

You Already Know

Course(s):

1. A Front-End Web Developer MasterClass Using HTML, CSS, and JavaScript





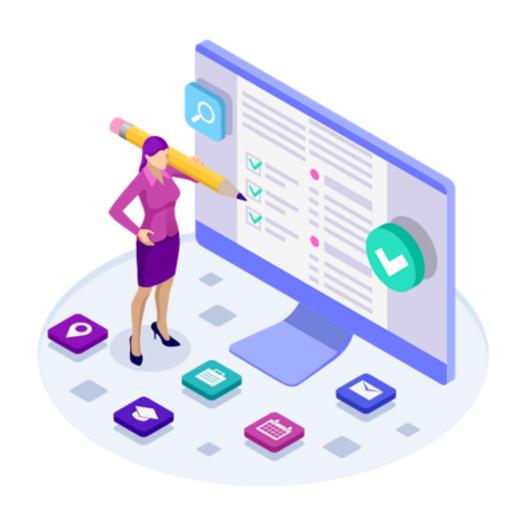






- Apply designs of HTML5 and CSS3
 - Basics of HTML and CSS
 - What we'll create in this course?
- Build your own HTML5 video player
 - Build HTML5 video player

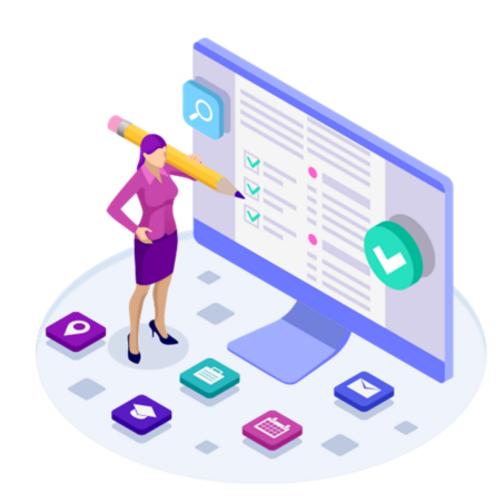
- Describe HTML5 input types
 - HTML5 input types



de Colo

- Get your free Web Hosting: HTML
- Structure of a website
- Heading, Paragraphs, Links, Images, and Tables

- Explain the fundamentals of CSS
 - Introduction
- CSS selectors
- CSS transforms
- Create a project using HTML and CSS
 - Headers
 - Menu
 - Sidebars



A Day in the Life of a Full Stack Developer

Joe has gained expertise in Bootstrap. A new project for the food industry is assigned to him.

In this sprint, he has to develop a customizable website for a restaurant that will provide a brief information on the restaurant, its bestsellers, and its contact number.

In this lesson, you will learn how to solve this real-world scenario to help Joe complete his task effectively and quickly.



Learning Objectives

By the end of this lesson, you will be able to:

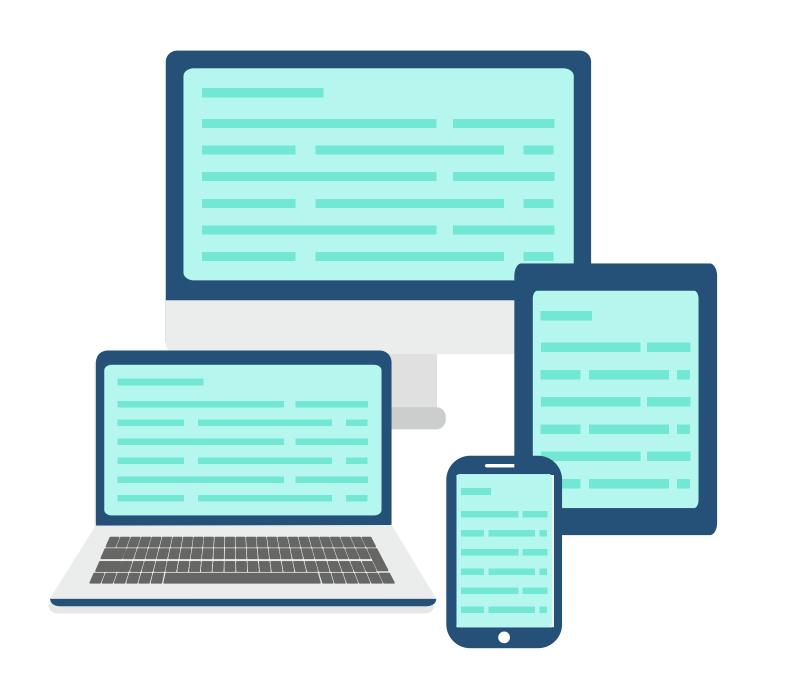
- Explain HTML, CSS, Bootstrap typography and utilities
- Illustrate the Bootstrap design
- List buttons, navigation bars, input groups, and media objects
- Describe carousel, accordion, modal, and pagination
- Define forms, tabs, and captions



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Responsive Web Design: Introduction

Responsive Web Design is a responsive browser that can adapt to different screen sizes.





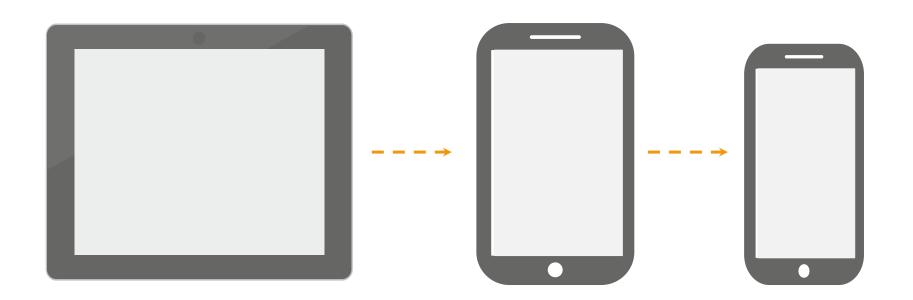
Responsive vs. Adaptive

Responsive⁻

Responsive web design is a fluid design that responds to the browser and can resize according to the screen size with no empty spaces on the sides.

