

# Building the Layout, Style, and CRUD for Your App with HTML and CSS



**Steve Buchanan**

DevOps Architect

@buchatech | [www.buchatech.com](http://www.buchatech.com)



# Overview

Exploring HTML, DOM, CRUD, FORMS

Build out HTML Files for Web App

Add Forms To Our HTML Files

Add View to HTML For Showing List

Add CSS To Our HTML Files





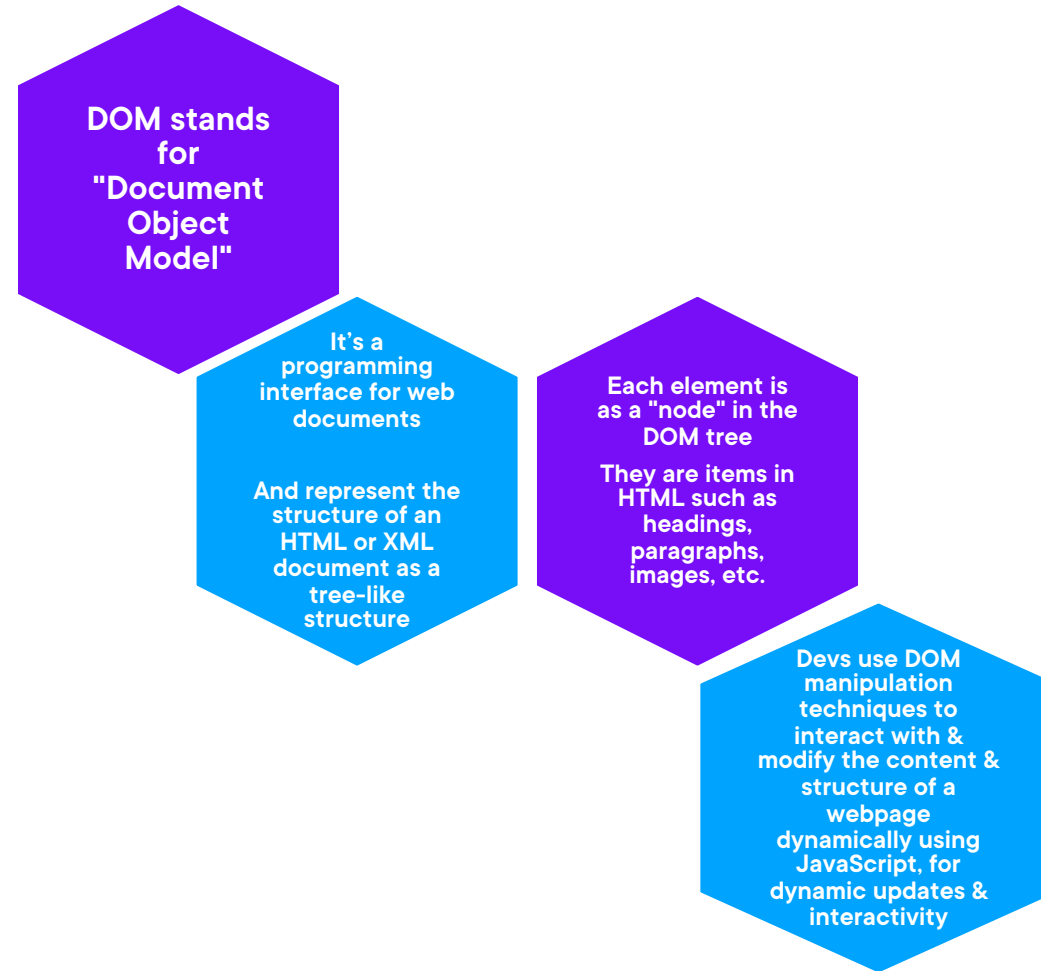
# Exploring HTML, DOM, CRUD, FORMS



# HTML



# DOM



# CRUD

CRUD stands for  
Create, Read,  
Update, and  
Delete.

