Full Stack
Web Programming

Seven Advanced Academy

Introduction to Bootstrap-4 Part 2

Lesson 46

Introduction

- Let go deeper and touch more advanced component of bootstrap 4
-

BreadCrumbs

- Bootstrap provides the .breadcrumb class which styles a list into a breadcrumb.

- Bootstrap adds separators (by using :before and content) to the list as well as display: inline-block to the li element — resulting in that "breadcrumb" effect.

```
<ul class="breadcrumb">
<li class="breadcrumb-item"><a href="#">Home</a></li>
<li class="breadcrumb-item"><a href="#">Fruit</a></li>
<li class="breadcrumb-item active">Pears</li>
</ul>
```

BreadCrumbs

To create a breadcrumb:

- Add class="breadcrumb" to the ul element that represents the breadcrumb.

- Add the .breadcrumb-item class to each li element within the breadcrumb.

- Also add class="active" to the li that represents the current page/section (the page that the user is currently on) — which would almost always be the last crumb in the breadcrumb.

BreadCrumbs

Non-List Breadcrumbs:

- Breadcrumbs don't necessarily need to be in a list. You can use them like this if required:

```
<div class="breadcrumb">
  <a class="breadcrumb-item" href="#">Home</a>
  <a class="breadcrumb-item" href="#">Fruit</a>
  <span class="breadcrumb-item active">Pears</span>
</div>
```

- Bootstrap 3 only requires the .breadcrumb class on the ul tag.
- Bootstrap 4 also requires .breadcrumb-item to be applied against each item in the breadcrumb.

Pagination

- Bootstrap's .pagination class does just that — provides pagination.

- Pagination is typically where you have navigation that links to multiple pages within a series. For example, search results that return many pages will have pagination that enables the user to navigate to the next page or even jump forward several pages.

Pagination

- Default Pagination
- To create default pagination, add class="pagination" to the <ul> element that represents the list of pages.
- Also add .page-item to each <li> element and .page-link to each <a> element.

```html
<nav>
<ul class="pagination">
<li class="page-item">
 <a href="#" class="page-link" aria-label="Previous">
   <span aria-hidden="true">&laquo;</span>
 </a>
</li>
<li class="page-item"><a href="#" class="page-link">1</a></li>
<li class="page-item"><a href="#" class="page-link">2</a></li>
<li class="page-item"><a href="#" class="page-link">3</a></li>
<li class="page-item"><a href="#" class="page-link">4</a></li>
<li class="page-item"><a href="#" class="page-link">5</a></li>
<li class="page-item"><a href="#" class="page-link">6</a></li>
<li class="page-item"><a href="#" class="page-link">7</a></li>
<li class="page-item">
 <a href="#" class="page-link" aria-label="Next">
  <span aria-hidden="true">&raquo;</span>
 </a>
</li>
</ul>
</nav>
```

Pagination

- Bootstrap 3 only requires the .pagination class.
- Bootstrap 4, in addition to the .pagination class, also requires the .page-item class to be added to each <li> element and .page-link to each <a> element.
- Active State for Current Page
- Add the .active class to the <li> element that represents the current page (the page that the user is currently on).

```
<nav>
<ul class="pagination">
<li class="page-item">
  <a href="#" class="page-link" aria-label="Previous">
    <span aria-hidden="true">&laquo;</span>
  </a>
</li>
<li class="page-item"><a href="#" class="page-link">1</a></li>
<li class="page-item"><a href="#" class="page-link">2</a></li>
<li class="page-item"><a href="#" class="page-link">3</a></li>
<li class="page-item active"><a href="#" class="page-link">4</a></li>
<li class="page-item"><a href="#" class="page-link">5</a></li>
<li class="page-item"><a href="#" class="page-link">6</a></li>
<li class="page-item"><a href="#" class="page-link">7</a></li>
<li class="page-item">
  <a href="#" class="page-link" aria-label="Next">
    <span aria-hidden="true">&raquo;</span>
  </a>
</li>
</ul>
</nav>
```

Pagination

- Disabling an Option
- Add the .disabled class to the <li> element to disable that option.

```
<li class="page-item disabled">
 <a href="#" class="page-link">4</a>
</li>
```

- Pagination Size
- Add either the .pagination-lg or .pagination-sm to the <ul> element to increase or decrease the size of the pagination controls.

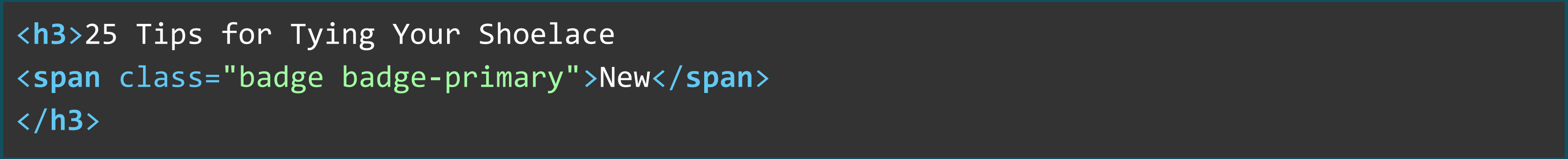
```
<ul class="pagination pagination-lg"> <!-- large -->
<ul class="pagination pagination-lg"> <!-- medium -->
<ul class="pagination pagination-sm"> <!-- small -->
```

Badges

- Bootstrap's badge classes can be used to highlight additional information that's appended to a string of text.

- To create a badge, apply the .badge class, as well as one of the .badge-* classes to the <span> element that represents the badge.

- Here we create a default badge by using class="badge badge-primary"



```
<h3>25 Tips for Tying Your Shoelace
<span class="badge badge-primary">New</span>
</h3>
```

Badges

- Contextual Classes
- The following contextual classes are available for badges.

```
<span class="badge badge-primary">Primary</span>
<span class="badge badge-success">Success</span>n>
<span class="badge badge-info">Info</span>
<span class="badge badge-warning">Warning</span>
<span class="badge badge-danger">Danger</span>
<span class="badge badge-light">Light</span>
<span class="badge badge-dark">Dark</span>
```

- Pill Badges
- Make the corners more rounded with Bootstrap's .badge-pill class.

```
<span class="badge badge-pill badge-primary">Primary</span>
<span class="badge badge-pill badge-success">Success</span>
```

Badges

New in Bootstrap 4

- Bootstrap 3 uses labels and badges, each for a slightly different purpose.

- In Bootstrap 4, badges do what labels used to do in Bootstrap 3. Bootstrap 4 also introduced the .badge-pill class to provide rounded corners.

Jumbotron

- In Bootstrap, a jumbotron is a large callout that is styled with large text and heavy padding. By default, Bootstrap 4 jumbotrons are styled in light gray (#eceeef), but you can change this to any color.

- To create a jumbotron, apply the .jumbotron class to the <div> element that represents the jumbotron.

```
<div class="container">
<div class="jumbotron">
<h1>My Jumbotron</h1>
<p>Think BIG with a Bootstrap Jumbotron!</p>
</div>
</div>
```

Jumbotron

- Full-Width Jumbotron

- To make the jumbotron full width and without the rounded corners, add the .jumbotron-fluid class, and nest a container inside the jumbotron.

```
<div class="jumbotron jumbotron-fluid">
<div class="container">
<h1>My Jumbotron</h1>
<p>Think BIG with a Bootstrap Jumbotron!</p>
</div>
</div>
```

Alerts

- Bootstrap provides an easy way to create a stylized alert message box with its alert component.

- To create an alert box, use the .alert class along with one of the .alert-*classes to specify the kind of alert.

```
<div class="alert alert-success" role="alert">Success alert</div>
<div class="alert alert-info" role="alert">Info alert</div>
<div class="alert alert-warning" role="alert">Warning alert</div>
<div class="alert alert-danger" role="alert">Danger alert</div>
<div class="alert alert-light" role="alert">Light alert</div>
<div class="alert alert-dark" role="alert">Dark alert</div>
```

Dismissible Alerts

- You can create dismissible alerts by adding Bootstrap's .alert-dismissible class, along with a Close button. When the user clicks the Close button, the alert disappears.