Adaptive

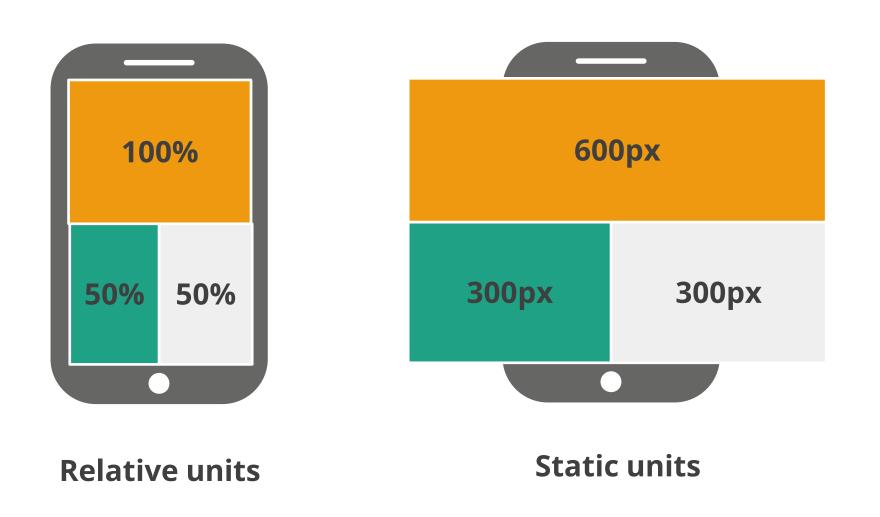
Adaptive design adapts to the screen size only at specific points.



Responsive Web Design

Relative vs. Static Units

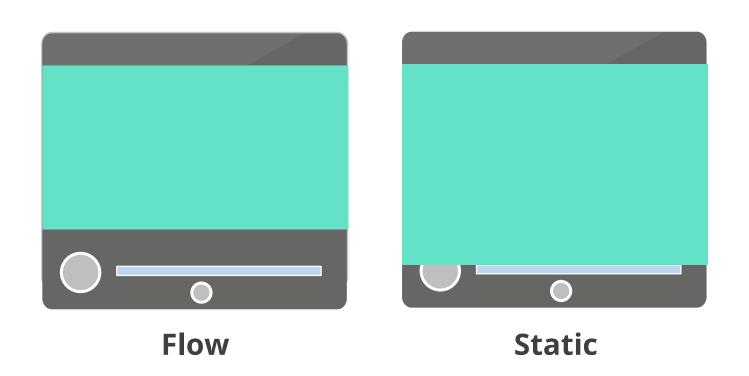
Relative units can adapt to any screen in percentages, unlike static units that adapt in pixels.





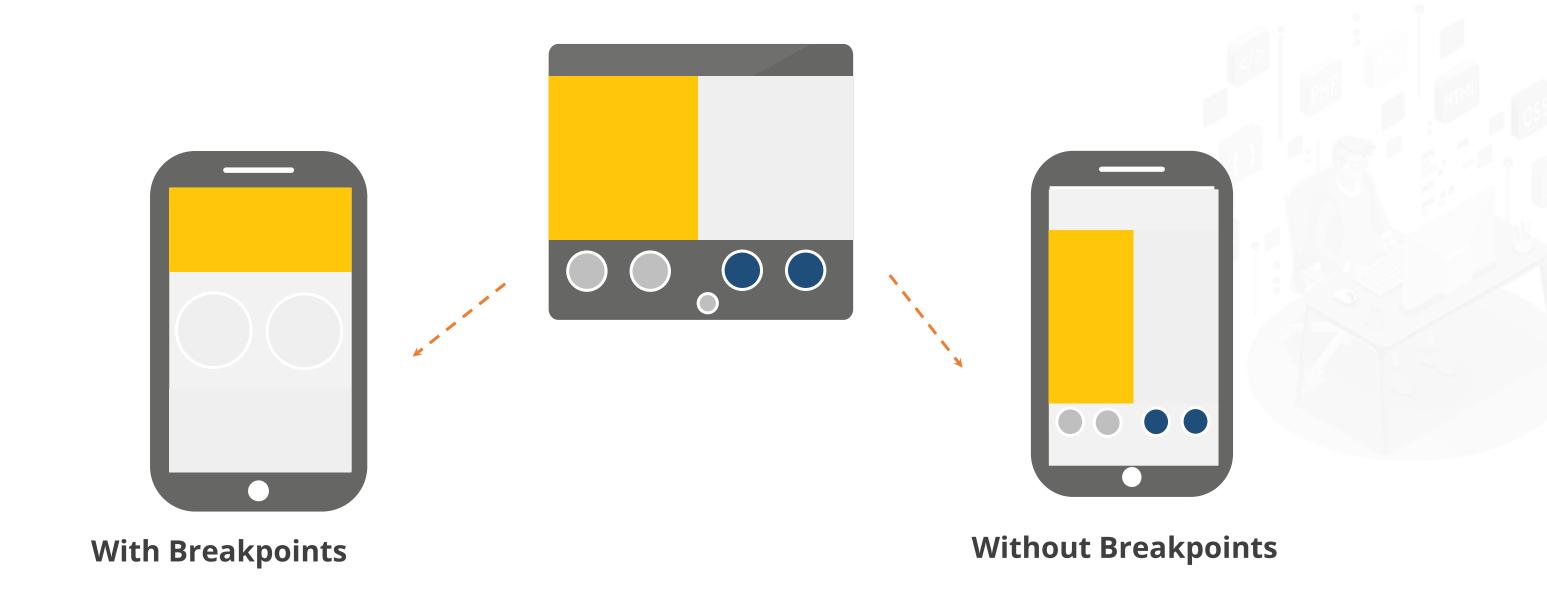
Flow vs. Static

The flow in responsive web design helps the content to smoothly adjust when the screen size changes, unlike in static web design.



