

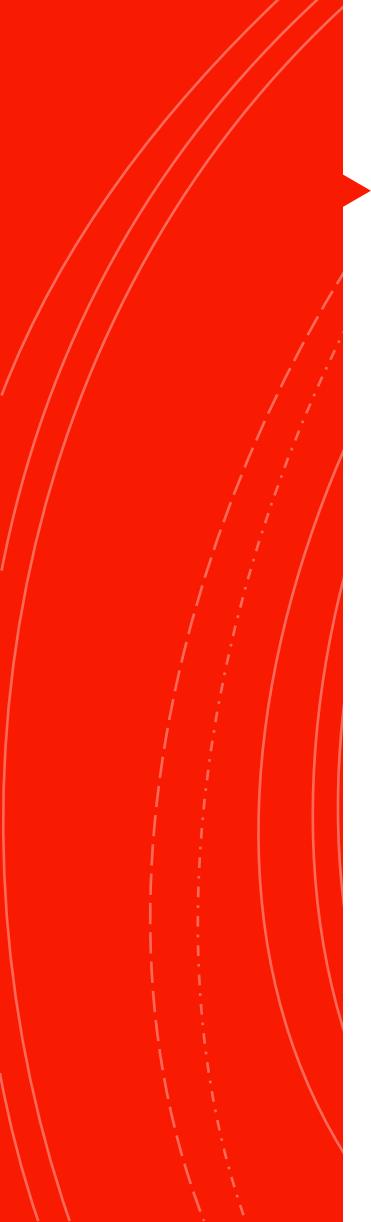


Web Development 2

Andrew Kinai

Agenda

- Introduction
- Web development
 - HTML
 - CSS
 - JavaScript
- Frameworks
 - jQuery
 - Bootstrap
- Project



Recap

- **HTML (Hyper Text Markup Language):** define the content and structure of a web page
- **CSS (Cascading Style Sheets):** define the presentation of the content of a web page
- **JS (JavaScript):** program the behavior of a web page

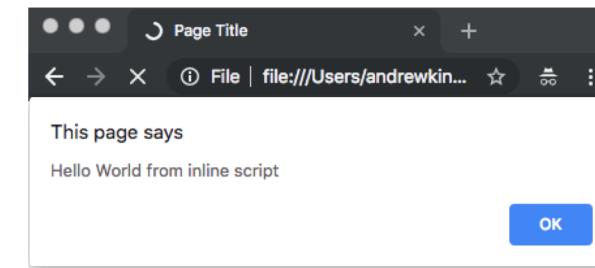
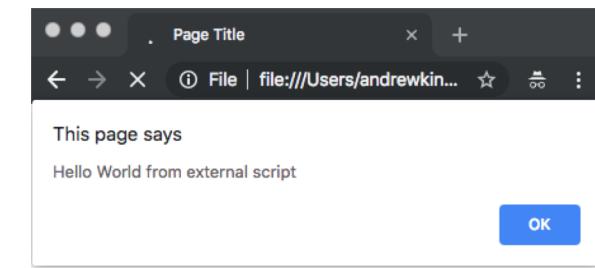
JavaScript

HTML

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
<link href="css/styles.css" rel="stylesheet">
<script src="js/script.js"></script>
<script>
  alert("Hello World from inline script");
</script>
</head>
<body>
<h1>Page Title</h1>
<p>Page content</p>
</body>
</html>
```

JS

```
alert("Hello World from external script");
```



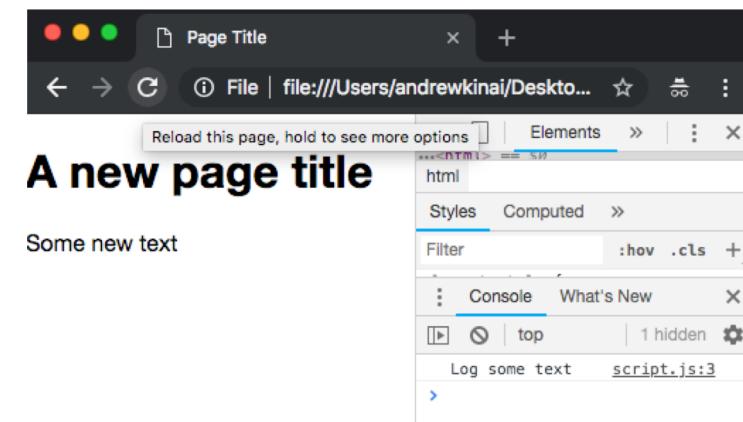
JavaScript: output

HTML