- Here we use &times; to create the Close icon (×).

```html
<div class="alert alert-success alert-dismissible" role="alert">
<button type="button" class="close" data-dismiss="alert" aria-label="Close"><span
aria-hidden="true">&times;</span></button>
<strong>Congratulations!</strong> You successfully tied your shoelace!
</div>
```

Alerts With Fading Effect

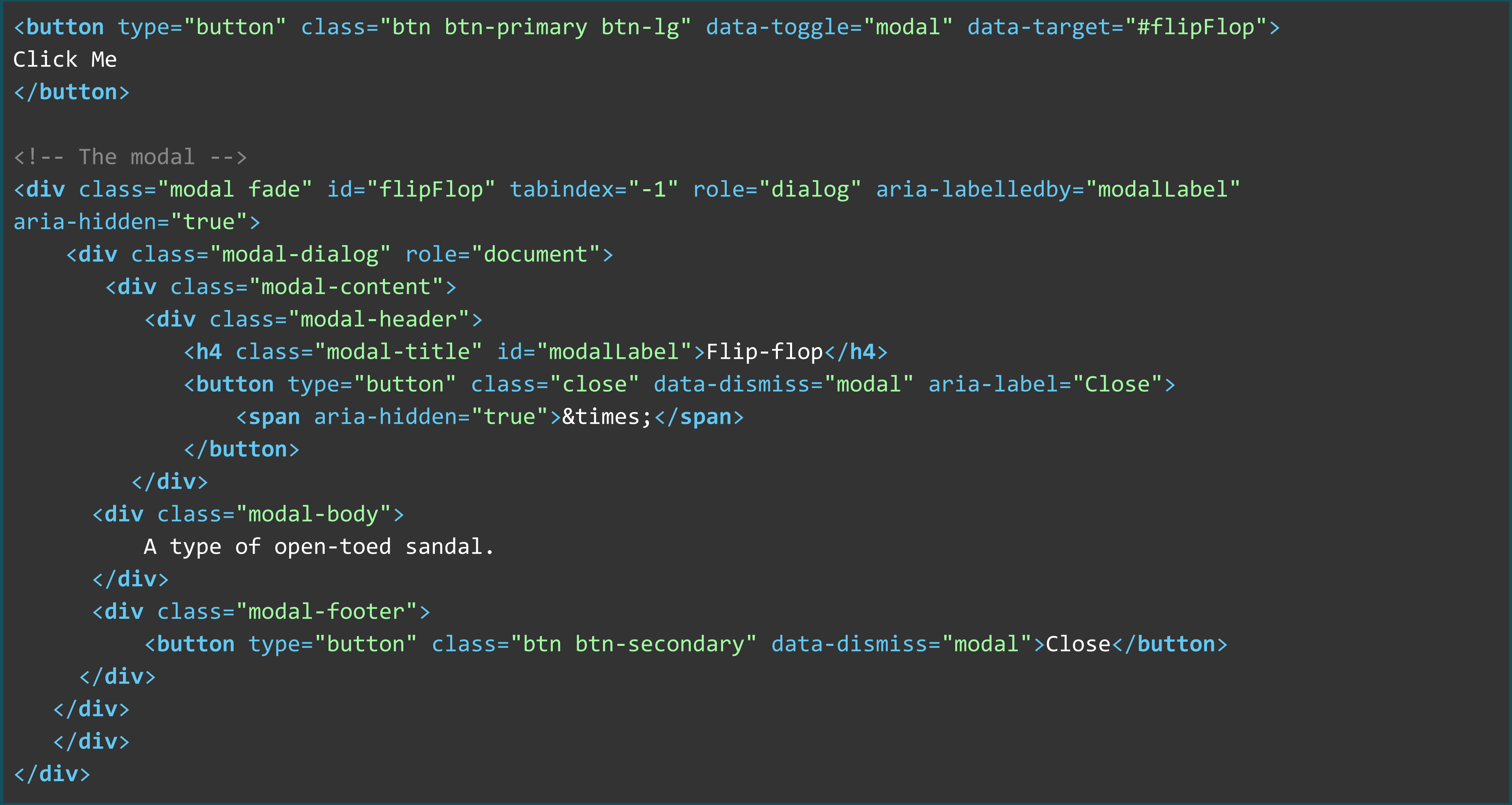
- You can give the alert a slight fading effect when closing them by adding the .fade and .show classes.

```
<div class="alert alert-success alert-dismissible fade show" role="alert">
<button type="button" class="close" data-dismiss="alert" aria-label="Close"><span
aria-hidden="true">&times;</span></button>
<strong>Congratulations!</strong> You successfully tied your shoelace!
</div>
```

Modals

- Bootstrap enables you to add a modal dialog box to your site. A modal is a dialog box that takes the focus while the rest of the screen is dimmed or grayed out. This forces the user to take action on the dialog box before continuing.

- To create a modal, use the .modal class along with various other .modal-* classes to define each section of the modal.



```
<button type="button" class="btn btn-primary btn-lg" data-toggle="modal" data-target="#flipFlop">
Click Me
</button>

<!-- The modal -->
<div class="modal fade" id="flipFlop" tabindex="-1" role="dialog" aria-labelledby="modalLabel"
aria-hidden="true">
    <div class="modal-dialog" role="document">
       <div class="modal-content">
          <div class="modal-header">
             <h4 class="modal-title" id="modalLabel">Flip-flop</h4>
             <button type="button" class="close" data-dismiss="modal" aria-label="Close">
                 <span aria-hidden="true">&times;</span>
             </button>
         </div>
      <div class="modal-body">
          A type of open-toed sandal.
      </div>
      <div class="modal-footer">
          <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>
     </div>
   </div>
   </div>
</div>
```

Modal Size

- Modals have a default size of medium. You can specify small or large as required.

- **Small Modal**
- For a small modal dialog box, add the .modal-sm class to the .modal-dialog

- **Large Modal**
- For a large modal dialog box, add the .modal-lg class to the .modal-dialog

Modal Remove The Fade Effect

- You can remove the .fade class to get rid of the fade-in/fade-out effect.

```html
<button type="button" class="btn btn-primary btn-lg" data-toggle="modal" data-target="#largeShoes">
Click Me
</button>

<!-- The modal -->
<div class="modal" id="largeShoes" tabindex="-1" role="dialog" aria-labelledby="modalLabelLarge"
aria-hidden="true">
<div class="modal-dialog modal-sm">
<div class="modal-content">

<div class="modal-header">
<h4 class="modal-title" id="modalLabelLarge">Boot Polish</h4>
<button type="button" class="close" data-dismiss="modal" aria-label="Close">
<span aria-hidden="true">&times;</span>
</button>
</div>

<div class="modal-body">
Remove that faded effect by adding boot polish!
</div>

</div>
</div>
</div>
```

Progress Bars

- Bootstrap provides a component for displaying progress bars on a website. Progress bars are typically used to provide feedback to the user on the progress of a given process or action. Users can visualize instantly how much is complete and how much more there is to go.

- **Default Progress Bar**
- To create a default progress bar, use the .progress class with a .progress-bar nested inside it.

```html
<div class="progress">
<div class="progress-bar" role="progressbar" style="width: 75%" aria-valuenow="75"
aria-valuemin="0" aria-valuemax="100"></div>
</div>
```

Progress Bars With Contextual Classes

- You can use the contextual classes to provide extra semantics via color.

```html
<div class="progress">
<div class="progress-bar bg-success" role="progressbar" style="width: 25%" aria-valuenow="25"
aria-valuemin="0" aria-valuemax="100"></div>
</div>
<br>
<div class="progress">
<div class="progress-bar bg-info" role="progressbar" style="width: 50%" aria-valuenow="50"
aria-valuemin="0" aria-valuemax="100"></div>
</div>
<br>
<div class="progress">
<div class="progress-bar bg-warning" role="progressbar" style="width: 75%" aria-valuenow="75"
aria-valuemin="0" aria-valuemax="100"></div>
</div>
```

Progress Bars With Stripes

- You can add stripes by adding the .progress-bar-striped class to the .progress-bar element.

```
<div class="progress">
  <div class="progress-bar progress-bar-striped" role="progressbar" style="width: 10%"
aria-valuenow="10" aria-valuemin="0" aria-valuemax="100"></div>
</div>
<br>
<div class="progress">
  <div class="progress-bar progress-bar-striped bg-success" role="progressbar" style="width: 25%"
aria-valuenow="25" aria-valuemin="0" aria-valuemax="100"></div>
</div>
<br>
<div class="progress">
  <div class="progress-bar progress-bar-striped bg-info" role="progressbar" style="width: 50%"
aria-valuenow="50" aria-valuemin="0" aria-valuemax="100"></div>
</div>
```

Progress Bars With Animated Stripes

- You can animate the stripes by adding the .progress-animated class to the .progress element.