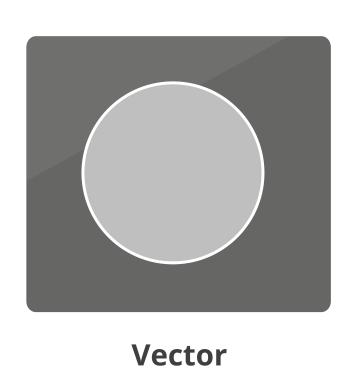
With vs. Without Breakpoints

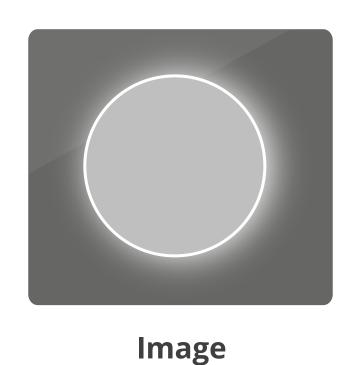
When the screen size changes, the presence of breakpoints allows the content to adapt to the screen size.



Vectors vs. Images

A vector adapts to the resolution of the retina, and its quality is independent of the screen resolution. In the case of an image, it cannot adapt to the resolution of the retina.





Mobile First

To develop a mobile-first design:

- Start with CSS development for mobile device, followed by media queries to adapt to desktops and tablets
- Determine the content that is the most important



Why Mobile First?

Is a design that is independent of the screen size

Helps avoid overwriting of code

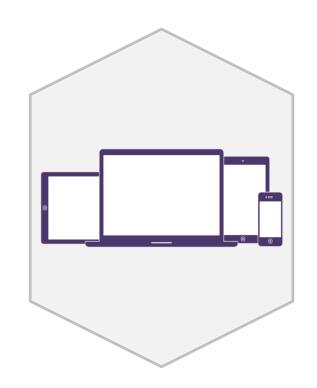
Narrows down the website information to a convenient portion



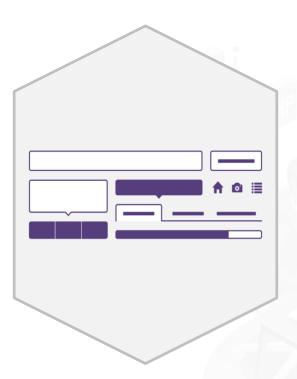
Properties of Bootstrap



Preprocessors



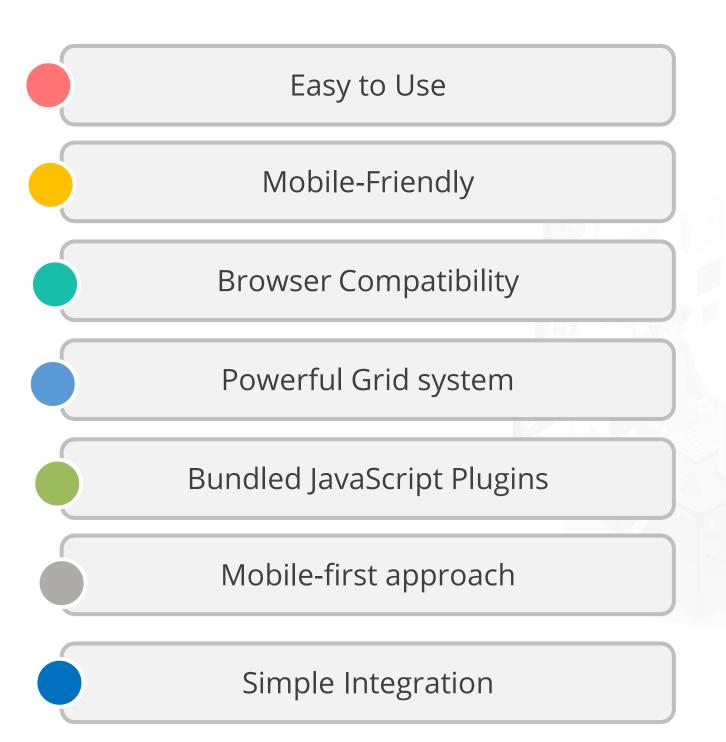
One framework for every device



Customizable

Features of Bootstrap







Competitors

These are a few front-end web designing alternatives that can be used instead of Bootstrap:



Foundation



Skeleton



Bootstrap Components

- Labels
- Panels
- Jumbotron
- Page Header
- Navbar
- Thumbnails
- Alerts
- List group
- Page Header
- Wells

- Badges
- Dropdowns
- Button groups
- Glyphicons
- Button Drops
- Breadcrumbs
- Input groups
- Navs
- Pagination
- Media Object



• At the start of the page, include HTML5 doctype and the lang attribute with the right character set.

