

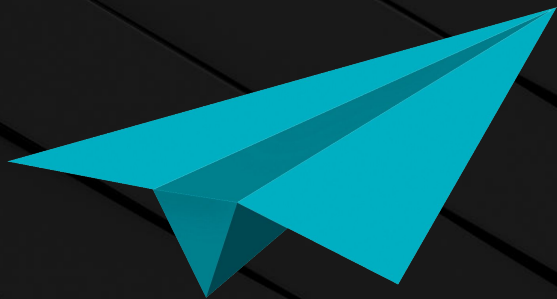


Customizing Bootstrap 4

Skills Bootcamp in Front-End Web Development

Lesson 3.2





Office Hours

30 Minutes

The background is a dark charcoal gray with a series of parallel diagonal lines running from the top-left to the bottom-right. Overlaid on this are several teal-colored geometric shapes: a large central triangle pointing right, a smaller triangle to its left, and a square to its right. Scattered around these shapes are various white line-art symbols, including a plus sign, a minus sign, a circle with a dot, a circle with a horizontal line, a circle with a vertical line, a circle with a diagonal line, a circle with a cross, a circle with a dot, a circle with a horizontal line, a circle with a vertical line, a circle with a diagonal line, a circle with a cross, a circle with a dot, a circle with a horizontal line, a circle with a vertical line, a circle with a diagonal line, and a circle with a cross.

WELCOME

Today's Objectives

By the end of class today, you will:



Create a fluid layout with the Bootstrap 4 built-in col system.



Build a desktop layout with three columns in Bootstrap using its built-in 12-column grid and user interface (UI) components.



Customize the Bootstrap 4 template's UI components

Today's Progress

In the first half of class, we'll build:

01

Cards in our responsive rows

02

Bootstrap 4 form component

03

Bootstrap 4 modal window

Navbar



Hello, world!

This is a simple hero unit, a simple jumbotron-style component for calling extra attention to featured content or information.

It uses utility classes for typography and spacing to space content out within the larger container.

[Learn more](#)



Card title

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

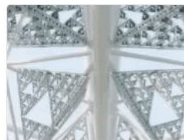
[Go somewhere](#)



Card title

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

[Go somewhere](#)



Card title

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

[Go somewhere](#)



Card title

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

[Go somewhere](#)

Today We Build—Rock Nation



Rock Nation

Venues

Artists

Near you ▾

Buy Tickets

It's Time to Rock

Rock Nation brings you the most headbanging shows on the planet. Click below to find tickets for your favorite bands

Buy Tickets



Bootstrap 4 Components Review

Bootstrap 4 Components Review

Bootstrap 4 is an open-source framework for developing with HTML, CSS, and JavaScript. Bootstrap is used to prototype quickly ideas or build entire apps with Bootstrap's responsive grid system, prebuilt components, and plugins built on jQuery (JavaScript).



What is a Bootstrap 4 component?



Why would front-end developers use Bootstrap 4 components?



How does Bootstrap's grid system work? Why is the number 12 relevant to col classes?

Questions?





Activity: Add Containers, Rows, and Columns to Your Template

In this activity, you'll add the structure for the content on your page by adding rows, containers, and columns.

Suggested Time:

15 Minutes



Time's Up! Let's Review.

Let's Review: Bootstrap's Col Class



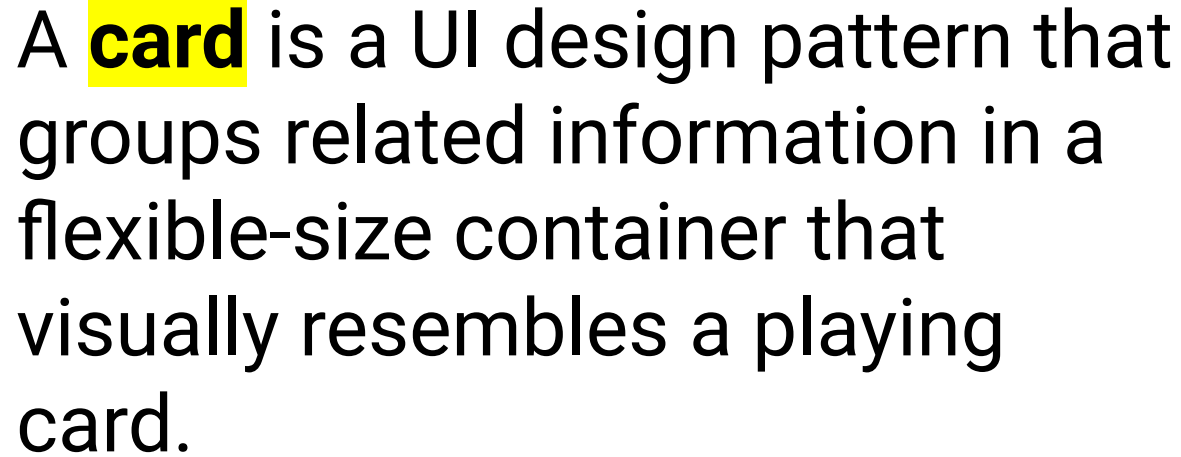
What is the difference between a container and a container-fluid?



How does the col class system work conceptually?



Bootstrap 4 Cards



A **card** is a UI design pattern that groups related information in a flexible-size container that visually resembles a playing card.