- Note that not all browsers support this feature at the time of writing.

```html
<div class="progress">
  <div class="progress-bar progress-bar-striped progress-bar-animated"
  role="progressbar"     aria-valuenow="75" aria-valuemin="0"
  aria-valuemax="100" style="width: 75%"></div>
</div>
```

Media Objects

- Bootstrap's media object component provides an easy way to align text and media objects when presenting them alongside each other. It allows you to quickly and easily float media to the left and/or right of a content block. Useful for UI components such as blog comments, Tweets, etc.

Media Objects

```
<div class="media">
<img class="mr-3" src="https://www.quackit.com/pix/samples/9s.jpg" alt="Sample photo">
<div class="media-body">
<h4>Media Heading</h4>
<p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam
rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt
explicabo.</p>
</div>
</div>

<div class="media">
<img class="mr-3" src="https://www.quackit.com/pix/samples/11s.jpg" alt="Sample photo">
<div class="media-body">
<h4>Media Heading</h4>
<p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam
rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt
explicabo.</p>
</div>
</div>
```

Media Objects

- **How to Use**
- To use the media object component, you need to apply a class for the outer container, as well as separate classes to the media and to the text.

- **Outer Container**
- Wrap the whole thing in a <div> and give it the .media class.

- **Media Object**
- No special class is needed for the media object (eg, <img>, <video> etc). Just insert it into the HTML where you need it.

Media Objects

- **Media Body**
- Apply the .media-body class to the text's parent <div> or other element. Also apply the .media-heading to any headings inside the media body.

- **Margins**
- Use a Bootstrap spacing utility to apply margins to the media object (for example, mr-3).

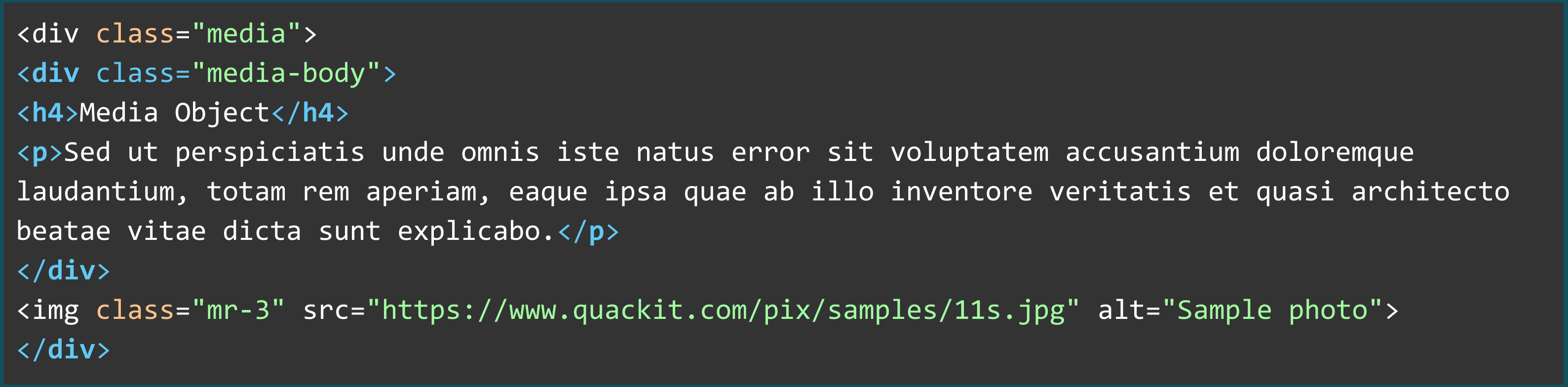
Nested Media Objects

- You can nest media objects inside each other (i.e. the whole media block). The nested media block will be indented by default.

```
<div class="media">
<img class="mr-3" src="https://www.quackit.com/pix/samples/9s.jpg alt="Sample photo">
<div class="media-body">
<h4>Media Object</h4><p>ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt
explicabo.</p>
<div class="media"><!-- Start Nested Media Object -->
<img class="mr-3" src="https://www.quackit.com/pix/samples/11s.jpg" alt="Sample photo">
<div class="media-body">
<h4>Nested Media Object</h4><p>ab illo inventore veritatis et quasi architecto beatae vitae dicta
sunt explicabo.</p>
</div>
</div><!-- End Nested Media Object -->
</div>
</div>
```

Media Objects Horizontal Alignment

- You can swap the position of the media object and media body in your markup (so that the heading and text come before the image).



```
<div class="media">
<div class="media-body">
<h4>Media Object</h4>
<p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque
laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto
beatae vitae dicta sunt explicabo.</p>
</div>
<img class="mr-3" src="https://www.quackit.com/pix/samples/11s.jpg" alt="Sample photo">
</div>
```

Media Objects Vertical Alignment

- Media objects are top-aligned by default. You can change this with any of the flexbox utility classes. For example, to align to the middle, use d-flex align-self-center. The d-flex part ensures that display: flex is applied to the element.

```
<div class="media">
<img class="d-flex align-self-center mr-3" src="https://www.quackit.com/pix/samples/11s.jpg"
alt="Sample photo">
<div class="media-body">
<h4>Media Object</h4>
<p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque
laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto
beatae vitae dicta sunt explicabo.</p>
</div>
</div>
```

Media Objects Vertical Alignment (Center)

- Media objects are top-aligned by default. You can change this with any of the flexbox utility classes. For example, to align to the middle, use d-flex align-self-center. The d-flex part ensures that display: flex is applied to the element.

```
<div class="media">
<img class="d-flex align-self-center mr-3" src="https://www.quackit.com/pix/samples/11s.jpg"
alt="Sample photo">
<div class="media-body">
<h4>Media Object</h4>
<p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque
laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto
beatae vitae dicta sunt explicabo.</p>
</div>
</div>
```

Media Objects Vertical Alignment (Bottom)

- Media objects are top-aligned by default. You can change this with any of the flexbox utility classes. For example, to align to the bottom, use d-flex align-self-end. The d-flex part ensures that display: flex is applied to the element.

```html
<div class="media">
<img class="d-flex align-self-end mr-3" src="https://www.quackit.com/pix/samples/11s.jpg"
alt="Sample photo">
<div class="media-body">
<h4>Media Object</h4>
<p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque
laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto
beatae vitae dicta sunt explicabo.</p>
</div>
</div>
```

Media Lists

- You can create a media list by placing media objects inside a list. Media lists can be useful for presenting user comment threads, article lists, etc.

- To create a media list, apply the .list-unstyled class to the <ul> tag, and the .media class to the <li> tag.

```
<ul class="list-unstyled">
<li class="media">
<img class="mr-3" src="/pix/samples/9s.jpg" alt="Photo of Pukeko in New Zealand">
<div class="media-body">
<h4>Media Object</h4>
<p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque
laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto
beatae vitae dicta sunt explicabo.</p>
```

```html
<!-- Start Nested Media Object -->
<div class="media">
<img class="mr-3" src="/pix/samples/10s.jpg" alt="Photo of bird in the Philippines">
<div class="media-body">
<h4>Nested Media Object</h4>
<p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam
rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt
explicabo.</p>
</div>
</div>
<!-- End Nested Media Object -->

</div>
</li>
<li class="media">
<img class="mr-3" src="/pix/samples/11s.jpg" alt="Photo of sunset in Laos">
<div class="media-body">
<h4>Media Object</h4>
<p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam
rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt
explicabo.</p>
</div>
</li>
</ul>
```

List Groups

- In Bootstrap, list groups is a component that styles unordered lists in a particular way. This paves the way for creating more complex lists with custom content, without getting bogged down with presentation issues.