- •Add the viewport <meta> tag for proper touch zooming and rendering
- •Adjust the width and the initial zoom level of the page as per your device
- •This will ensure that you have a better experience and there will be no need for zooming

- •Include the following files:
 - bootstrap.min.css
 - jquery.min.js
 - bootstrap.min.js
- •Download and include the files in your page. In this example, we include them from the Internet:

• In Bootstrap, you can include elements to wrap the site contents.

Import Bootstrap in Your Application



Duration: 20 Min.

Problem Statement:

You are given a project to create an HTML page and include Bootstrap to your web application.

Assisted Practice: Guidelines

Steps to import bootstrap in your application:

- 1. Write an HTML page in your code editor
- 2. Add bootstrap to your application using CDN
- 3. Host bootstrap locally
- 4. Push the code to GitHub repositories



Browsers and Devices Compatibility ©Simplilearn. All rights reserved.

Responsive with Bootstrap

Bootstrap helps you to create responsive and mobile-friendly websites. It offers:





CSS3 media queries

Responsive embedded and flexible image

Responsive utilities



Use of @media Rule

With @media rule in Bootstrap, you can have a different layout for all screens, including tablet, mobile, and desktops.





Introduction to Grid Systems

In Bootstrap

- Grid system permits a maximum of 12 columns on a page.
- You can group and create wider columns instead of using them individually.
- For decent organization and padding, place the rows within .container-fluid (full-width) or .container (fixed-width).
- Group columns horizontally using rows.
- Create grid columns by specifying the number of available columns you wish to span. For example, three equal columns would use three .col-xs-4.
- Place the content within columns, and only columns may be immediate children of rows.

Grid System

In Bootstrap, the grid system presents a swift and simple way to build responsive website layouts.

	Extra small devices Phones (<768px)	Small devices Tablets (≥768px)	Medium devices Desktops (≥992px)	Large devices Desktops (≥1200px)
Grid behavior	Horizontal at all times	Collapsed to start, horizontal above breakpoints		
Container width	None (auto)	750px	970px	1170px
Class prefix	.col-xs-	.col-sm-	.col-md-	.col-lg-
# of columns	12			
Column width	Auto	~62px	~81px	~ 97px
Gutter width	30px (15px on each side of a column)			



Bootstrap Grid Classes

The Bootstrap grid system has four classes:



These classes can be combined to create more dynamic and flexible layouts.

Bootstrap: Cards, Tables, and Lists ©Simplilearn. All rights reserved.

Typography

Typography is a Bootstrap feature for formatting and styling text content. Headings are set by HTML tags from <H1> to <H6>, and some others such as <mark>, <small>, and .

HTML code	Display
Heading H1	Heading H1
Heading H2	Heading H2
Heading H3	Heading H3
Heading H4	Heading H4
Heading H5	Heading H5
Heading H6	Heading H6



Images

Image classes in Bootstrap are responsive so that they scale in size according to the size of their parent elements without losing the aspect ratio.

HTML code	Display
<pre></pre>	
	
<pre></pre>	

Media Objects

Media Objects are components to display images or videos that are aligned to the left or right of the content. Usually, blog comments and tweets are displayed as media objects.

Syntax:

Display:



Comment heading.

Some comments here......

Cards

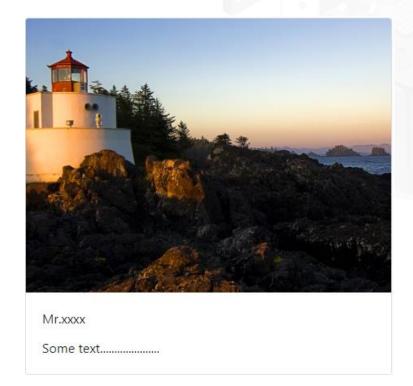
Cards are used to display content made of different types of objects such as text or image.

Basic card:

This is a basic card

Image card:

```
<div class="card" style="width:450px">
    <img class="card-img-top"
src="img.jpg">
        <div class="card-body">
             Mr.xxxx
             Some
text...
             </div>
             </div>
        </div>
```





Jumbotrons

A Jumbotron is a component to display a message in a grey box to call for extra attention to the text.

Syntax:

```
<div class="jumbotron">
    <h1>Jumbotron</h1>
    It is a grey box to highlight a message.
</div>
```

Display:

Jumbotron

It is a grey box to highlight a message.

Badges

Badges, or labels, are used to highlight or show additional information related to a particular content.

HTML code	Display
<h1>Gifts <span class="badge badge-
warning">Free</h1>	Gifts Free
<h2>Laptops New</h2>	Laptops New
<h3>Tablets New arrivals</h3>	Tablets New arrivals
<h4>Smart phones <span class="badge badge-</td><td>Smart phones Coming soon</td></tr><tr><td>secondary">Coming soon</h4>	Inbox 12
<h5>Inbox 12</h5>	

Glyphicons

Glyphicons are icon fonts that can be used in web pages in the forms of text, toolbars, forms, buttons, and navigation toolbars.

Example:

HTML Code	Display
	A
	•
	
	iB
	55
	()
	Q

Tables

Tables allow data such as text, images, or links to be arranged into rows and columns.

HTML code		Display	
<thead></thead>			
Heading 1 Heading 2 Heading 3	Heading 1	Heading 2	Heading 3
************************************	Cell 11	Cell 12	Cell 13
Cell 11 Cell 12 Cell 13	Cell 21	Cell 22	Cell 23
	Cell 31	Cell 32	Cell 33

List Groups

List groups are used to display a set of elements in an ordered or unordered list.