```
<!DOCTYPE html>
<html>
  <head>
    <title>Page Title</title>
    <link href="css/styles.css" rel="stylesheet">
  </head>
  <body>
    <h1 id="page-title">Page Title</h1>
  </body>
  <script src="js/script.js"></script>
</html>
```

JS

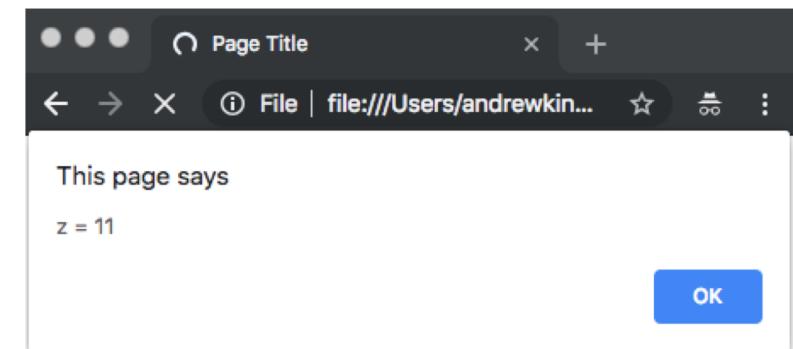
```
document.getElementById("page-title").innerHTML = "A new page
title";
document.write("Some new text");
console.log("Log some text");
```



JavaScript: variables

JS

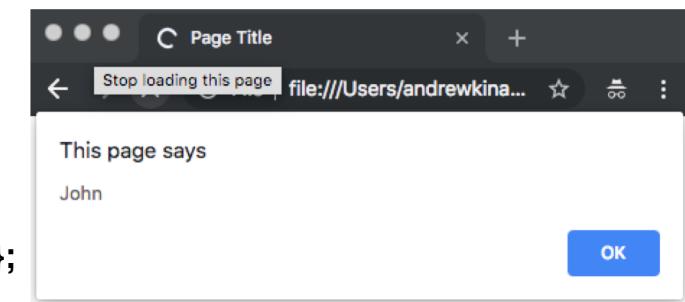
```
var x = 5;  
var y = 6;  
var z = x + y;  
alert("z = " + z);
```



JavaScript: data types

JS

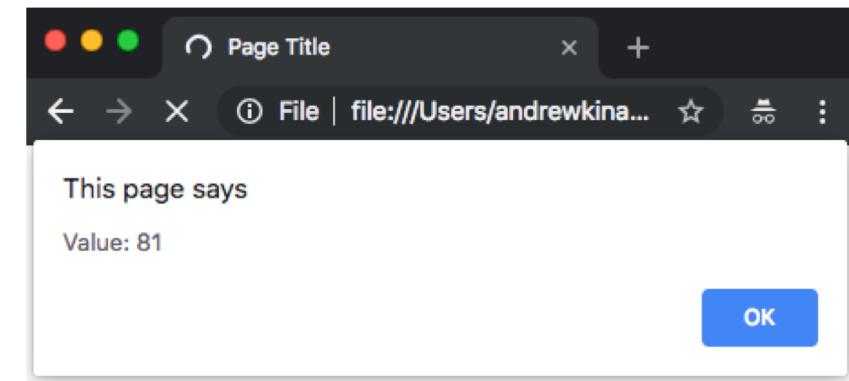
```
var length = 20;  
var lastName = "Smith";  
var x = {firstName: "John", lastName: "Doe", age: 30};  
alert(x.firstName);
```



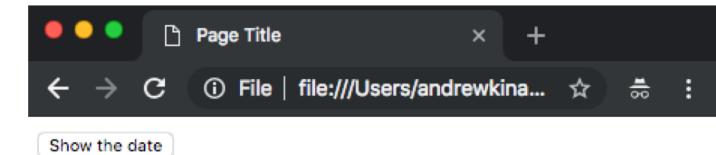
JavaScript: functions

JS

```
function square(number) {  
    return number * number;  
}  
  
function output(value) {  
    alert("Value: " + value)  
}  
  
var x = square(9);  
output(x);
```

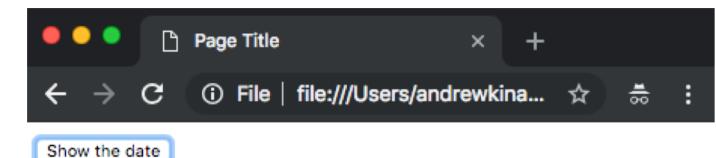


JavaScript: events



HTML

```
<button onclick="displayDate()">Show the date</button>
<p id="date-wrap"></p>
```



JS