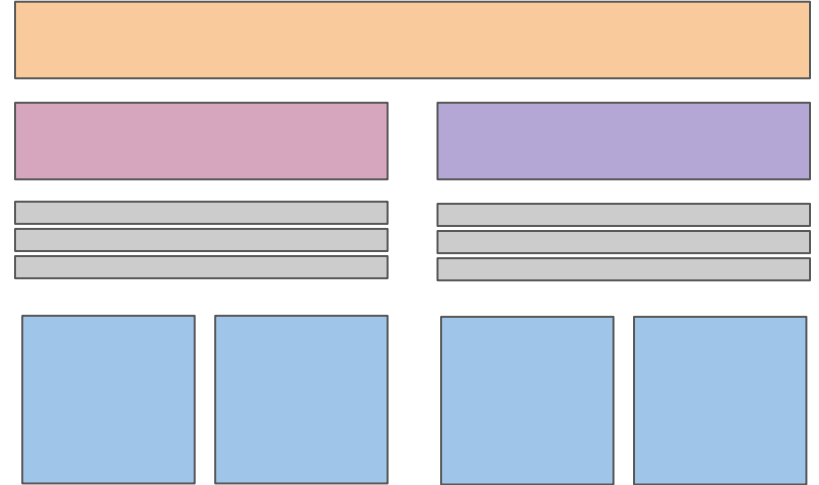
Content Chunking

Bootstrap cards help with “Content Chunking”


Monolith Content



After Chunking



Bootstrap 4 Cards



Visually
separate and
group content
that is related.

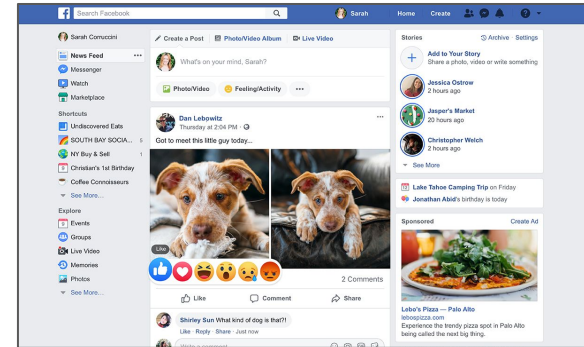
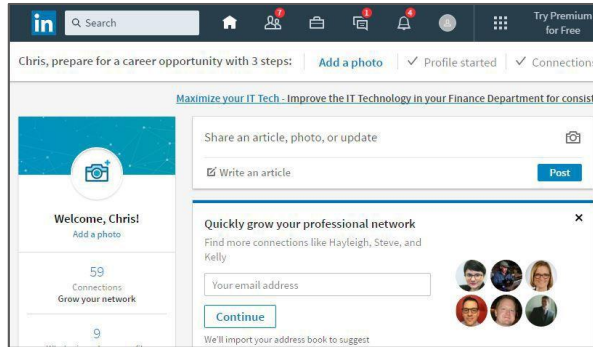
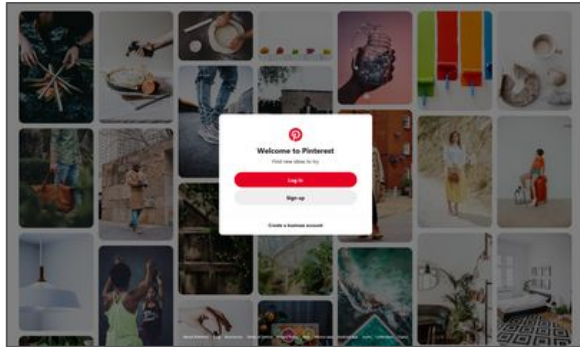
The diagram consists of three overlapping circles arranged horizontally. The first circle on the left has a light blue border. The second circle in the middle has a medium blue border. The third circle on the right has a dark teal border. The circles overlap such that the middle one is partially behind the first, and the third one is partially behind the second. Each circle contains a text block. Below each circle is a soft, light blue shadow.

Are rectangles
full of inclusive
images and text that
serve as a teaser
to more detailed
information.

Are an easy way
to partition
content, making
your UI easier to
visually digest.

Bootstrap 4 Cards

You have most certainly seen cards before without realizing it (websites like Pinterest, LinkedIn, or Facebook)
They all use cards to give you enough information to get you interested.





Instructor Demonstration

Bootstrap 4 Cards



Activity: Add Cards to Your Bootstrap 4 Template

In this activity, you'll add cards to your page.

Suggested Time:

10 Minutes



Time's Up! Let's Review.



What is a card? Have you seen cards used on any big websites? Where?