	HTML code	Display
Unordered List	<pre><ul class="list-group"></pre>	First
	<pre><li class="list-group-item">First <li class="list-group-item">Second <li class="list-group-item">Third <li class="list-group-item">Fourth </pre>	Second
	<pre><!--! Class= list group item -->Fourth <!--i class="list-group-item"-->Fifth </pre>	Third
		Fourth
Ordered List	<pre> First Second Third Fourth </pre>	1. First 2. Second 3. Third 4. Fourth



Buttons

A button is used to trigger an action. Optional style and color classes can be used to change the appearance of a web page.

HTML code	Display
<button class="btn btn-</td><td></td></tr><tr><td>primary" type="button">Primary</button> <button <="" td="" type="button"><td></td></button>	
class="btn btn-secondary">Secondary <button< td=""><td>PRIMARY SECONDARY SUCCESS</td></button<>	PRIMARY SECONDARY SUCCESS
type="button" class="btn btn-success">Success	

Button Groups

A button group is a series of multiple buttons in a line.

HTML code	Display
<pre><div class="btn-group" role="group"> <button class="btn btn- primary" type="button">Yes</button> <button class="btn btn- info" type="button">No</button> <button class="btn btn- warning" type="button">Exit</button> </div></pre>	Yes No Exit

Dropdowns

A dropdown is a menu that displays a list of text or links for a user to choose from.

Display
Dropdown
First
Second
Third

Stateful Buttons

Stateful buttons can be used to toggle between states. These buttons can change text and color when clicked or hovered over.

HTML Code	Display
<pre><label class="btn btn-primary active"></label></pre>	Option A Option B Option C

Header and Footer

Bootstrap **header** is a method used to hold elements. It is usually placed above the *body* element.

<div class="card-header bg-transparent bordersuccess">Bootstrap</div>

Bootstrap **footer** is a navigation method used to hold links, buttons, and other elements. It is usually placed at the end of a web page.

<div class="card-footer bg-transparent border-success">Updated 3 minutes ago</div>



Header and Footer

```
<div class="card border-success mb-3" style="max-width:
18rem;">
```

<div class="card-header bg-transparent bordersuccess">Bootstrap</div>

```
<div class="card-body text-success">
```

<h5 class="card-title">Header and Footer</h5>

This is the simplest way of
using header and footer

</div>

<div class="card-footer bg-transparent bordersuccess">Updated 3 minutes ago</div>
</div>

Output

Bootstrap

Header and Footer

This is the simplest way of using header and footer

Updated 3 minutes ago

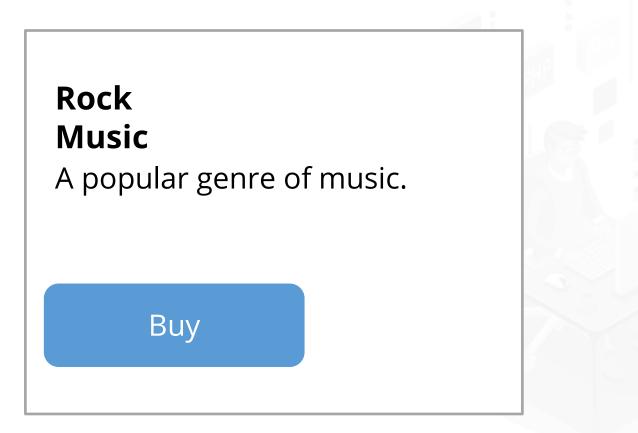


Text Alignments: Text-Left

Bootstrap allows the alignment of text to the left side of an HTML page.

```
<div class="card" style="width: 18rem;">
    <div class="card-body">
        <h5 class="card-title">Rock Music</h5>
        A popular genre of music.
        <a href="#" class="btn btn-primary">Buy</a>
        </div>
    </div></div>
```

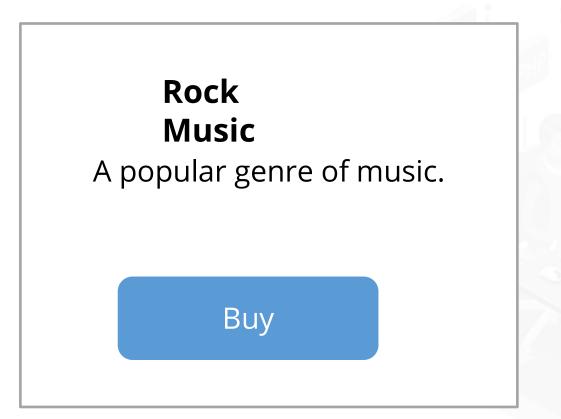
Output



Text Alignments: Text-Center

Bootstrap allows the alignment of the text to the center of an HTML page.

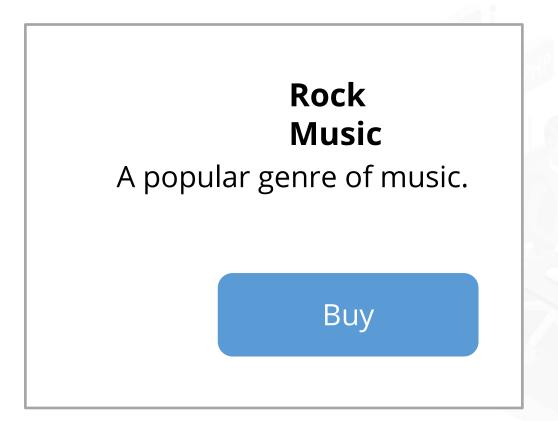
Output



Text Alignments: Text-Right

Bootstrap allows the alignment of the text to the right side of an HTML page.