- **Create a Default List Group**
- To create a default list group, apply the .list-group class to the <ul> tag, and the .list-group-item to each <li> tag.

List Groups With Badges

- You can add badges to list groups. You can align them with the other content using classes like justify-content-between (which translates into justify-content: space-between).

```
<ul class="list-group">
<li class="list-group-item justify-content-between">
These Boots Are Made For Walking
<span class="badge badge-secondary badge-pill">15</span>
</li>
<li class="list-group-item justify-content-between">
Eleanor, Put Your Boots On
<span class="badge badge-secondary badge-pill">38</span>
</li>
</ul>
```

Linked List Groups

- You can use Bootstrap 4's .list-group-item-action to form linked list items. Linked list items result in the whole item being clickable (not just the text portion). The whole list item receives a "hover" style too.

- To create a linked list group, swap the <ul> tag for a <div> tag and the <li> tags for <a>.

- You can also use Bootstrap's .active class to highlight a list item as the current one.

Button List Groups

- You can also use buttons instead of links. Just use <button> tags for the .list-group-item/.list-group-item-action classes.

```
<div class="list-group">
<button type="button" class="list-group-item list-group-item-action">These Boots Are Made For
Walking</button>
<button type="button" class="list-group-item list-group-item-action active">Eleanor, Put Your
Boots On</button>
<button type="button" class="list-group-item list-group-item-action">Puss 'n' Boots</button>
<button type="button" class="list-group-item list-group-item-action">Die With Your Boots
On</button>
<button type="button" class="list-group-item list-group-item-action">Fairies Wear Boots</button>
</div>
```

Disabled and Contextual List Groups

- You can also apply Bootstrap's .disabled class to a .list-group-item to make it appear disabled.

- You can also apply Bootstrap's contextual classes to list group items. To do this, add one of the .list-group-item-* classes to the list group item.

- When an item is .active its contextual class appears in a darkened version.

Custom Content List Groups

- List groups can contain other HTML elements too. And you can make it all clickable if it's nested inside a <a> element.

- Bootstrap 4 has the .list-group-item-heading class for headings and the .list-group-item-text class for text.

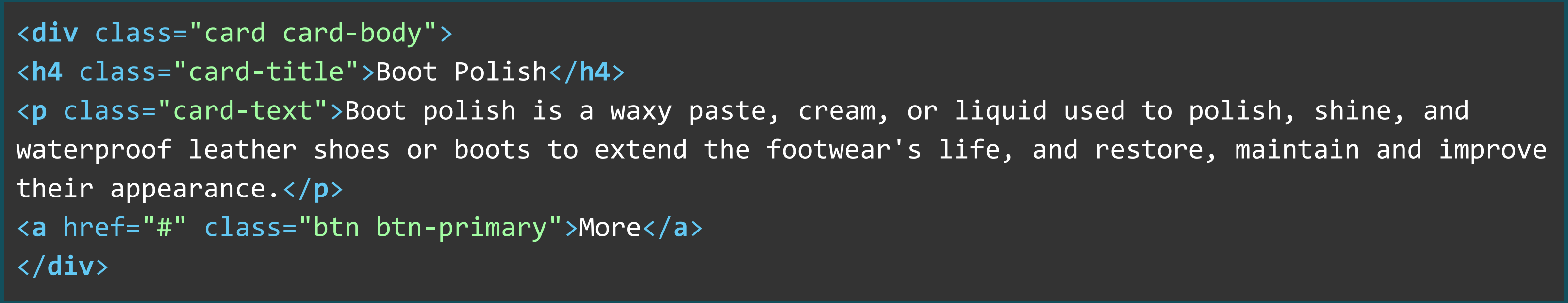
Cards

- A card is a container with light styling that you can place virtually any content into. Plenty of styling options are available such as alignment, padding, colors, headings, and more.

- **Basic Card**
- To create a basic card, apply the .card and .card-body classes to an element to create the outer card container.

- Add .card-title to any heading elements and .card-text to text elements.

Cards



```html
<div class="card card-body">
<h4 class="card-title">Boot Polish</h4>
<p class="card-text">Boot polish is a waxy paste, cream, or liquid used to polish, shine, and waterproof leather shoes or boots to extend the footwear's life, and restore, maintain and improve their appearance.</p>
<a href="#" class="btn btn-primary">More</a>
</div>
```

- **Header & Footer**
- You can add a header and/or footer by adding a <div> with .card-header or .card-footer.

Cards

```html
<div class="card" style="max-width: 20rem;">
<div class="card-header">Sponsored Content</div>
<div class="card-body">
<h4 class="card-title">Ugg Boots</h4>
<p class="card-text">Best ugg boots on the planet.</p>
</div>
<div class="card-footer">By Uuuuggghhh.com</div>
</div>
```

- Here I've also moved the .card-body to a new <div> inside the card. I did this to allow the card header to line up flush against the card border (the .card-body has padding which I don't want). More on flush content below.

Cards

- **HTML Headers**
- You can also apply the .card-header class to any HTML header element (i.e. <h1> - <h6> tags).

```
<div class="card" style="max-width: 20rem;">
<h3 class="card-header">Cold Feet?</h3>
<div class="card-body">
<h4 class="card-title">Ugg Boots</h4>
<p class="card-text">Best ugg boots on the planet.</p>
</div>
<div class="card-footer">By Uuuuggghhh.com</div>
</div>
```

Cards WIth Header Navigation

- You can also add a Bootstrap nav pill or nav tab to a card.
- **Nav Tab**
- Add the .card-header-tabs class to the <ul> element.

```
<div class="card" style="max-width: 20rem;">
<div class="card-header">
<ul class="nav nav-tabs card-header-tabs">
  <li class="nav-item"><a class="nav-link active" href="#">Ugg</a></li>
  <li class="nav-item"><a class="nav-link" href="#">Moccasins</a></li>
  <li class="nav-item"><a class="nav-link disabled" href="#">Go Go</a></li>
</ul>
</div>
<div class="card-body">
  <h4 class="card-title">Ugg Boots</h4>
  <p class="card-text">Best ugg boots on the planet.</p>
</div>
<div class="card-footer">By Uuuugghhh.com</div>
</div>
```

Cards WIth Header Navigation

- **Nav Pill**
- Add the .card-header-pills class to the <ul> element.

```
<div class="card" style="max-width: 20rem;">
<div class="card-header">
<ul class="nav nav-tabs card-header-pills">
  <li class="nav-item"><a class="nav-link active" href="#">Ugg</a></li>
  <li class="nav-item"><a class="nav-link" href="#">Moccasins</a></li>
  <li class="nav-item"><a class="nav-link disabled" href="#">Go Go</a></li>
</ul>
</div>
<div class="card-body">
  <h4 class="card-title">Ugg Boots</h4>
  <p class="card-text">Best ugg boots on the planet.</p>
</div>
<div class="card-footer">By Uuuuggghhh.com</div>
</div>
```

Cards

- **Flush Content (Remove Padding)**

- By default, the .card-body class has padding. This provides a nice aesthetically pleasing space between the content and the card border.

- Sometimes you might want to remove the padding and have content line up flush against the sides of the card.

- To create flush content, don't put that content inside a .card-body (because it has padding).

Cards

- Instead, remove the .card-body from the outer <div> and nest it inside (in its own <div>).

```html
<div class="card" style="max-width: 202px;">
<!-- Heading -->
<div class="card-body">
<h4 class="card-title">Sun Gone</h4>
<h6 class="card-subtitle text-muted">Sun disappears!</h6>
</div>
<!-- Image -->
<img src="/pix/samples/12s.jpg" alt="Photo of sunset">
<!-- Text Content -->
<div class="card-body">
<p class="card-text">The sun disappeared behind the horizon today. Experts claim it could be gone
for good!</p>
</div>
</div>
```

Cards

- Now you can place the (flush) content outside the .card-body (but still inside the .card). This effectively removes the padding — allowing the content to line up flush against the sides of the card. You can have multiple .card-body elements if required.