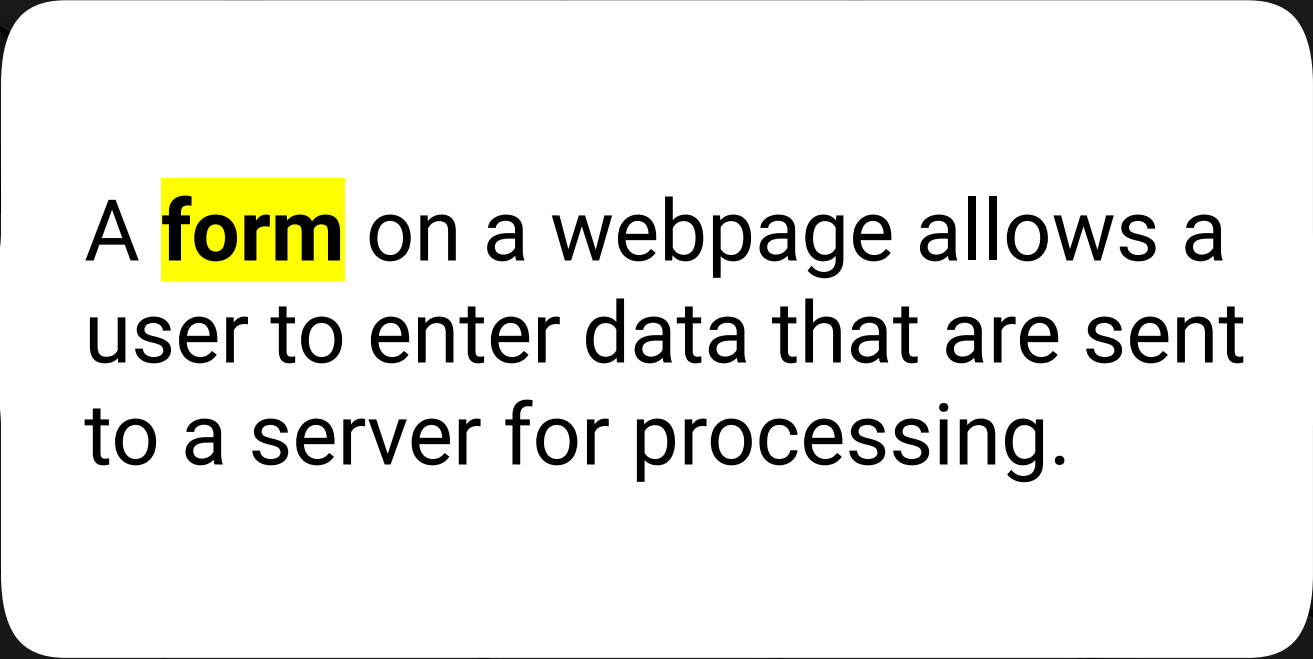


Bootstrap 4 Form and Modal Components



Bootstrap 4

Form Components

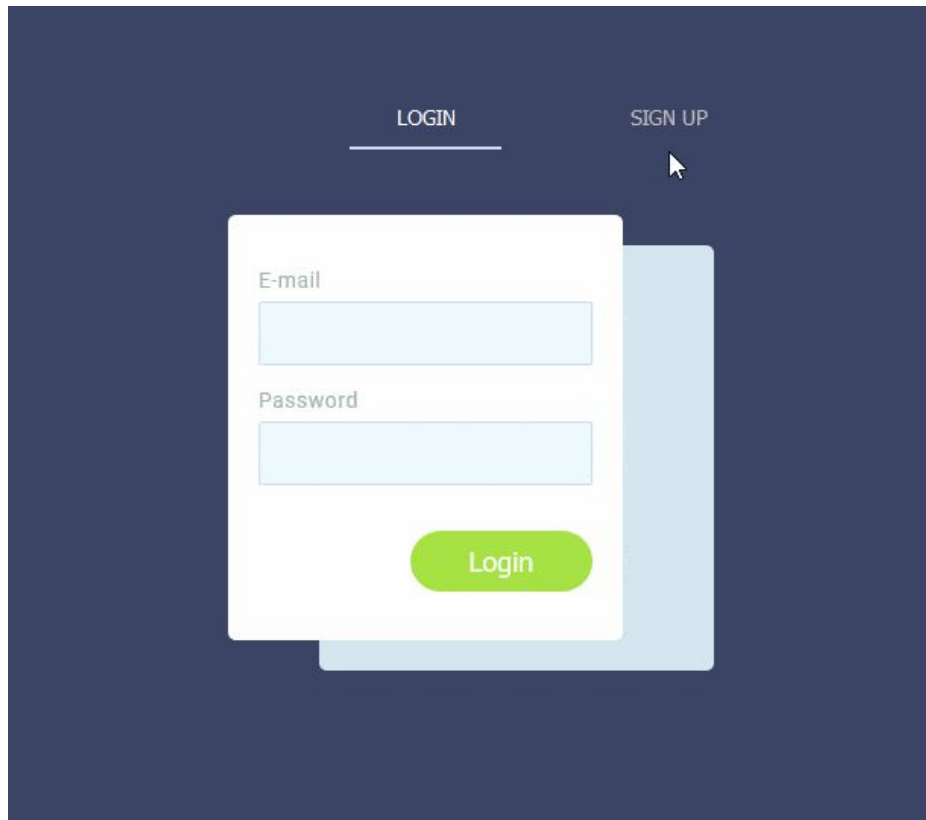


A **form** on a webpage allows a user to enter data that are sent to a server for processing.

Bootstrap 4 Form Components

Form elements are common elements found on the web and are the primary mode of transportation of data.

They are used to capture user, payment, or contact information.





Bootstrap 4 Form Components

Bootstrap gives us a form that is quick to customize (or connect to a database). They can have a variety of functions. One Example:

Signing up for a website or app.

Register

 username



☐ Remember Me

Sign Up

Bootstrap 4 Form Components

Forms in the past were notoriously difficult to style, requiring additional code called a polyfill to look the same across browsers.

This isn't a problem with Bootstrap 4's forms—they are already compatible across all browsers.

Mobile devices

Generally speaking, Bootstrap supports the latest versions of each major platform's default browsers. Note that proxy browsers (such as Opera Mini, Opera Mobile's Turbo mode, UC Browser Mini, Amazon Silk) are not supported.