```
function displayDate() {
    document.getElementById('date-wrap').innerHTML = Date()
}
```

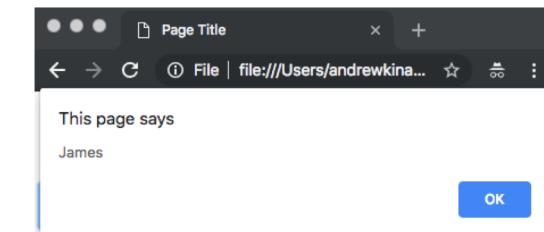
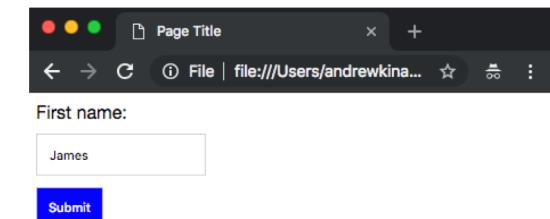
JavaScript: user input

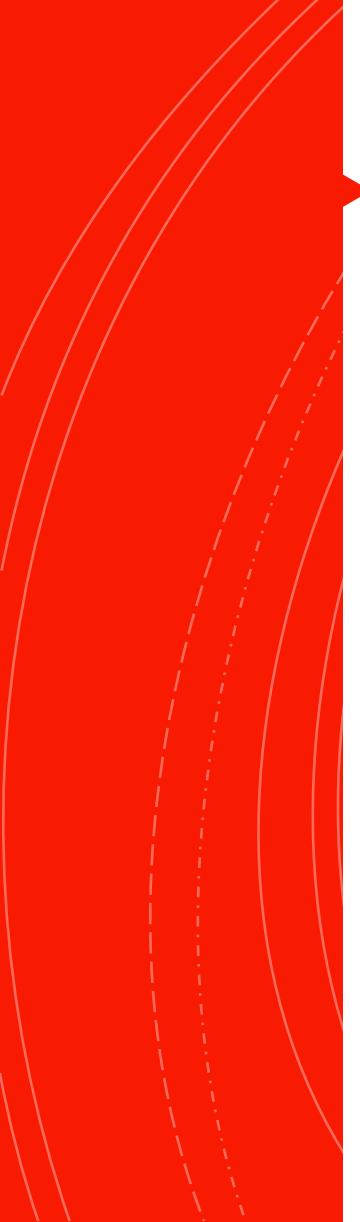
HTML

```
<form>
  First name:<br>
  <input type="text" name="firstname" id="firstname"
  placeholder="Enter first name"><br>
  <input type="button" value="Submit"
  onclick="showInput()">
</form>
```

JS

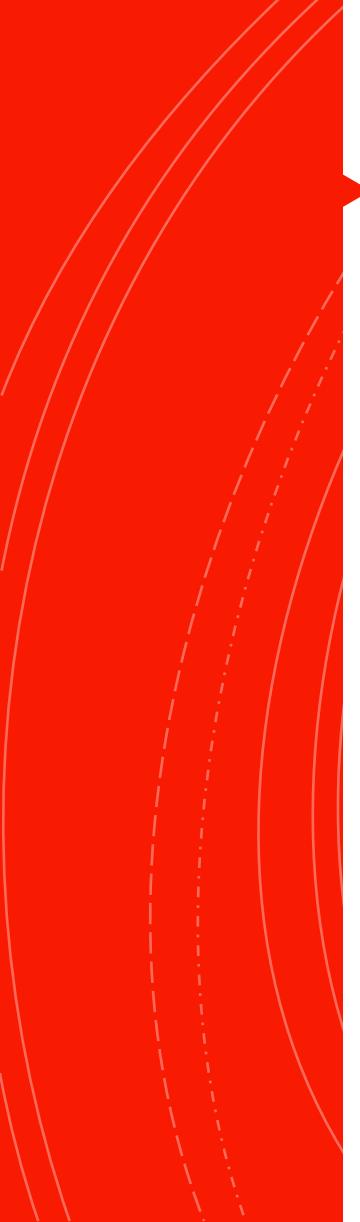
```
function showInput() {
  alert(document.getElementById('firstname').value);
}
```





jQuery

- **jQuery** is a fast, small, and feature-rich JavaScript library
 - HTML document traversal and manipulation
 - event handling
 - animation



jQuery

```
<!DOCTYPE html>
<html>
  <head>
    <title>Home - Project</title>
    <link href="css/styles.css" rel="stylesheet">
  </head>
  <body>