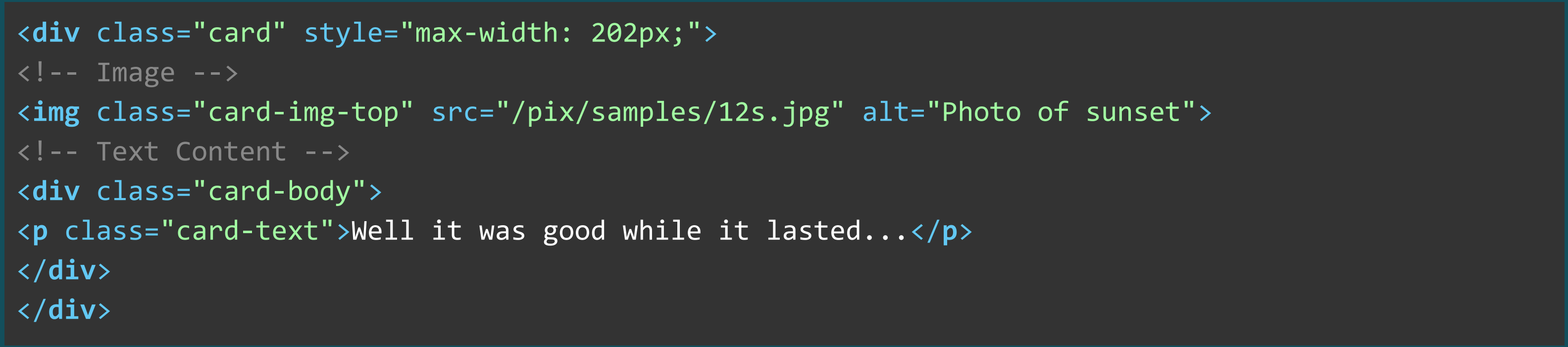
- Note that when using content with a fixed width (such as images), you may need to specify the width of the card to match that of the content.

- **Top & Bottom**

Cards WIth Images

- You can have content such as images line up flush with the top of the card (so that the top corners of the image fit flush with the rounded corners of the card).

- To do this, apply either the .card-img-top or .card-img-bottom class to the <img> tag.



```
<div class="card" style="max-width: 202px;">
<!-- Image -->
<img class="card-img-top" src="/pix/samples/12s.jpg" alt="Photo of sunset">
<!-- Text Content -->
<div class="card-body">
<p class="card-text">Well it was good while it lasted...</p>
</div>
</div>
```

Cards

- **List Groups**
- You can add list groups to cards. Use the .list-group-flush class to place it flush against the card's border.

```
<div class="card" style="max-width: 20rem;">
<div class="card-header">Sun Gone</div><!-- Card Header -->
<div class="card-body"><!-- Card Block -->
<p class="card-text">Expert opinions are divided.</p>
</div>
<!-- List Group -->
<ul class="list-group list-group-flush">
<li class="list-group-item">The Sun will come back</li>
<li class="list-group-item">The Sun won't come back</li>
<li class="list-group-item">It will have babies and spawn thousands</li>
<li class="list-group-item">Good night!</li>
</ul>
</div>
```

Cards

- **Links**
- Add the .card-link class to the <a> element to display links inside cards.

```html
<div class="card" style="max-width: 20rem;">

<div class="card-body">
<h4 class="card-title">Sun Gone</h4>
<p class="card-text">Here are the top resources for all things related to the Sun.</p>
<!-- Links -->
<a href="#" class="card-link">Sun Gone</a>
<a href="#" class="card-link">Still Gone</a>
</div>

</div>
```

Cards

- **Text Alignment**
- You can use any of Bootstrap's text alignment classes to align text within the card. These are .text-left, .text-right, .text-center, .text-justify, and .text-nowrap.

```
<div class="card text-center" style="max-width: 202px;">
<div class="card-body"><!-- Heading -->
<h4 class="card-title">Sun Gone</h4>
<h6 class="card-subtitle text-muted">Sun disappears!</h6>
</div>
<img src="/pix/samples/12s.jpg" alt="Photo of sunset"><!-- Image -->
<div class="card-body"><!-- Text Content -->
<p class="card-text">The sun disappeared behind the horizon today. Experts claim it could be gone
for good!</p>
<a href="#" class="btn btn-primary">Full Report</a>
</div>
</div>
```

Cards

- **Contextual Color**
- You can use Bootstrap's text and background utilities to change the color of the card.

```
<div class="card text-white bg-primary" style="max-width: 20rem;">
```

- **Border Color**
- You can also use Bootstrap's border utilities.

```
<div class="card text-white bg-primary" style="max-width: 20rem;">
```

Responsive Embed

- Bootstrap's responsive embed component provides an easy way to scale videos and slide shows to their containing block.

- The responsive embed component can be used on <iframe>, <video>, <object>, and <embed> elements.

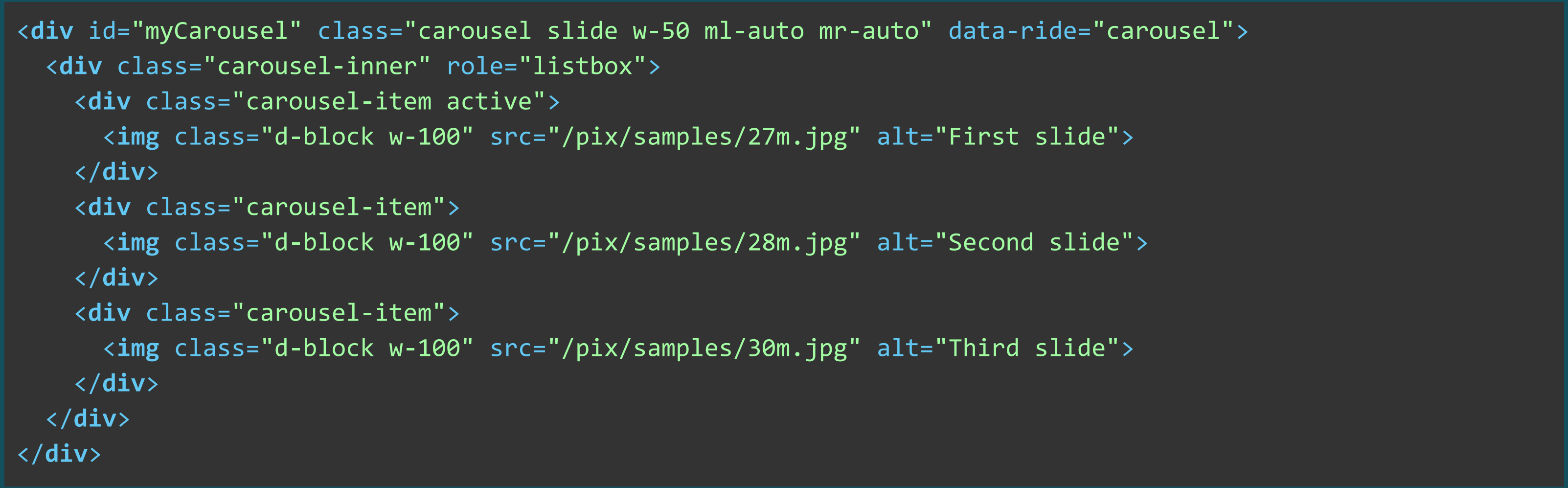
- To apply the responsive embed component to one of these elements, wrap the element within a <div> element with the .embed-responsive class, along with an intrinsic ratio class (eg, .responsive-embed-16by9 or .responsive-embed-4by3).