	Chrome	Firefox	Safari	Android Browser & WebView	Microsoft Edge
Android	Supported	Supported	N/A	Android v5.0+ supported	Supported
iOS	Supported	Supported	Supported	N/A	Supported
Windows 10 Mobile	N/A	N/A	N/A	N/A	Supported

Desktop browsers

Similarly, the latest versions of most desktop browsers are supported.

	Chrome	Firefox	Internet Explorer	Microsoft Edge	Opera	Safari
Mac	Supported	Supported	N/A	N/A	Supported	Supported
Windows	Supported	Supported	Supported, IE10+	Supported	Supported	Not supported

Bootstrap 4 Form Components

Bootstrap 4 also has many custom form elements that can be added to your form to embellish it and make it look nice.

Range inputs



Checkboxes

- ☐ Default checkbox
- ☐ Disabled checkbox

Radio buttons

- ☒ Default radio
- ☐ Second default radio
- ☐ Disabled radio

Menus

Open this select menu ▾

Range



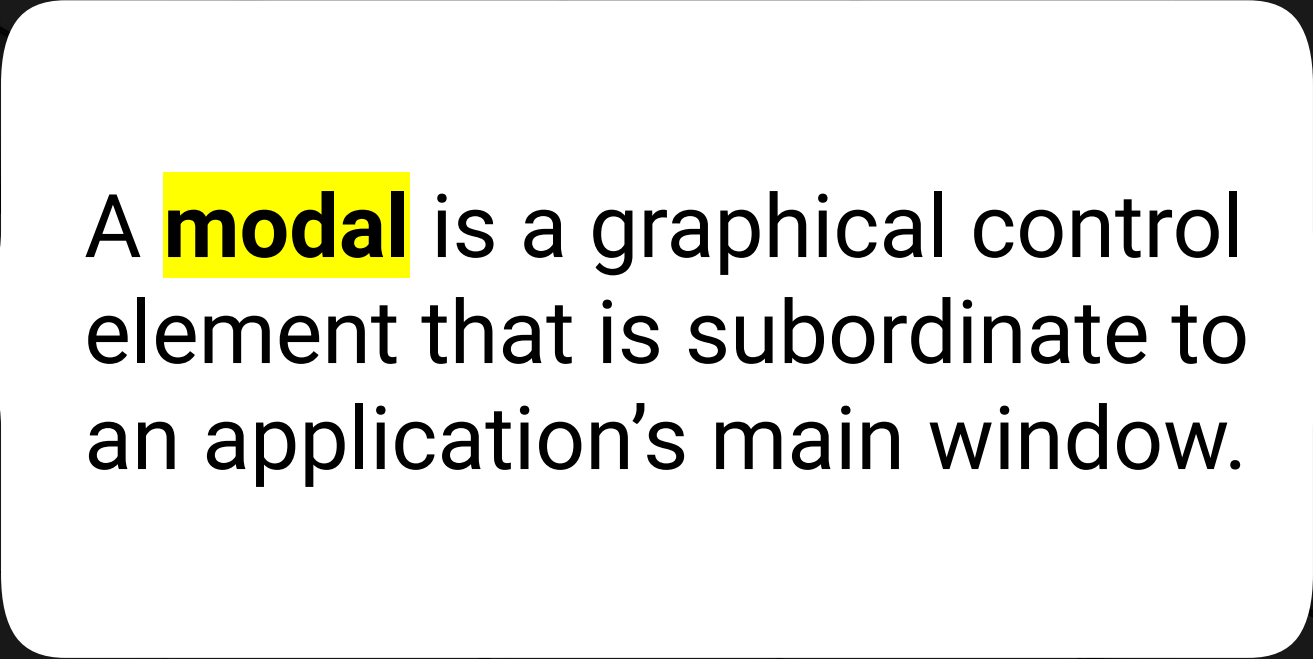
Switches

- ☒ Toggle this switch element
- ☐ Disabled switch element



Bootstrap 4

Modal Components

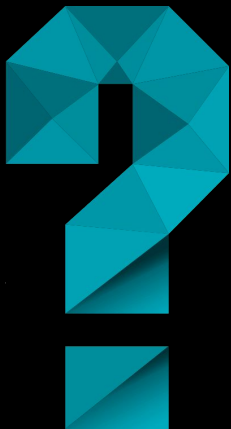


A **modal** is a graphical control element that is subordinate to an application's main window.

Bootstrap 4 Modal Components

A modal creates a mode that disables the main window but keeps it visible, with the modal window as a child window in front of it.

Bootstrap 4's modals are components that come prebuilt with animations and transitions that make a fully functional, pleasing UI component.



See the window that pops up?
That is a modal.

A rectangular button with rounded corners, featuring a dark background and white text that reads "Show modal". The button is centered within a light gray rectangular area that represents a modal window.

Bootstrap 4 Modal Components



Modals are built with HTML, CSS, and JavaScript.



They're positioned over everything else in the document and darken the backdrop so that your user is focused on your content.



Modals should be used sparingly to avoid usability issues.