Output



Develop a Static Web Page



Duration: 50 Min.

Problem Statement:

You are given a project to develop a static web page.

Assisted Practice: Guidelines

Steps to develop a static web page:

- 1. Build a static web page in your code editor
- 2. View the results in your local browser
- 3. Push the code to GitHub repositories



Bootstrap: Forms and Form Validations

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Input Group

Input groups are extended form controls which are used to add text or buttons before or after text-based inputs.

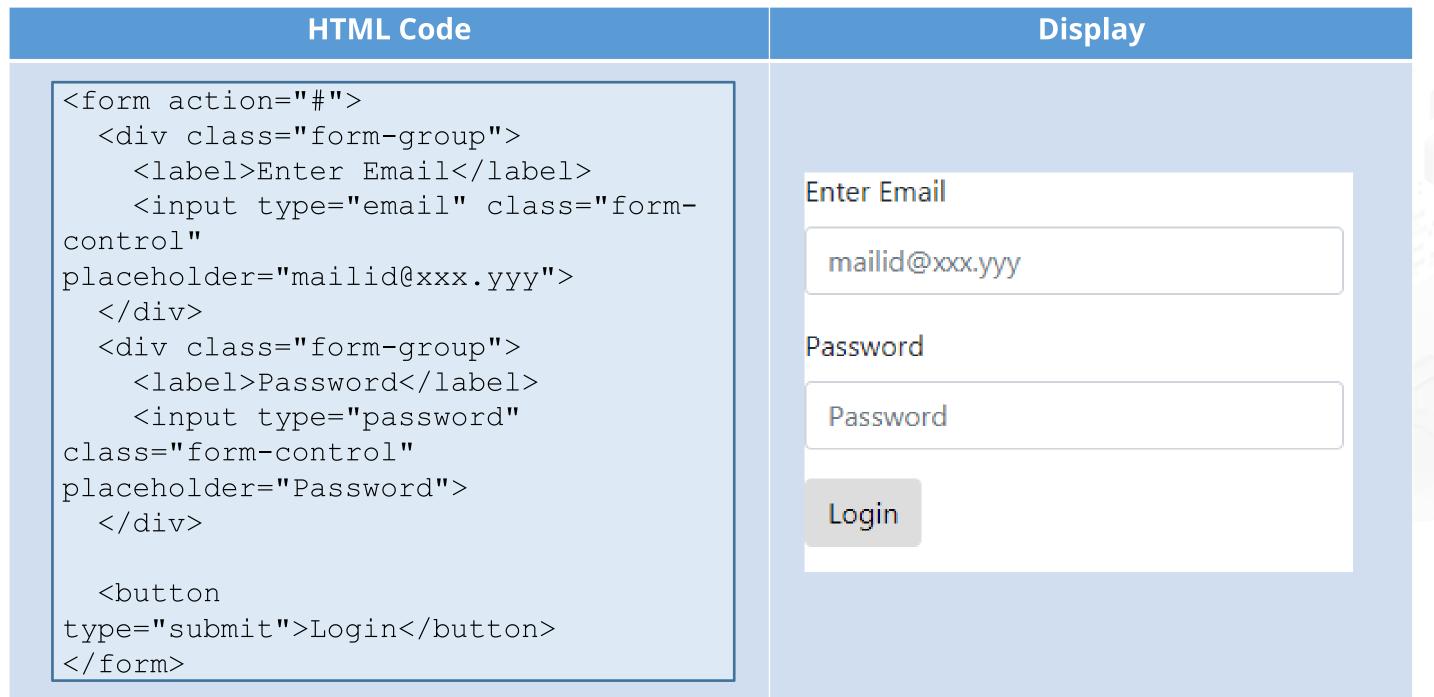
Syntax:





Forms

Forms are elements used to collect data from visitors to the website. They can be text boxes, buttons, checkboxes, radio buttons, login fields, and password fields.



Form Controls

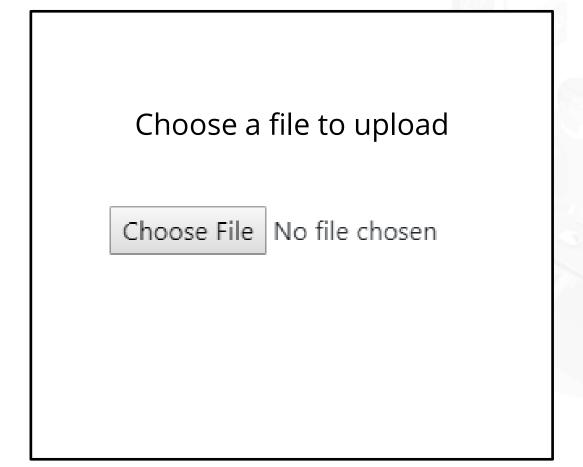
Form controls such as <select> and <input> are styled using the .form-control class.

Using *form-control-file*:

```
<form>

        div class="form-group">
        label for="formcontrol">Choose a file to upload</label>
        input type="file" class="form-control">
        div></form>
```

Output:



Custom Forms

Custom forms are HTML elements that replace default elements of a browser to allow customization and consistency across browsers.

HTML Code	Display
<pre><h6>Age Group</h6> <div class="custom-control custom-radio"></div></pre>	Age Group 20 to 50 Above 50
<pre><div class="custom-control custom-radio"> <input class="custom-control-input" type="radio"/> <label class="custom-control-label">Above 50</label> </div></pre>	

Form Controls: Sizing

Form control sizes can be set using .form-control-lg and .form-control-sm.