Responsive Embed

```html
<div class="embed-responsive embed-responsive-16by9">
<iframe class="embed-responsive-item"
src="//www.youtube.com/embed/wMuNjnNyaiA" allowfullscreen></iframe>
</div>
```

Carousel

- The Bootstrap carousel component enables you to add scrolling images and text that slide in, pause, then slide out. Controls enable the user to scroll forwards or backwards within the set. Basically a scrolling marquee with user controls.



```
<div id="myCarousel" class="carousel slide w-50 ml-auto mr-auto" data-ride="carousel">
  <div class="carousel-inner" role="listbox">
    <div class="carousel-item active">
      <img class="d-block w-100" src="/pix/samples/27m.jpg" alt="First slide">
    </div>
    <div class="carousel-item">
      <img class="d-block w-100" src="/pix/samples/28m.jpg" alt="Second slide">
    </div>
    <div class="carousel-item">
      <img class="d-block w-100" src="/pix/samples/30m.jpg" alt="Third slide">
    </div>
  </div>
</div>
```

Carousel

- **Explanation**
- To create a basic carousel:

- Apply .carousel and .slide to an outer container (with its own ID).
- For the scrollable contents, wrap all items in a .carousel-inner and give each item a .carousel-item class.

- Also, you must apply .active to one of the slides in the carousel, otherwise the carousel won't be visible. This class allows you to set one slide as the initial slide (i.e. the starting slide).

Carousel

- **Add Controls**
- To add "Previous/Next" controls, use an <a> with .carousel-control-prev or carousel-control-next. Also add a <span> with .carousel-control-prev-icon or .carousel-control-next-icon.

- To cater for screenreaders, add <span> s with the words "Previous" or "Next" and give them the .sr-only class. This will hide this text from browsers, but read out the text in screenreaders.

Carousel

```
<div id="myCarousel" class="carousel slide bg-inverse w-50 ml-auto mr-auto" data-ride="carousel">
  <div class="carousel-inner" role="listbox">
    <div class="carousel-item active">
      <img class="d-block w-100" src="/pix/samples/30m.jpg" alt="First slide">
    </div>
    <div class="carousel-item">
      <img class="d-block w-100" src="/pix/samples/28m.jpg" alt="Second slide">
    </div>
    <div class="carousel-item">
      <img class="d-block w-100" src="/pix/samples/27m.jpg" alt="Third slide">
    </div>
  </div>
  <a class="carousel-control-prev" href="#myCarousel" role="button" data-slide="prev">
    <span class="carousel-control-prev-icon" aria-hidden="true"></span>
    <span class="sr-only">Previous</span>
  </a>
  <a class="carousel-control-next" href="#myCarousel" role="button" data-slide="next">
    <span class="carousel-control-next-icon" aria-hidden="true"></span>
    <span class="sr-only">Next</span>
  </a>
</div>
```

Carousel

- **Carousel Sizing**

- Note that in these examples I've added some extra Bootstrap classes in order to size the images and center the carousel.

- In particular, I've added w-50 ml-auto mr-auto to the carousel, and w-100 to the images.

- This gives the carousel a width of 50% and a left and right margin of auto. The images get a width of 100% (i.e. 100 percent of the width of the carousel).

Carousel

- When I don't do this, the controls can fall outside the image and become invisible due to the width of the image being narrower than the carousel itself, and the controls and the background both being white (i.e. white on white).

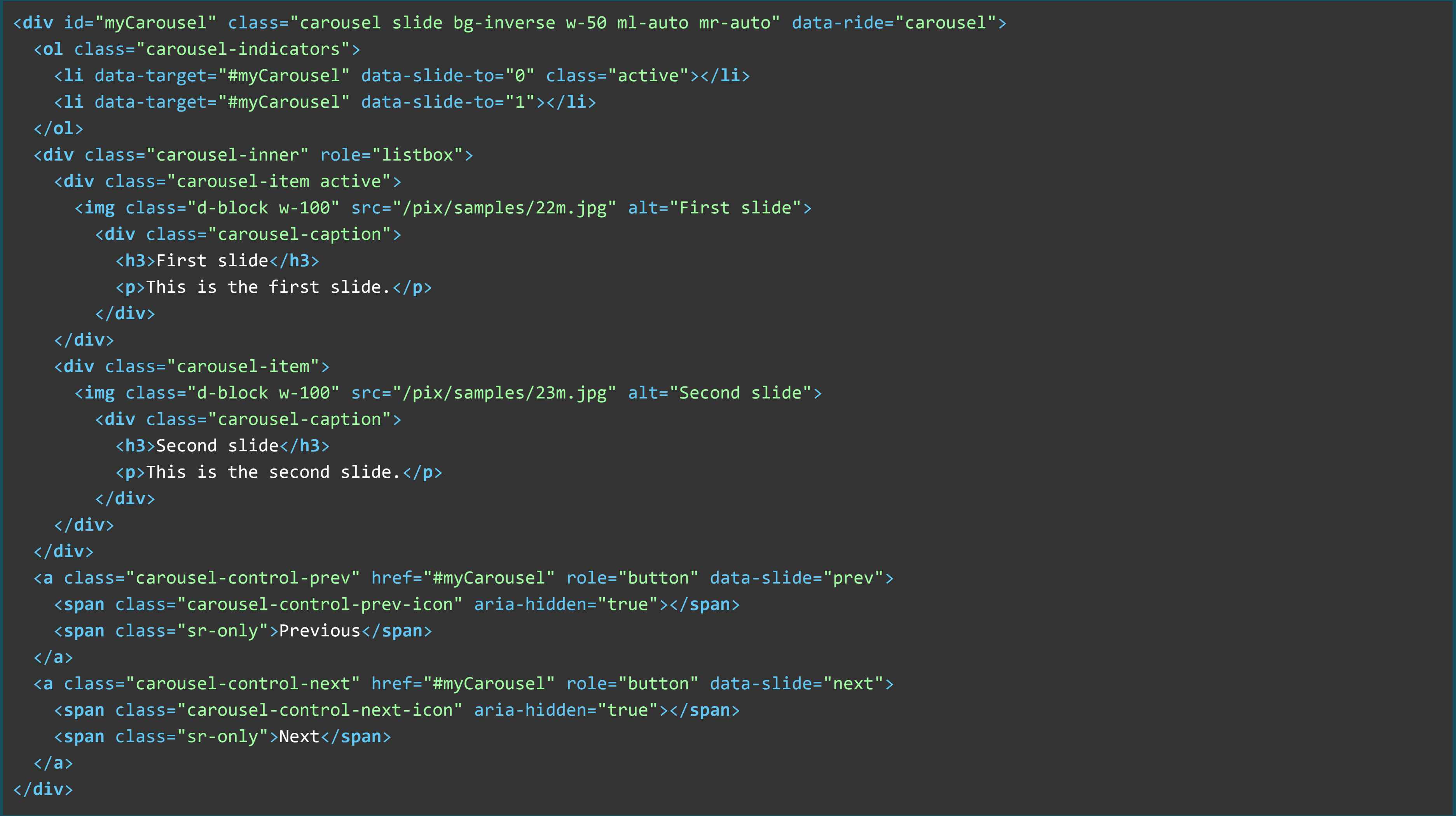
- So, if you find that you can't see the controls on your carousel, check that they're not falling outside of the image. Whether you need to resize the image and/or carousel will depend on your images and the context with which they're being displayed.

Carousel

- **Add Indicators**
- To add "indicator" controls (the little clickable areas at the bottom, center), add a list with .carousel-indicators, as well as the applicable .data-target and .data-slide-to attributes.