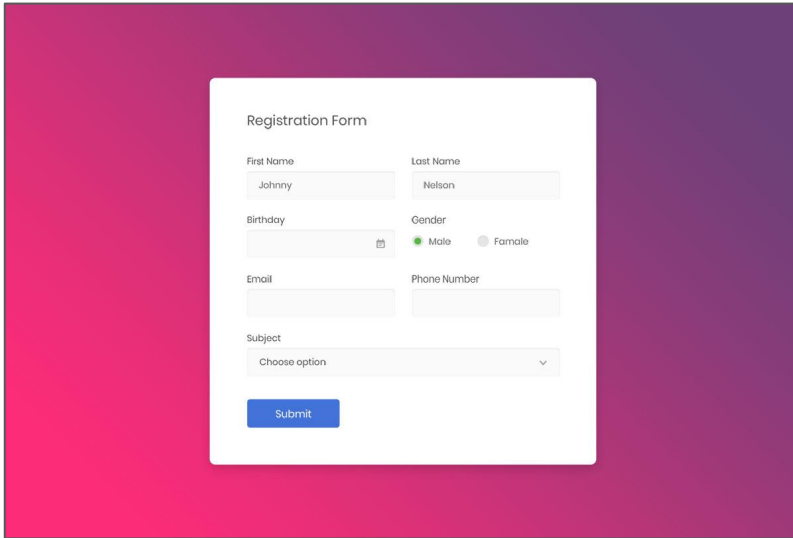


Modals can hold many different UI elements and are used to focus a user on a specific part of our UI.

Bootstrap 4 Modal Components

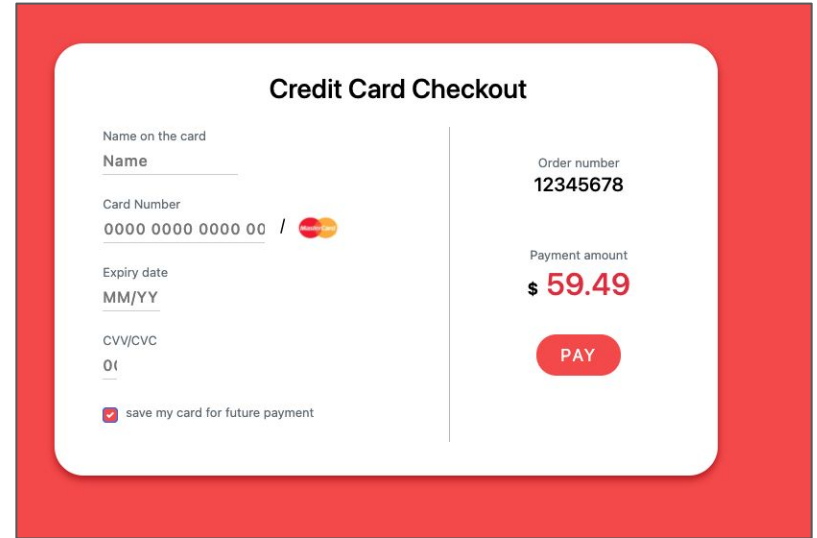
Examples of modals:

Sign-in forms



A registration form modal with a white background and rounded corners, centered on a purple-to-pink gradient background. The form is titled "Registration Form" and contains several input fields: "First Name" (with "Johnny" entered), "Last Name" (with "Nelson" entered), "Birthday" (with a calendar icon), "Gender" (with "Male" selected and "Female" as an option), "Email", and "Phone Number". There is also a "Subject" dropdown menu with "Choose option" selected. A blue "Submit" button is at the bottom.

Payment forms



A credit card checkout modal with a white background and rounded corners, centered on a red background. The form is titled "Credit Card Checkout" and is divided into two columns. The left column contains fields for "Name on the card" (with "Name" entered), "Card Number" (with "0000 0000 0000 00" and a Mastercard logo), "Expiry date" (with "MM/YY" entered), and "CVV/CVC" (with "00" entered). There is also a checkbox labeled "save my card for future payment" which is checked. The right column contains the "Order number" "12345678" and the "Payment amount" "\$ 59.49". A red "PAY" button is at the bottom right.

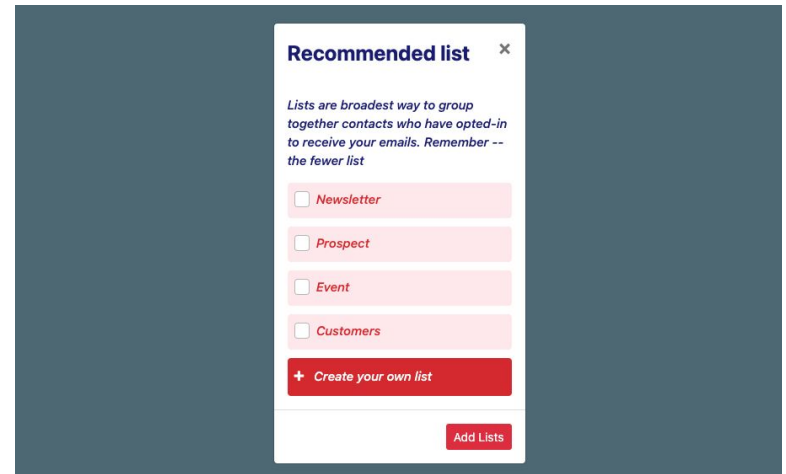
Bootstrap 4 Modal Components

Examples of modals:

Advertisements



Information boxes



Bootstrap 4 Modal Components

Modal elements were not common on the web before Bootstrap 4, partially because they require custom JavaScript code to function. All you need to do is link to the Bootstrap's CSS and JavaScript files.