It's a set of the  
four primary  
operations for  
managing data:

**Create:** Adding new data or records to the system/database

**Read:** Retrieving or reading existing data from the system/database

**Update:** Modifying or editing existing data in the system/database

**Delete:** Removing or deleting data from the system/database



# FORMS

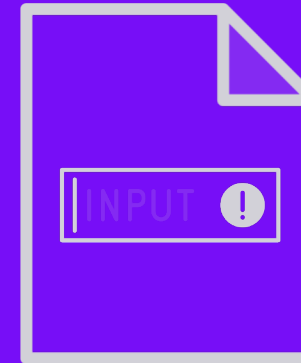


## HTML Forms

**Forms** in HTML are used to collect user input, such as text, checkboxes, radio buttons, & more

HTML provides various **Form Elements**: such as input, textarea, select, etc. to create form fields where users can enter information

## JavaScript Interaction



**JavaScript** can be used to enhance form functionality, validating user input, handling form submissions, and providing interactive experiences

When a user **submits a form**, the data is sent to a server (backend) for processing, which can then respond with results or store the data in a database



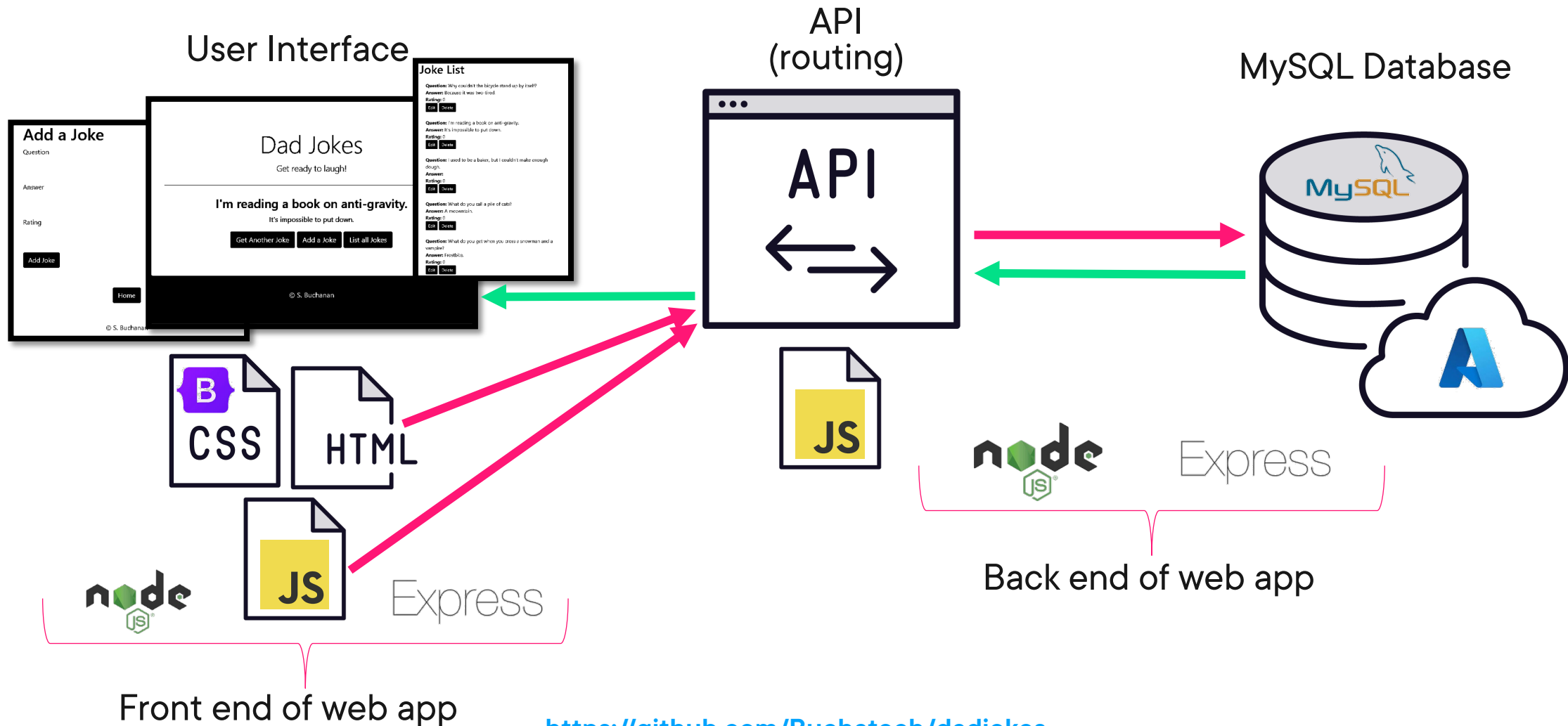


# **Build out HTML Files for Web App**





# App Components & Architecture



# Core HTML

## Index.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Dad Jokes</title>
</head>
<body>
  <h1 class="display-4">Dad Jokes</h1>
  <p class="lead">Get ready to laugh!</p>
</body>