  </body>
  <script src="js/jquery.js"></script>
  <script src="js/script.js"></script>
</html>
```

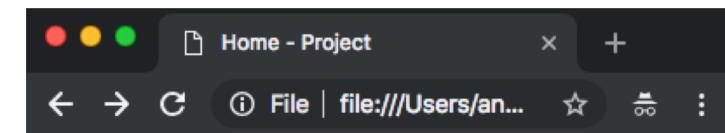
jQuery: selectors

HTML

```
<p></p>
<div class="alternate"></div>
<div id="middle"></div>
<div class="alternate"></div>
```

JS

```
$(document).ready(function(){
    $("p").html("paragraph");
    $(".alternate").html("alternate");
    $("#middle").html("middle");
});
```



paragraph
alternate
middle
alternate

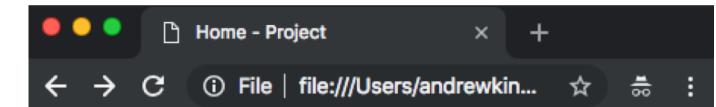
jQuery: events

HTML

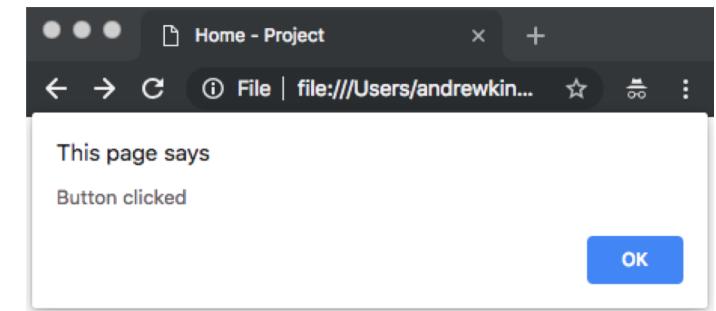
```
<input type="button" id="button" value="Button">
```

JS

```
$(document).ready(function(){
    $("#button").click(function(){
        alert("Button clicked")
    });
});
```



Button



OK

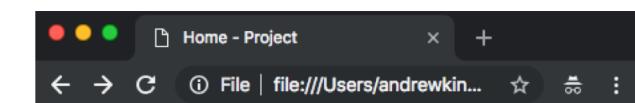
jQuery: effects

HTML

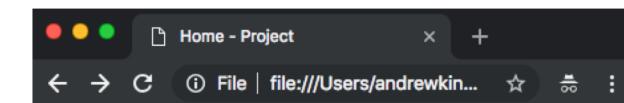
```
<input type="button" id="show" value="Show">
<input type="button" id="hide" value="Hide">
<p id="text">Some text to be shown</p>
```

JS