Bootstrap 4 modals have two requirements:

```
<!-- Button trigger modal -->  
<button type="button" class="btn btn-primary" data-toggle="modal" data-target="#exampleModal">  
  Launch demo modal  
</button>
```

This attribute tells our button that it is connected to a Bootstrap 4 modal element. This is required for our button to trigger a Bootstrap 4 modal.

This attribute tells our button which modal element it is targeting.



Activity: Forms and Modals

In this activity, you'll add a form and a modal component to your template, customizing their Bootstrap elements with HTML and CSS.

Suggested Time:

10 Minutes



Time's Up! Let's Review.

Your Site Should Look Like This...



Card title

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

[Go somewhere](#)



Card title

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

[Go somewhere](#)



Card title

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

[Go somewhere](#)



Card title

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

[Go somewhere](#)

Sign up for our mailing list

Email address

We'll never share your email with anyone else.

Password

Let's Review: Forms and Modals



What are forms used for on the web?



Why is the Bootstrap 4 form useful?



What is a modal?



What kind of UI elements might you find in a modal?

A close-up, high-angle shot of a computer keyboard. The central focus is a large, white, rectangular key with rounded corners. On this key, there is a dark blue icon of a coffee cup with three wavy lines above it representing steam. Below the icon, the word "Break" is printed in a dark blue, serif font. The key is set against a light-colored, textured keyboard surface. Surrounding the main key are other keys, including one with a double quote symbol to the left and one with a dash/slash symbol to the right, all in a similar white and blue color scheme.

Break



Overwriting Bootstrap 4

Overwriting Bootstrap 4

Bootstrap 4 on its own is useful, but being able to create fully responsive components simply by overriding default styles is Bootstrap 4's real power.

You can overwrite Bootstrap's custom CSS styles to match your design.



Overwriting Bootstrap 4

Bootstrap 4 classes are usually overwritten using your own custom classes that you then style to make components your own. Bootstrap 4 comes with all the CSS and HTML you'll need to create a template efficiently.

```
<!-- Bootstrap 4 CSS -->
```

```
<link rel="stylesheet" type="text/css" href="bootstrap.min.css">
```

We can then **customize our template** to look however we want.

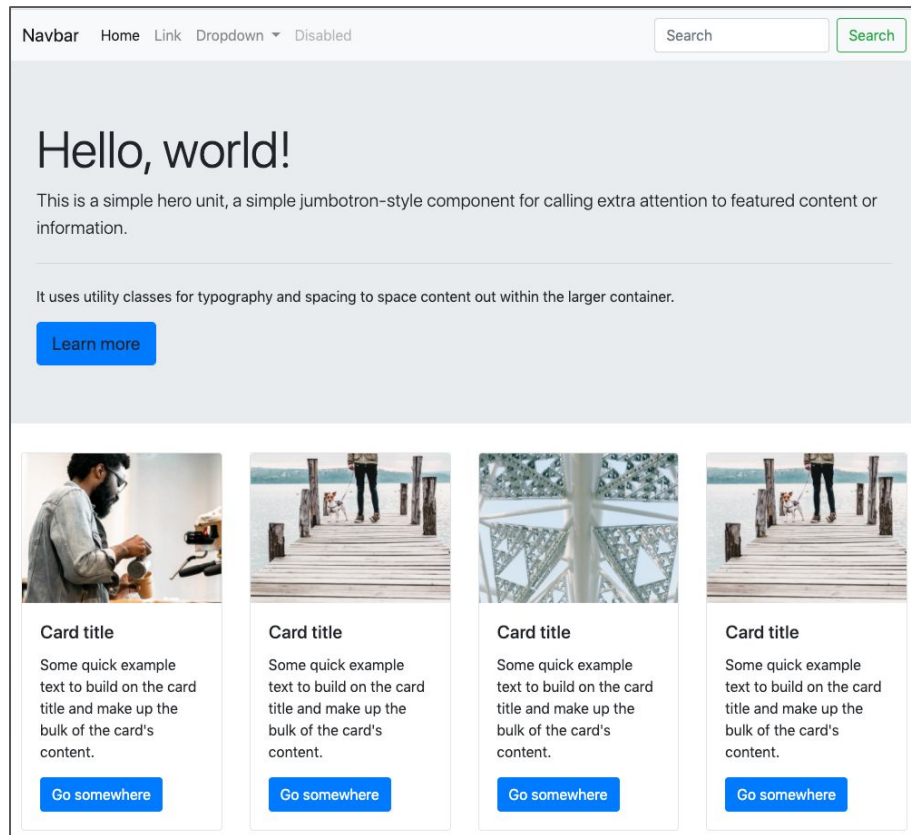
```
<!-- Custom CSS -->
```

```
<link rel="stylesheet" type="text/css" href="custom.css">
```

Overwriting Bootstrap 4

This is what we developed during Lesson 4.1.

Fairly “Bootstrap looking,” right?