<script>
// Function to get a random joke
</script>

<footer>
  <Center>
    <p><font color="white">&copy; S. Buchanan</font></p>
  </Center>
</footer>
</body>
</html>
```



# Core HTML

## addjoke.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Add Joke</title>
</head>
<body>

  <h1>Add a Joke</h1>

  <div class="container">
    <center><a href="/" class="btn btn-primary">Home</a></center>
  </div>

  <script src=""></script>

  <br>
  <br>
  <footer>
    <Center>
      <p>&copy; S. Buchanan</p>
    </Center>
  </footer>

</body>
</html>
```



# Core HTML

## jokeslist.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Joke List</title>
</head>
<body>
  <div class="container">
    <h1>Joke List</h1>
    <ul id="joke-list" class="list-group"></ul>
  </div>

  <br>
  <br>
  <div class="container">
    <center><a href="/" class="btn btn-primary">Home</a></center>
  </div>

  <script src=""></script>

  <br>
  <br>
<footer>
  <Center>
    <p>&copy; S. Buchanan</p>
  </Center>
</footer>

</body>
</html>
```



# Demo

**Demo: Build out the initial index.html, addjoke.html, & jokeslist.html files for the app**





# **Add Forms To Our HTML Files**



# Forms

## Index.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Dad Jokes</title>

</head>
<body onload="getRandomJoke()"> <!-- Call the function on page load -->
  <div class="jumbotron text-center">
    <h1 class="display-4">Dad Jokes</h1>
    <p class="lead">Get ready to laugh!</p>
    <hr class="my-4">
    <h3 id="joke-question"></h3>
    <p id="joke-answer"></p>
    <button class="btn btn-primary" onclick="getRandomJoke()">Get Another Joke</button>
    <a href="/features/addjoke/addjoke.html" class="btn btn-success">Add a Joke</a>
    <a href="/features/jokelist/jokelist.html" class="btn btn-info">List all Jokes</a>
  </div>

  <script>
    // Function to get a random joke
  </script>

  <footer>
    <Center>
      <p><font color="white">&copy; S. Buchanan</font></p>
    </Center>
  </footer>
</body>
</html>
```



# Forms

## jokeslist.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Joke List</title>
</head>
<body>
  <div class="container">
    <h1>Joke List</h1>
    <ul id="joke-list" class="list-group"></ul>
  </div>

  <br>
  <br>
  <div class="container">
    <center><a href="/" class="btn btn-primary">Home</a></center>
  </div>

  <script src=""></script>

  <br>
  <br>
<footer>
  <Center>
    <p>&copy; S. Buchanan</p>
  </Center>
</footer>

</body>
</html>
```





# Forms

## addjoke.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Add Joke</title>
</head>
<body>
  <div class="container">
    <h1>Add a Joke</h1>
    <form id="add-joke-form" action="/jokes" method="POST">
      <div class="form-group">
        <label for="question">Question</label>
        <input type="text" class="form-control" id="question" name="question" required>
      </div>
      <div class="form-group">
        <label for="answer">Answer</label>
        <input type="text" class="form-control" id="answer" name="answer" required>
      </div>
      <div class="form-group">
        <label for="rating">Rating</label>
        <input type="number" class="form-control" id="rating" name="rating" min="1" max="5" required>
      </div>
      <button type="submit" class="btn btn-primary">Add Joke</button>
    </form>
  </div>

  <br>
  <br>
  <div class="container">
    <center><a href="/" class="btn btn-primary">Home</a></center>
  </div>

  <script src=""></script>

  <br>
  <br>
  <footer>
    <Center>
      <p>&copy; S. Buchanan</p>
    </Center>
  </footer>

</body>
</html>
```



