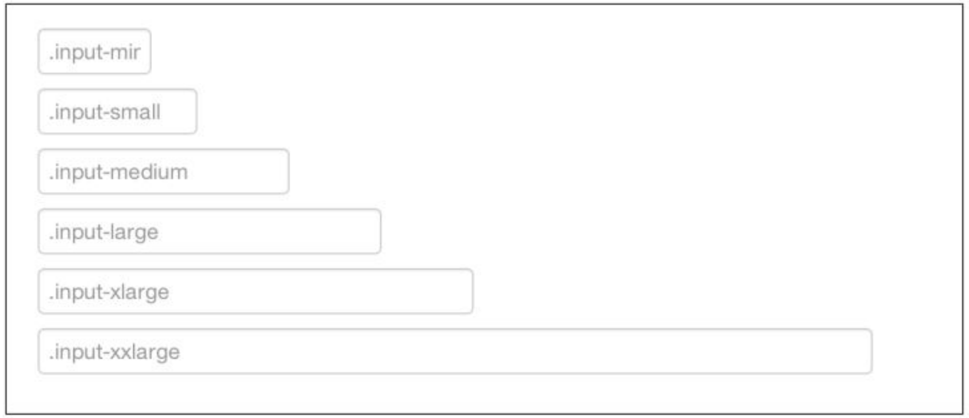
- appending a button to a search form



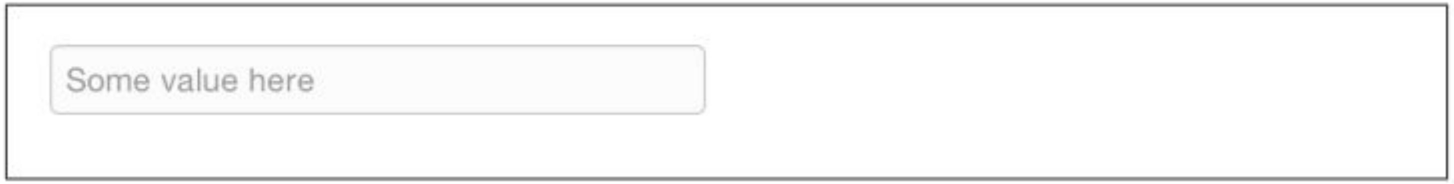
- Form Control Sizing



- Relative input controls

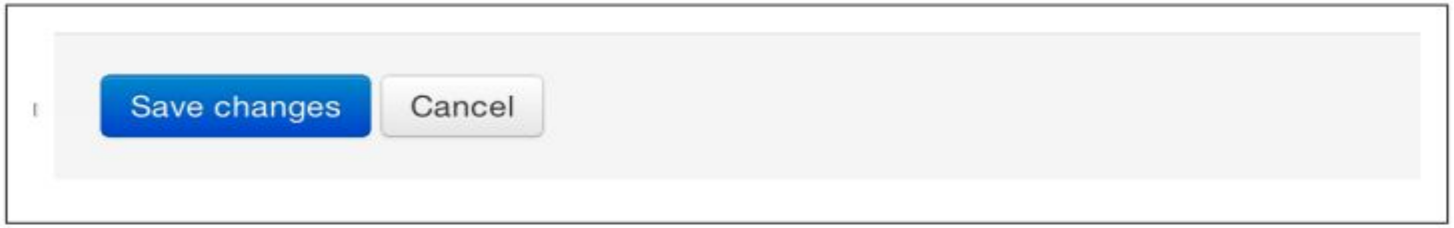


- Uneditable text

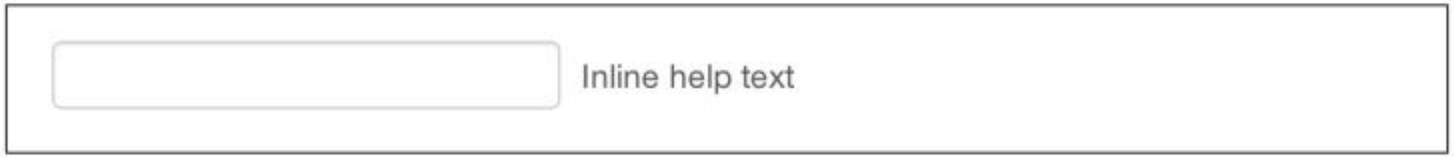


Some value here

- Form actions

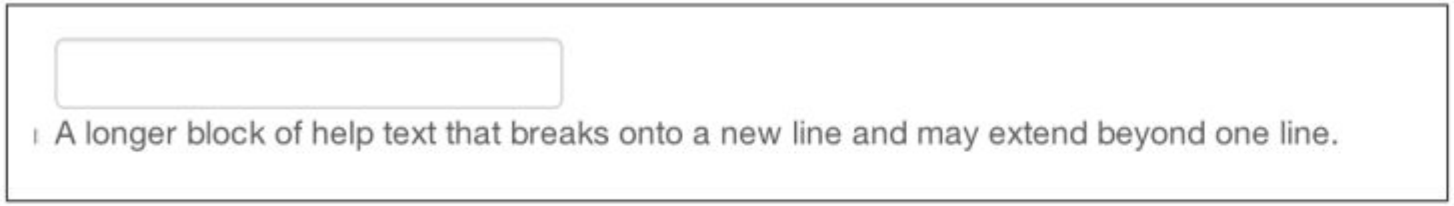


- Help text



Inline help text

- Block help



A longer block of help text that breaks onto a new line and may extend beyond one line.

Form Control States

- Input focus
- Input focus
- Validation states