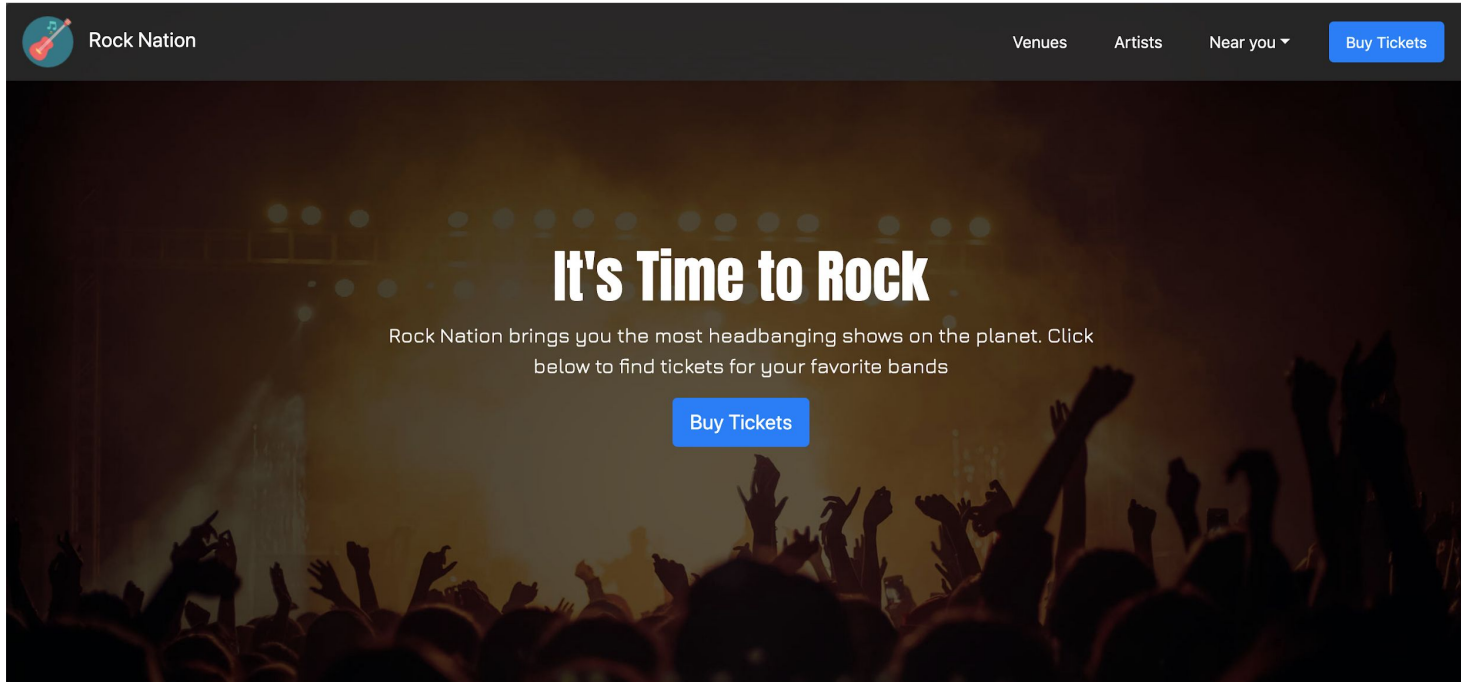




Bootstrap components are
meant to be overridden to create
a full-color design.

Overwriting Bootstrap 4

Here's a peek at what it'll look like after today:



Much better!

Transforming a template from just components to a full design is how Bootstrap's components are meant to be used.

Overwriting Bootstrap 4

If you don't customize components, your design will still look and feel "Bootstrappy," and clients and business stakeholders will be able to tell.

The whole goal for a UX designer is to create an experience!



The whole goal for a UX designer is to create an experience!





How does overwriting happen?

Overwriting Bootstrap 4

First, students need to understand that internet browsers load files top–down, meaning that line 1 loads first, followed by line 2, and so on, until the entire page loads.

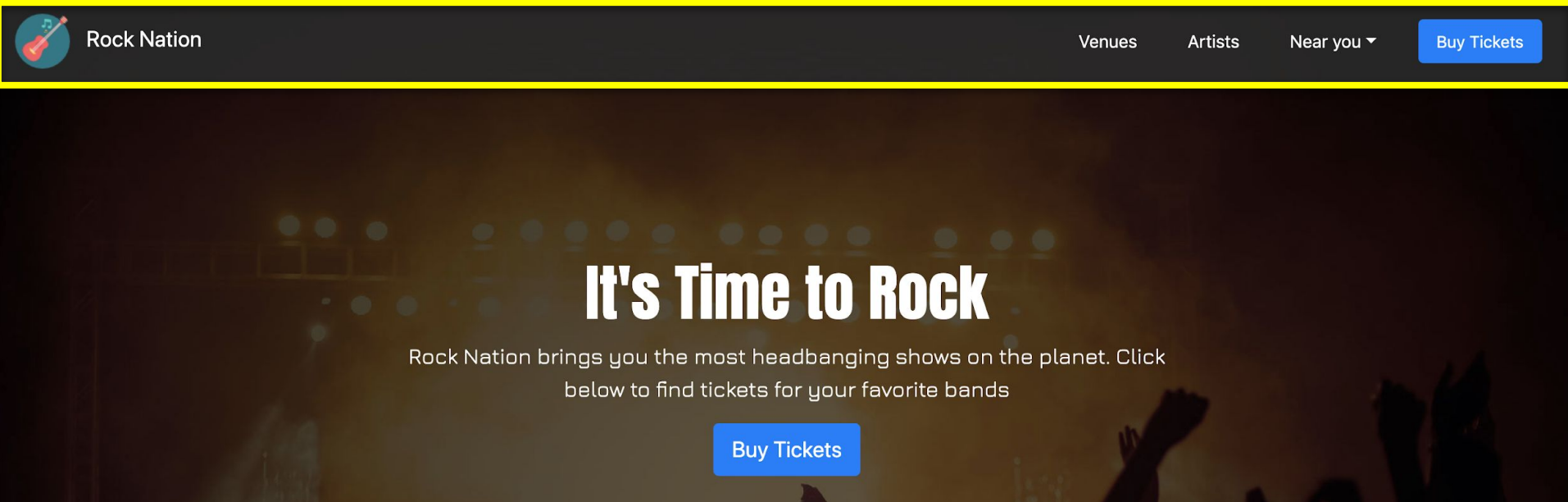
Load style sheets like so and second will overwrite those style sheets that loaded first.

```
<!-- Bootstrap 4 CSS -->
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T"
crossorigin="anonymous">
<!-- Load our custom stylesheet 2nd to overwrite bootstrap with our custom styles-->
<link rel="stylesheet" href="css/index.css">
```