Using *form-control-lg* and *form-control-sm*:

```
<select class="form-control form-control-
lg">
  <option>Large select</option>
  </select>
  <option>Default select</option>
  </select>
  <select class="form-control form-control-
sm">
  <option>Small select</option>
  </select>
```

Output:

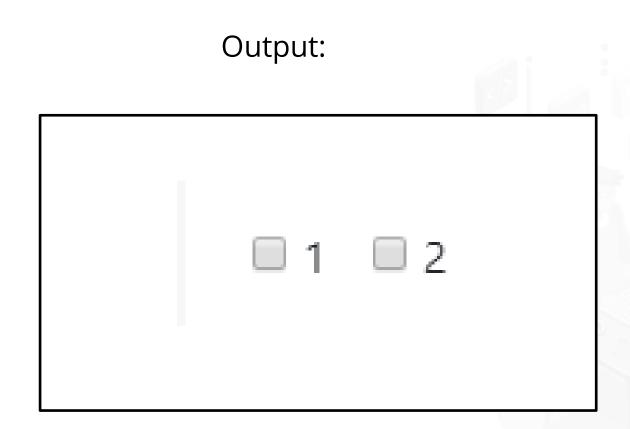


Form Controls: Inline

Checkboxes and radios can be placed horizontally by adding .form-check-inline to any .form-check.

Using form-check-inline:

```
<div class="form-check form-check-inline">
 <input class="form-check-input"
type="checkbox" id="inlineCheckbox1"
value="option1">
 <label class="form-check-label"</pre>
for="inlineCheckbox1">1</label>
</div>
<div class="form-check form-check-inline">
 <input class="form-check-input"
type="checkbox" id="inlineCheckbox2"
value="option2">
 <label class="form-check-label"</pre>
for="inlineCheckbox2">2</label>
</div>
```



Form Controls: Grid

Form grids are used to build complex forms.

Using *row*:

```
<form>
 <div class="row">
  <div class="col">
   <input type="text" class="form-control"</pre>
placeholder="First name">
  </div>
  <div class="col">
   <input type="text" class="form-control"</pre>
placeholder="Last name">
  </div>
 </div>
</form>
```

Output:

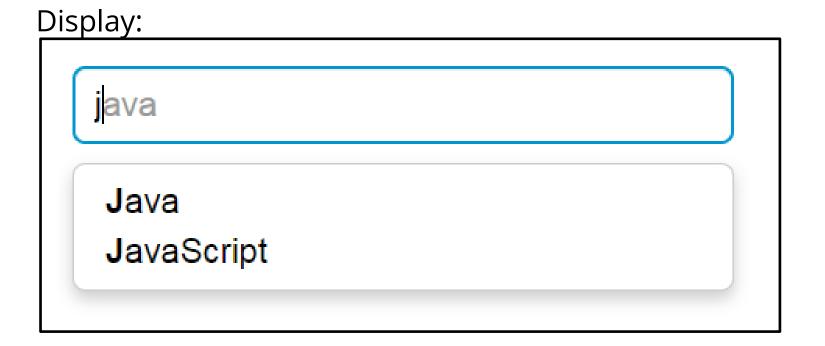


Typeaheads

Typeaheads are used to show hints to the users while filling forms for auto-completing them. This saves time and reduces input mistakes.

Syntax:

```
<script type="text/javascript">
$(document).ready(function(){
var cars = ['HTML', 'HTML5', 'Java', 'JavaScript', 'CSS', 'DTD', 'Bootstrap'];
</script>
```



Disabling Forms

Forms can be disabled from user interactions using the *disabled* boolean attribute. It can be used to a *<fieldset>* to disable form controls.

```
<form>
<fieldset disabled>
<div class="form-group">
   <label for="disabledSelect">Disabled select menu</label>
   <select id="disabledSelect" class="form-control">
    <option>Disabled select</option>
   </select>
  </div>
<button type="submit" class="btn btn-primary">Submit</button>
</fieldset>
</form>
```

Forms Validation

Forms validation is a method by which the server checks if a user has entered all the necessary data in the required format.

Functions of form validation:

Basic Validation

A form is checked for any missing data in mandatory fields

Data Form Validation

A form is checked for data accuracy

Tabs

Tabs are components in which content or links are placed in separate panes to open different pages and sections.

Syntax:

```
     class="active"><a href="#">Home</a>
     <a href="#">Menu 1</a>
     <a href="#">Menu 2</a>
     <a href="#">Menu 3</a>
     <a href="#">Menu 3</a>
```







Duration: 70 Min.

Problem Statement:

You are given a project to create a form using Bootstrap.

Assisted Practice: Guidelines

Steps to demonstrate forms:

- 1. Build a form using Bootstrap in your code editor
- 2. View results in your local browser
- 3. Push the code to GitHub repositories



Bootstrap: Nav and Navbar ©Simplilearn. All rights reserved.

Nav

The **nav** tag is used to define a block of links for navigation, for the current page, or for other pages.

Syntax:

Display:

Active Link1 Active Link2 Disabled Link

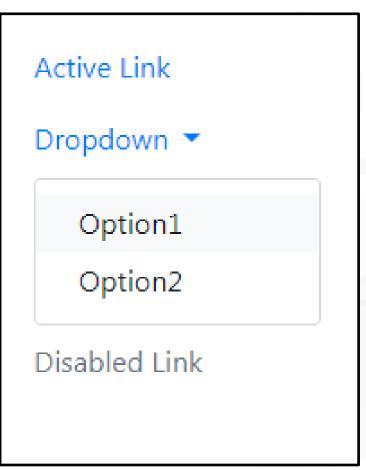


Navigation Bar

A navigation bar is a set of buttons or links used to connect to different sections of the website. Each link can have different features like dropdowns and variation in sizes, colors, and fonts.