- **Captions**
- You can add captions to your slideshow by adding a <div> with the .carousel-caption class applied. This goes inside each .carousel-item.

```html
<div id="myCarousel" class="carousel slide bg-inverse w-50 ml-auto mr-auto" data-ride="carousel">
  <ol class="carousel-indicators">
    <li data-target="#myCarousel" data-slide-to="0" class="active"></li>
    <li data-target="#myCarousel" data-slide-to="1"></li>
    <li data-target="#myCarousel" data-slide-to="2"></li>
  </ol>
  <div class="carousel-inner" role="listbox">
    <div class="carousel-item active">
      <img class="d-block w-100" src="/pix/samples/23m.jpg" alt="First slide">
    </div>
    <div class="carousel-item">
      <img class="d-block w-100" src="/pix/samples/22m.jpg" alt="Second slide">
    </div>
    <div class="carousel-item">
      <img class="d-block w-100" src="/pix/samples/32m.jpg" alt="Third slide">
    </div>
  </div>
  <a class="carousel-control-prev" href="#myCarousel" role="button" data-slide="prev">
    <span class="carousel-control-prev-icon" aria-hidden="true"></span>
    <span class="sr-only">Previous</span>
  </a>
  <a class="carousel-control-next" href="#myCarousel" role="button" data-slide="next">
    <span class="carousel-control-next-icon" aria-hidden="true"></span>
    <span class="sr-only">Next</span>
  </a>
</div>
```



```
<div id="myCarousel" class="carousel slide bg-inverse w-50 ml-auto mr-auto" data-ride="carousel">
  <ol class="carousel-indicators">
    <li data-target="#myCarousel" data-slide-to="0" class="active"></li>
    <li data-target="#myCarousel" data-slide-to="1"></li>
  </ol>
  <div class="carousel-inner" role="listbox">
    <div class="carousel-item active">
      <img class="d-block w-100" src="/pix/samples/22m.jpg" alt="First slide">
        <div class="carousel-caption">
          <h3>First slide</h3>
          <p>This is the first slide.</p>
        </div>
    </div>
    <div class="carousel-item">
      <img class="d-block w-100" src="/pix/samples/23m.jpg" alt="Second slide">
        <div class="carousel-caption">
          <h3>Second slide</h3>
          <p>This is the second slide.</p>
        </div>
    </div>
  </div>
  <a class="carousel-control-prev" href="#myCarousel" role="button" data-slide="prev">
    <span class="carousel-control-prev-icon" aria-hidden="true"></span>
    <span class="sr-only">Previous</span>
  </a>
  <a class="carousel-control-next" href="#myCarousel" role="button" data-slide="next">
    <span class="carousel-control-next-icon" aria-hidden="true"></span>
    <span class="sr-only">Next</span>
  </a>
</div>
```

Tooltips

- Bootstrap provides tooltip functionality that allows a stylized tooltip to appear when the user hovers over an item. The text of the tooltip comes from the title attribute.

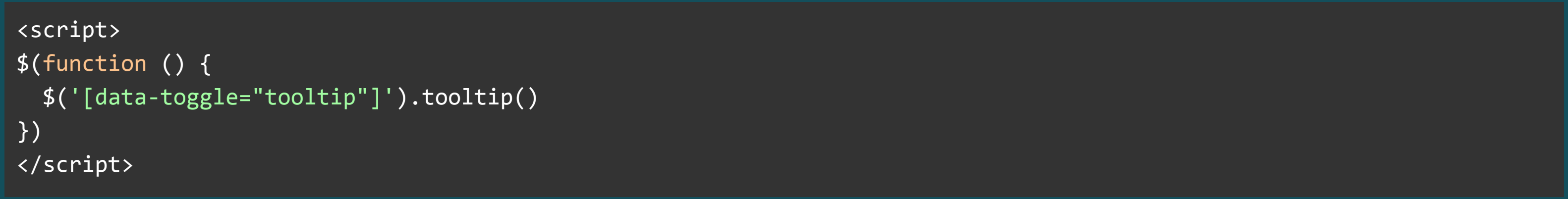
- Tooltips are generally more suitable for <a> and <button> elements.

- Tooltips rely on the 3rd party library Tether for positioning. Therefore, you need to ensure that you're calling the tether.min.js file on your web page (we already included this file when we were getting started with this tutorial).

Tooltips

- **Initialization**
- Bootstrap tooltips are not enabled by default. They require initialization before you can use them.

- One way to do this is to place the following code somewhere after the call to JQuery:

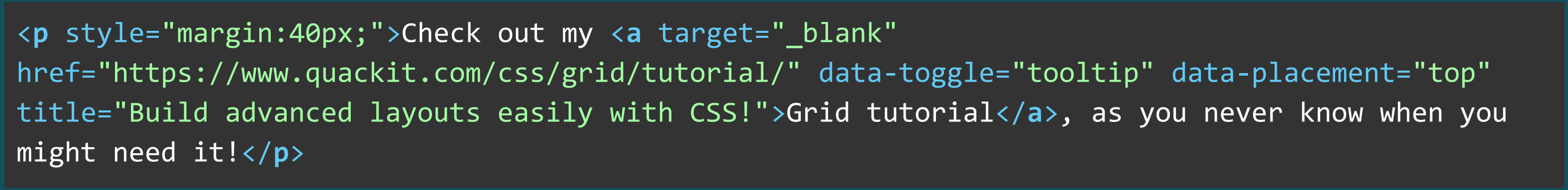


```
<script>
$(function () {
  $('[data-toggle="tooltip"]').tooltip()
})
</script>
```

- You can see an example of this by opening the above example in the Scratchpad Editor and scrolling down the code editor (left frame) until you see the above code.

Tooltips

- **Tooltip on a Link**
- Here's a basic example of applying a tooltip to a link.



```
<p style="margin:40px;">Check out my <a target="_blank"
href="https://www.quackit.com/css/grid/tutorial/" data-toggle="tooltip" data-placement="top"
title="Build advanced layouts easily with CSS!">Grid tutorial</a>, as you never know when you
might need it!</p>
```

- **Tooltip Position**
- You can specify for the tooltip to appear at the top, bottom, left or right.

- Here's a basic example of four tooltips, each with a different placement.

Tooltips

```html
<button type="button" class="btn btn-primary" data-toggle="tooltip" data-placement="top" title="Top shoes" style="margin:20px;">Shoes</button>
<button type="button" class="btn btn-info" data-toggle="tooltip" data-placement="right" title="Right boot" style="margin:20px;">Boots</button>
<button type="button" class="btn btn-warning" data-toggle="tooltip" data-placement="bottom" title="Bottom uggs" style="margin:20px;">Ugg</button>
<button type="button" class="btn btn-success" data-toggle="tooltip" data-placement="left" title="Left sock" style="margin:20px;">Socks</button>
```

Popovers

- Bootstrap provides a popover component that displays, small overlay content, similar to that found in iOS.

- Popovers rely on the 3rd party library Tether for positioning. Therefore, you need to ensure that you're calling the tether.min.js file on your web page (we already included this file when we were getting started with this tutorial).

- Popovers also require the tooltips plugin.

Popovers

- **Initialization**
- Bootstrap popovers are not enabled by default. They require initialization before you can use them.

- One way to do this is to place the following code somewhere after the call to JQuery:

```
<script>
$(function () {
  $('[data-toggle="popover"]').popover()
})
</script>
```

Popovers

- **Basic Popover**
- Here's a basic example of a popover.

- Use data-toggle="popover" to specify the popover, and data-content="" to provide the content for the popover.

```html
<button type="button" class="btn btn-primary" data-toggle="popover" data-content="Mountaineering boots are a type of footwear used in the sport of mountain climbing." style="margin:20px;">Click me</button>
<div style="text-align:center">
```

Popovers

- **Popover Position**
- You can use data-placement to specify for the popover to appear at the top, bottom, left or right.

- Here's a basic example of four popovers, each with a different placement.

- **Popover Title**
- Any title attribute you provide on the element will become the title of the popup.

Popovers

```html
<button type="button" class="btn btn-primary" data-toggle="popover" data-placement="right"
data-content="Chelsea boots are close-fitting, ankle-high boots with an elastic side panel."
style="margin:40px;">Click me</button>
<button type="button" class="btn btn-primary" data-toggle="popover" data-placement="bottom"
data-content="Dress boots are short leather boots worn by men." style="margin:40px;">Click me</button>
<button type="button" class="btn btn-primary" data-toggle="popover" data-placement="top"
data-content="Cowboy boots are for cowboys." style="margin:40px;">Click me</button>
<button type="button" class="btn btn-primary" data-toggle="popover" data-placement="left"
data-content="Ski boots are for skiing... duh!" style="margin:40px;">Click me</button>
</div>

<!--title-->
<button type="button" class="btn btn-primary" title="Jodhpur Boot" data-toggle="popover"
data-placement="right" data-content="An ankle boot designed as a riding boot with a rounded toe and a low
heel." style="margin:40px;">Click me</button>
```

Popovers

- **Closing Popovers**
- By default, popovers will close when the user clicks the element again (i.e. the one that triggered the popover).