```
$(document).ready(function(){
    $("#show").hide();
    $("#show").click(function(){
        $("#text").show();
        $("#hide").show();
        $(this).hide();
    });
    $("#hide").click(function(){
        $("#text").hide();
        $("#show").show();
        $(this).hide();
    });
});
```

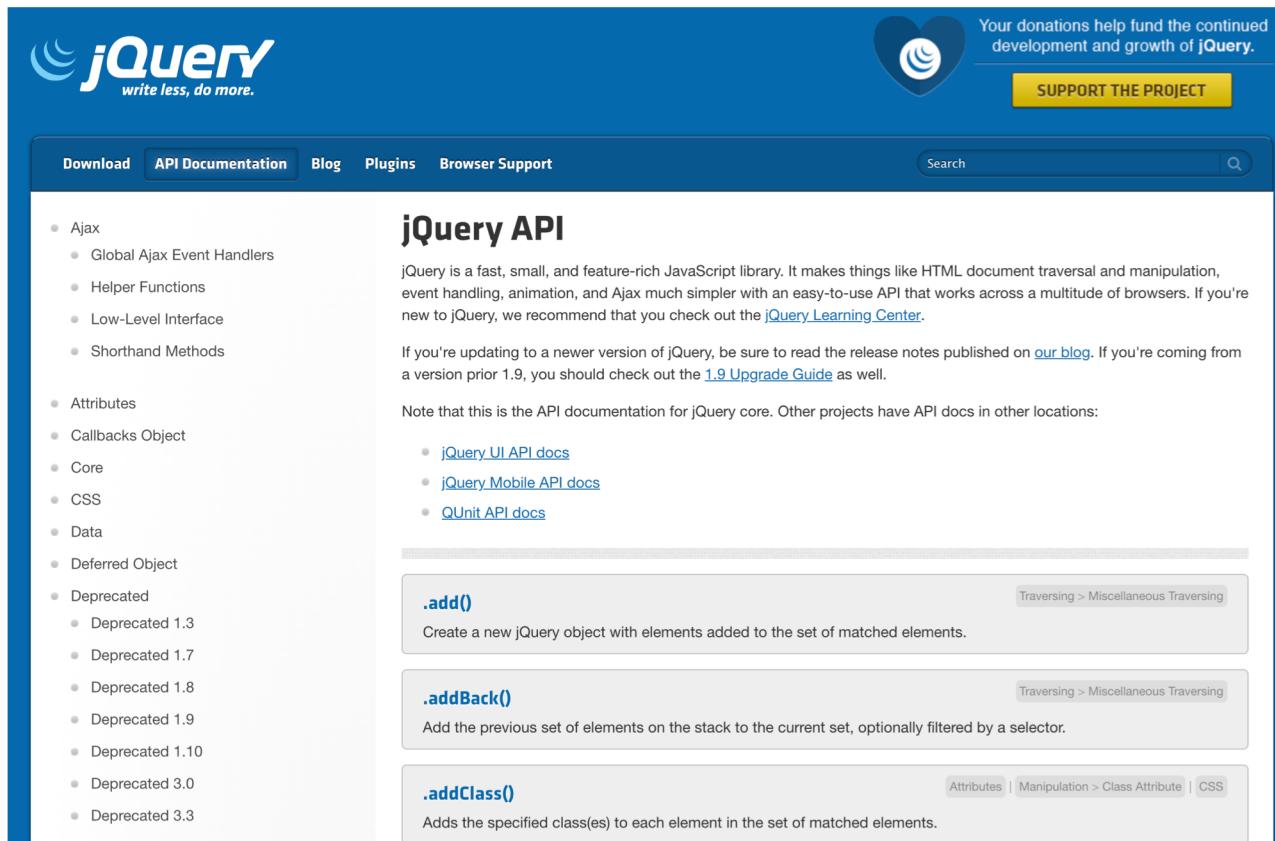


Hide
Some text to be shown



Show

jQuery: documentation



The screenshot shows the official jQuery API Documentation page. At the top, there's a navigation bar with links for Download, API Documentation (which is highlighted), Blog, Plugins, and Browser Support. To the right of the navigation is a search bar and a "SUPPORT THE PROJECT" button. A blue sidebar on the left contains a table of contents for the API, listing categories like Ajax, Attributes, Core, CSS, Data, Deferred Object, Deprecated, and Shorthand Methods. The main content area features a large heading "jQuery API". Below it, a paragraph describes jQuery as a fast, small, and feature-rich JavaScript library. It includes links to the Learning Center and Upgrade Guide. A note states that this is the API documentation for core jQuery. Further down, three API methods are shown in boxes: ".add()", ".addBack()", and ".addClass()". Each method has a brief description and a link to its category in the sidebar.

- Ajax
 - Global Ajax Event Handlers
 - Helper Functions
 - Low-Level Interface
 - Shorthand Methods
- Attributes
- Callbacks Object
- Core
- CSS
- Data
- Deferred Object
- Deprecated
 - Deprecated 1.3
 - Deprecated 1.7
 - Deprecated 1.8
 - Deprecated 1.9
 - Deprecated 1.10
 - Deprecated 3.0
 - Deprecated 3.3

jQuery API

jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. If you're new to jQuery, we recommend that you check out the [jQuery Learning Center](#).

If you're updating to a newer version of jQuery, be sure to read the release notes published on [our blog](#). If you're coming from a version prior 1.9, you should check out the [1.9 Upgrade Guide](#) as well.

Note that this is the API documentation for jQuery core. Other projects have API docs in other locations:

- [jQuery UI API docs](#)
- [jQuery Mobile API docs](#)
- [QUnit API docs](#)

.add() Traversing > Miscellaneous Traversing

Create a new jQuery object with elements added to the set of matched elements.

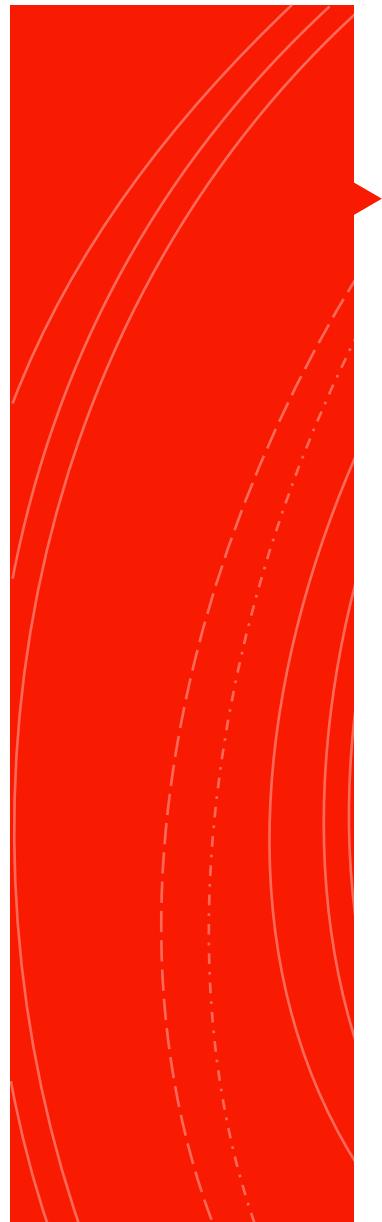
.addBack() Traversing > Miscellaneous Traversing

Add the previous set of elements on the stack to the current set, optionally filtered by a selector.

.addClass() Attributes | Manipulation > Class Attribute | CSS

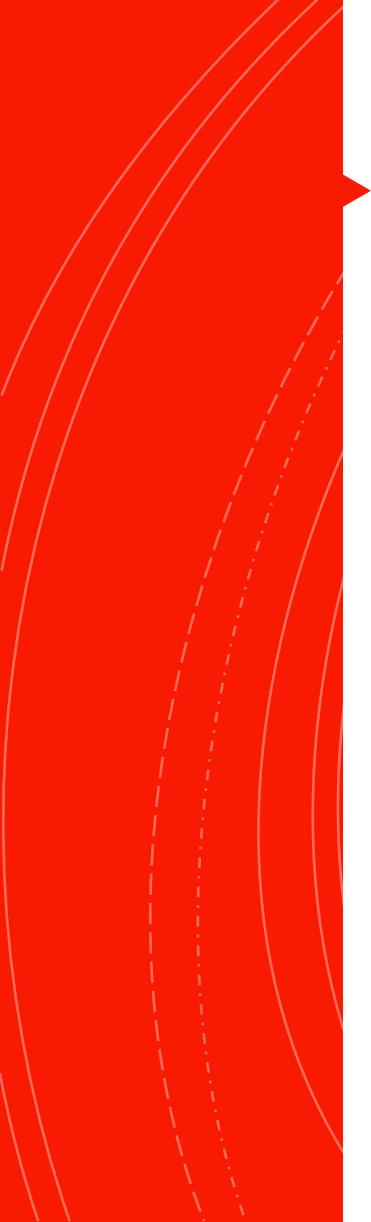
Adds the specified class(es) to each element in the set of matched elements.

<https://api.jquery.com/>



Bootstrap

- **Bootstrap** is an open source toolkit for developing with HTML, CSS and JS
 - responsive grid system
 - prebuilt components
 - plugins built on jQuery



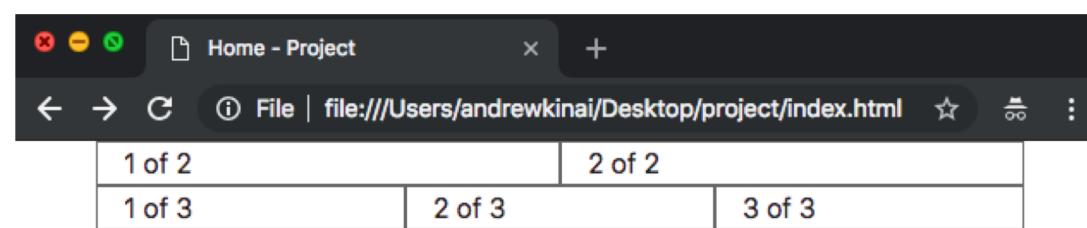
Bootstrap