Syntax:

```
<nav class="navbar">
   <a class="nav-link" href="#">Active Link</a>
    <a class="nav-link dropdown-toggle" href="#" data-</pre>
toggle="dropdown">
       Dropdown
      </a>
      <div class="dropdown-menu" aria-labelledby="navbarDropdown">
       <a class="dropdown-item" href="#">Option1</a>
       <a class="dropdown-item" href="#">Option2</a>
    <a class="nav-link disabled" href="#">Disabled Link</a>
    </nav>
```





Breadcrumbs

A breadcrumb is a scheme for navigation that shows the full path to the current page in the website.

Syntax:

```
Home / Page1 / Page2 / Page3 / Current Page
```

Pills

Pills are like tabs, where the links are placed to navigate to different sections of the website.

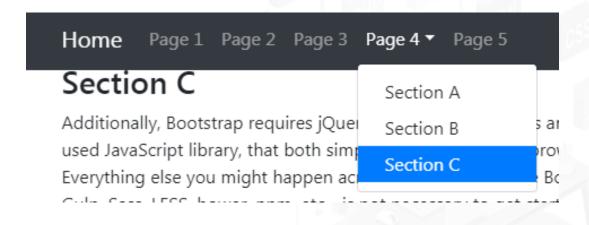
Syntax:



Scrollspy

A scrollspy is a navigation scheme that highlights the navigation links based on the scroll position to show where the user is currently in the page.

Syntax:





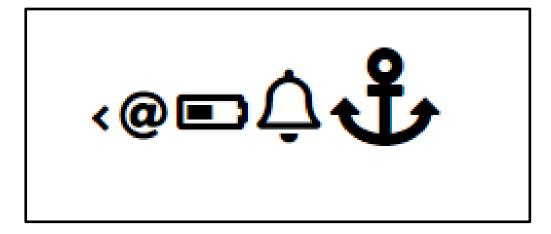
Bootstrap: Pagination and Progress ©Simplilearn. All rights reserved.

Icons

Icons are images grouped in libraries. Options are provided for better usability and scalability.

Syntax:

```
<i class="fas fa-angle-left" style="font-size:20px"></i>
<i class="fas fa-at" style="font-size:24px"></i>
<i class="fas fa-battery-half" style="font-size:28px"></i>
<i class="far fa-bell" style="font-size:36px"></i>
<i class="fas fa-anchor" style="font-size:48px"></i>
```



Pagination

Pagination is used to divide a document into different pages with numbers.

Pagination types	Display
Simple pagination	« 1 2 3 4 »
Active and hoverable pagination	« 1 2 3 4 »
Rounded active and hoverable pagination	« 1 2 <mark>3 4 »</mark>
Bordered pagination	« 1 2 3 4 »
Rounded border pagination	« 1 2 3 4 »
Space between pagination	« 1 2 3 4 »

Progress Bars

Progress bars are colored stripes that display the amount of progress a user has made in a process.

Syntax:



Spinners

A spinner is a component in HTML and CSS which shows the loading state of the page.

Syntax:

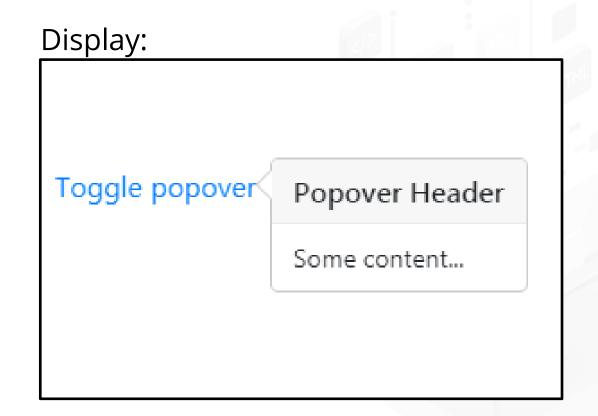




Popovers

Popovers are used to display additional information about elements when a user hovers over or clicks it. They contain more content than tooltips.

Syntax:





Duration: 45 Min.

Problem Statement:

You are given a project to add navigation using a navbar and use pagination to navigate in Bootstrap.

Assisted Practice: Guidelines

Steps to demonstrate navigation and pagination:

- 1. Build a navbar using Bootstrap in your code editor
- 2. View results in the browser
- 3. Add pagination to your website using Bootstrap
- 4. View results in the browser
- 5. Push the code to GitHub repositories



Key Takeaways

- Responsive Web Design is a responsive browser that can adapt to different screen sizes.
- Bootstrap helps you to create responsive and mobile-friendly websites.
- A navigation bar is a set of buttons or links used to connect to different sections of the website.
- Pagination is used to divide a document into different pages with numbers.
- Tabs are components in which content or links are placed in separate panes to open different pages and sections.



Building a Restaurant Website with Bootstrap

Duration: 90 min.

Problem Statement:

You are asked to build a responsive website for a restaurant which provides a brief overview of the restaurant, its bestsellers, its address and the option to contact the restaurant.



Before the Next Class

Course:

Full JavaScript Masterclass Course: ES6 Modern Development

You should be able to:

- Setup JavaScript on Windows, Mac OS X, and Linux
- Explain the basic features of JavaScript programming language
- Describe the objects used in JavaScript
- Demonstrate how to create classes in JavaScript