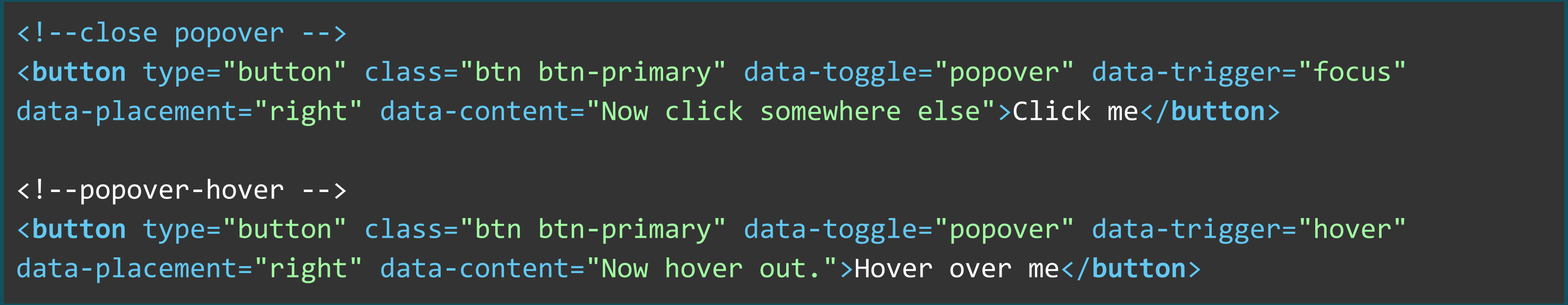
- You can make a popover close when the user clicks anywhere within the document (as opposed to the element that triggered it).

- To close a popover like this, use data-trigger="focus":

Popovers

- **Popovers on Hover**
- You can change it so that the popover is triggered by a mouseover event, rather than a click.

- To do this, use data-trigger="hover":



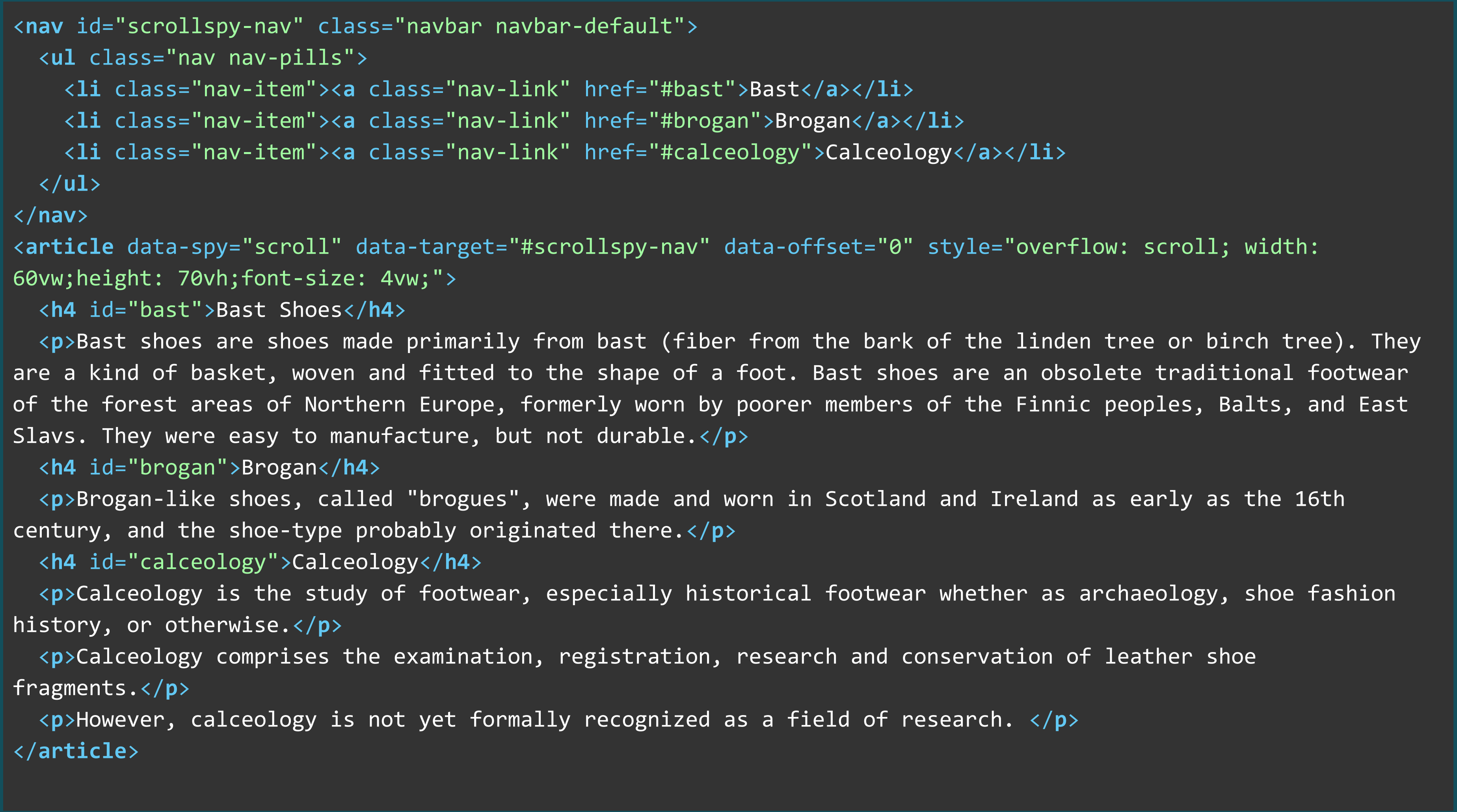
```
<!--close popover -->
<button type="button" class="btn btn-primary" data-toggle="popover" data-trigger="focus"
data-placement="right" data-content="Now click somewhere else">Click me</button>

<!--popover-hover -->
<button type="button" class="btn btn-primary" data-toggle="popover" data-trigger="hover"
data-placement="right" data-content="Now hover out.">Hover over me</button>
```

Scrollspy

- Scrollspy allows you to highlight the current position in a menu, based on the user's scroll position. As the user scrolls down the page, the applicable menu item is highlighted, based one where the scroll position is.

- **Scrollspy Example**
- Here's an example of Scrollspy in action. Scroll down the page/frame and see each menu item highlighted as you reach the corresponding position in the page:



```
<nav id="scrollspy-nav" class="navbar navbar-default">
  <ul class="nav nav-pills">
    <li class="nav-item"><a class="nav-link" href="#bast">Bast</a></li>
    <li class="nav-item"><a class="nav-link" href="#brogan">Brogan</a></li>
    <li class="nav-item"><a class="nav-link" href="#calceology">Calceology</a></li>
  </ul>
</nav>
<article data-spy="scroll" data-target="#scrollspy-nav" data-offset="0" style="overflow: scroll; width:
60vw;height: 70vh;font-size: 4vw;">
  <h4 id="bast">Bast Shoes</h4>
  <p>Bast shoes are shoes made primarily from bast (fiber from the bark of the linden tree or birch tree). They
are a kind of basket, woven and fitted to the shape of a foot. Bast shoes are an obsolete traditional footwear
of the forest areas of Northern Europe, formerly worn by poorer members of the Finnic peoples, Balts, and East
Slavs. They were easy to manufacture, but not durable.</p>
  <h4 id="brogan">Brogan</h4>
  <p>Brogan-like shoes, called "brogues", were made and worn in Scotland and Ireland as early as the 16th
century, and the shoe-type probably originated there.</p>
  <h4 id="calceology">Calceology</h4>
  <p>Calceology is the study of footwear, especially historical footwear whether as archaeology, shoe fashion
history, or otherwise.</p>
  <p>Calceology comprises the examination, registration, research and conservation of leather shoe
fragments.</p>
  <p>However, calceology is not yet formally recognized as a field of research. </p>
</article>
```

Scrollspy

- **Scrollspy requires Relative Positioning**
- Scrollspy requires the use of position: relative; on the element being spied on.

- This is most commonly the <body> element, so you can apply it to that element. However, when spying on other elements, you'll need to have a height set and overflow-y: scroll; applied.

Congratulations!