```
<!DOCTYPE html>
<html>
  <head>
    <title>Page Title</title>
    <link href="css/bootstrap.css" rel="stylesheet">
    <link href="css/styles.css" rel="stylesheet">
  </head>
  <body>

  </body>
  <script src="js/jquery.js"></script>
  <script src="js/bootstrap.js"></script>
  <script src="js/script.js"></script>
</html>
```

Bootstrap: grid

```
<div class="container">
  <div class="row">
    <div class="col">
      1 of 2
    </div>
    <div class="col">
      2 of 2
    </div>
  </div>
  <div class="row">
    <div class="col">
      1 of 3
    </div>
    <div class="col">
      2 of 3
    </div>
    <div class="col">
      3 of 3
    </div>
  </div>
</div>
```



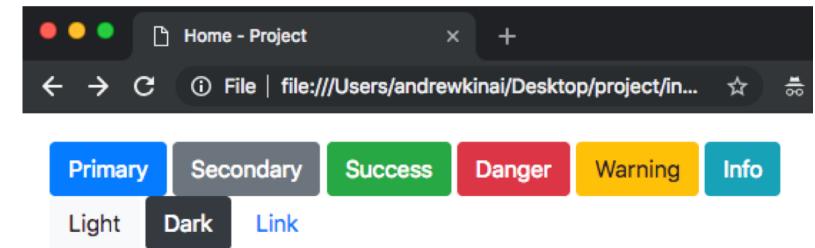
Bootstrap: tables