In your custom style sheet, you can target the Bootstrap 4 elements and write your custom CSS to overwrite Bootstrap 4's component styles.

Let's Code!

Let's start customizing our Bootstrap 4 template into a complete user funnel, starting with the navigation.





Instructor Demonstration

Customize a Search Bar



Activity: Webpage Funnel Customization: Part 1—Navbar

In this activity, you'll customize your site's navbar to reflect the site's layout and overall brand identity better.

Suggested Time:

15 Minutes

Activity: Customize Your Navigation

`!important;`

The `!important;` tag can be added to the end of any CSS property to make it override any styles added to it.

`margin-left: auto;`

The `margin-left: auto;` tag will move block-level elements to the farthest left they can go.

`margin-right: auto;`

The `margin-right: auto;` tag will move block-level elements to the farthest right they can go.

`margin: 0 auto;`

The `margin: 0 auto;` tag will center elements perfectly in their parent containers.

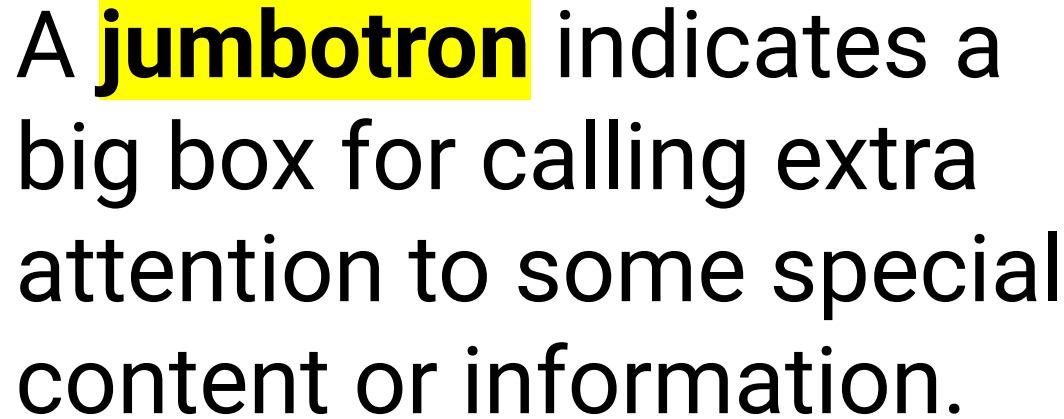
Your Navigation Should Look Like the Following





Time's Up! Let's Review.

UI Elements: Jumbotrons



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

Jumbotrons are a widely used web design feature.





Inside a jumbotron, you can put nearly any valid HTML—including other Bootstrap elements/classes.

Jumbotron Component

Hello, world!

This is a simple hero unit, a simple jumbotron-style component for calling extra attention to featured content or information.

Learn more

```
<div class="jumbotron">
  <h1>Hello World!</h1>
  <p>This is a simple hero unit, a simple jumbotron-style component for calling
extra attention to featured content or information.</p>
  <p><a class="btn btn-primary btn-lg" href="#" role="button">Learn More</a></p>
</div>
```



Instructor Demonstration

Customize Our Jumbotron!



Activity: Webpage Funnel Customization: Part 2—Jumbotron

In this activity, you'll customize a jumbotron. You'll learn about overriding Bootstrap 4 styles and learn some new tricks using view height to calculate the height of an element.

Suggested Time:

15 Minutes

Your Jumbotron Should Look Like the Following



It's Time to Rock

Rock Nation brings you the most headbanging shows on the planet. Click below to find tickets for your favorite bands

[Buy Tickets](#)



Time's Up! Let's Review.



Congratulations! Recap



What is a webpage funnel, and why is it important?



How is it related to a CTA?



Which components did we customize today?

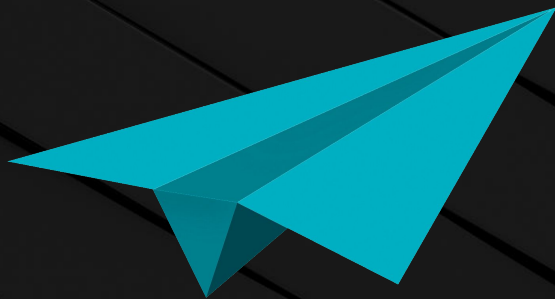


Did anyone have trouble customizing any components? What problems did you encounter?

Questions?



*The
End*



Office Hours

30 Minutes