```
<table class="table table-striped">
  <tr>
    <th>First name</th>
    <th>Last name</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>John</td>
    <td>Kamau</td>
    <td>35</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Akoth</td>
    <td>28</td>
  </tr>
</table>
```

First name	Last name	Age
John	Kamau	35
Eve	Akoth	28

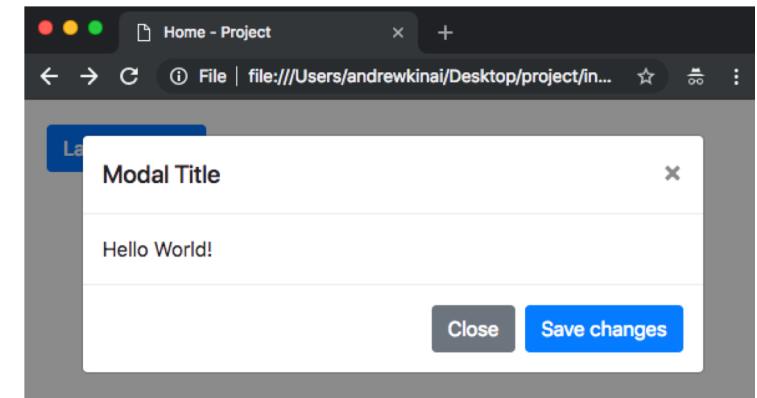
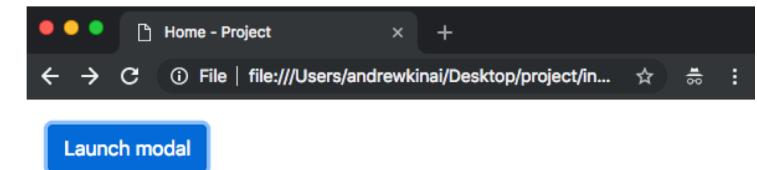
Bootstrap: buttons

```
<button type="button" class="btn btn-primary">Primary</button>
<button type="button" class="btn btn-secondary">Secondary</button>
<button type="button" class="btn btn-success">Success</button>
<button type="button" class="btn btn-danger">Danger</button>
<button type="button" class="btn btn-warning">Warning</button>
<button type="button" class="btn btn-info">Info</button>
<button type="button" class="btn btn-light">Light</button>
<button type="button" class="btn btn-dark">Dark</button>
<button type="button" class="btn btn-link">Link</button>
```



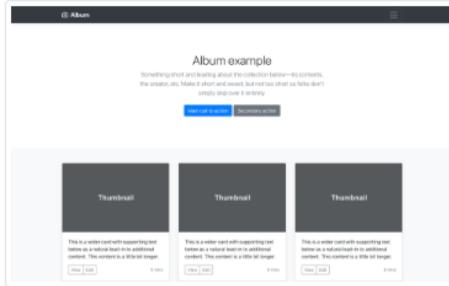
Bootstrap: modal

```
<button type="button" class="btn btn-primary" data-toggle="modal" data-target="#exampleModal">  
  Launch modal  
</button>  
  
<div class="modal fade" id="exampleModal" tabindex="-1" role="dialog" aria-labelledby="exampleModalLabel" aria-hidden="true">  
  <div class="modal-dialog" role="document">  
    <div class="modal-content">  
      <div class="modal-header">  
        <h5 class="modal-title" id="exampleModalLabel">Modal Title</h5>  
        <button type="button" class="close" data-dismiss="modal" aria-label="Close">  
          <span aria-hidden="true">&times;</span>  
        </button>  
      </div>  
      <div class="modal-body">  
        Hello World!  
      </div>  
      <div class="modal-footer">  
        <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>  
        <button type="button" class="btn btn-primary">Save changes</button>  
      </div>  
    </div>  
</div>
```



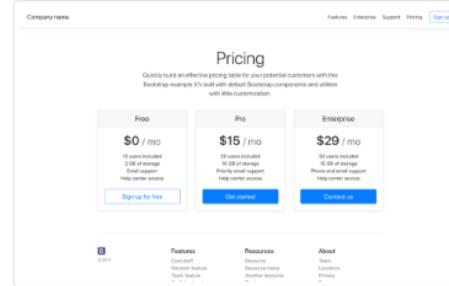
Custom components

Brand new components and templates to help folks quickly get started with Bootstrap and demonstrate best practices for adding onto the framework.



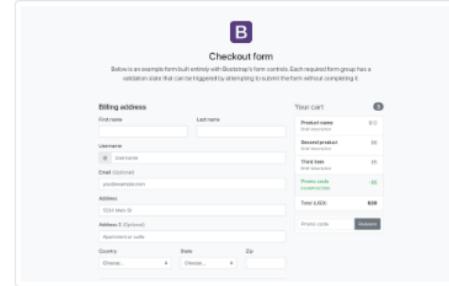
Album

Simple one-page template for photo galleries, portfolios, and more.



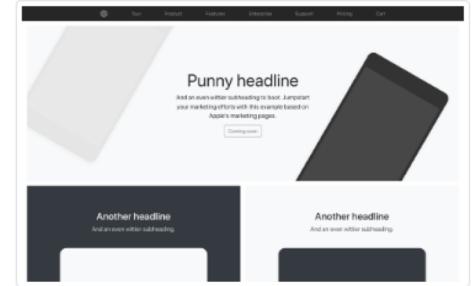
Pricing

Example pricing page built with Cards and featuring a custom header and footer.



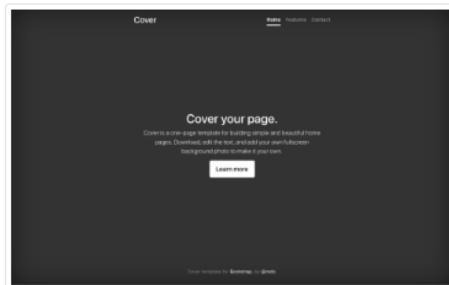
Checkout

Custom checkout form showing our form components and their validation features.



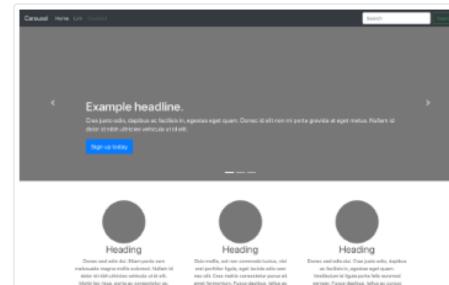
Product

Lean product-focused marketing page with extensive grid and image work.



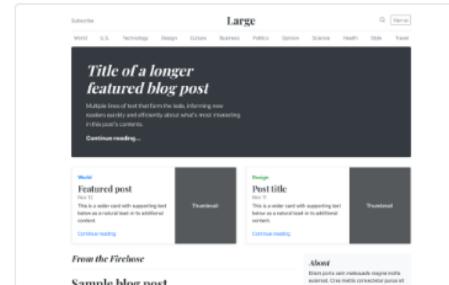
Cover

A one-page template for building simple and beautiful home pages.



Carousel

Customize the navbar and carousel, then add some new components.



Blog

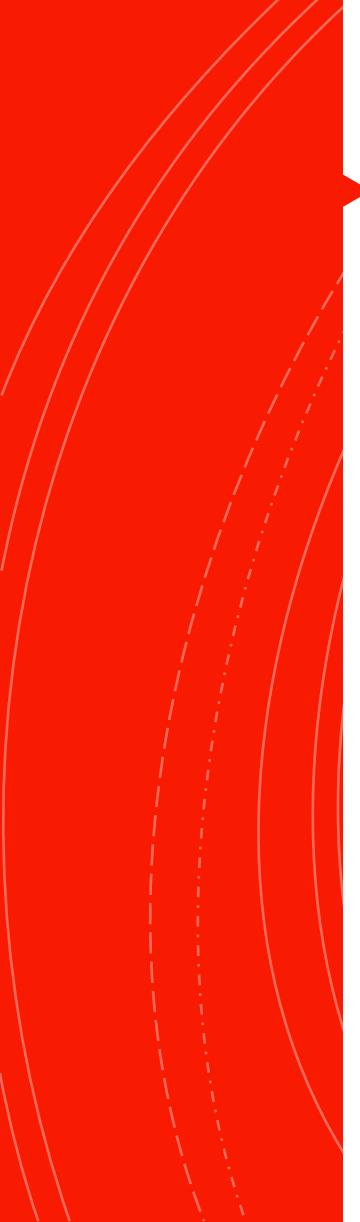
Magazine like blog template with header, navigation, featured content.



Dashboard

Basic admin dashboard shell with fixed sidebar and navbar.

<https://getbootstrap.com/docs/4.1/examples/>



Project

- Download the project files from
<http://bit.ly/cuea-web-dev>
- Zip the folder of the project once done and send it to
andkinai@ke.ibm.com



Thanks