# Demo

**Demo: add a form to addjoke.html file**



# Add View to HMTL For Showing List



# View

## jokeslist.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Joke List</title>
  <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
</head>
<body>
  <div class="container">
    <h1>Joke List</h1>
    <ul id="joke-list" class="list-group"></ul>
  </div>

  <br>
  <br>
  <div class="container">
    <center><a href="/" class="btn btn-primary">Home</a></center>
  </div>

  <script src="jokelist.js"></script>

  <br>
  <br>
<footer>
  <Center>
    <p>&copy; S. Buchanan</p>
  </Center>
</footer>

</body>
</html>
```



# Jokes List

```
// Function to display all jokes
function displayJokes() {
  fetch('/japi/jokes')
    .then(response => response.json())
    .then(data => {
      const jokeList = document.getElementById('joke-list');
      jokeList.innerHTML = '';

      data.forEach(joke => {
        const listItem = document.createElement('li');
        listItem.className = 'list-group-item';
        listItem.innerHTML = `
          <strong>Question:</strong> ${joke.question}<br>
          <strong>Answer:</strong> ${joke.answer}<br>
          <strong>Rating:</strong> ${joke.rating}<br>
          <button class="btn btn-sm btn-primary" onclick="editJoke(${joke.id})">Edit</button>
          <button class="btn btn-sm btn-danger" onclick="deleteJoke(${joke.id})">Delete</button>
        `;
        jokeList.appendChild(listItem);
      });
    })
    .catch(error => console.log(error));
}
```





# **Add CSS To Our HTML Files**



# What is Bootstrap CSS



## Bootstrap CSS:

- Bootstrap is a popular front-end framework that provides pre-designed CSS styles and components making it easier to build responsive & visually appealing websites



## Responsive Design:

- Bootstrap's CSS classes are designed to automatically adapt the layout & appearance of a website based on the user's device, such as desktops, tablets, &



## Component Library:

- Bootstrap offers a wide range of ready-to-use components, like navigation bars, buttons, modals, & more



## Customization:

- While Bootstrap provides default styles, it also allows developers to customize the framework to match their unique design requirements

<https://getbootstrap.com>



# CSS

## Index.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Dad Jokes</title>
  <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
  <style>
    body {
      background-color: purple;
    }

    .jumbotron {
      background-color: gold;
    }
  </style>
</head>
<body onload="getRandomJoke()"> <!-- Call the function on page load -->
  <div class="jumbotron text-center">
    <h1 class="display-4">Dad Jokes</h1>
    <p class="lead">Get ready to laugh!</p>
    <hr class="my-4">
    <h3 id="joke-question"></h3>
    <p id="joke-answer"></p>
    <button class="btn btn-primary" onclick="getRandomJoke()">Get Another Joke</button>
    <a href="/features/addjoke/addjoke.html" class="btn btn-success">Add a Joke</a>
    <a href="/features/jokelist/jokelist.html" class="btn btn-info">List all Jokes</a>
  </div>

  <script>
    // Function to get a random joke
  </script>

  <footer>
    <Center>
    <p><font color="white">&copy; S. Buchanan</font></p>
    </Center>
  </footer>
</body>
</html>
```





# CSS

## addjoke.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Add Joke</title>
  <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
</head>
<body>
  <div class="container">
    <h1>Add a Joke</h1>
    <form id="add-joke-form" action="/jokes" method="POST">
      <div class="form-group">
        <label for="question">Question</label>
        <input type="text" class="form-control" id="question" name="question" required>
      </div>
      <div class="form-group">
        <label for="answer">Answer</label>
        <input type="text" class="form-control" id="answer" name="answer" required>
      </div>
      <div class="form-group">
        <label for="rating">Rating</label>
        <input type="number" class="form-control" id="rating" name="rating" min="1" max="5" required>
      </div>
      <button type="submit" class="btn btn-primary">Add Joke</button>
    </form>
  </div>

  <br>
  <br>
  <div class="container">
    <center><a href="/" class="btn btn-primary">Home</a></center>
  </div>

  <script src=""></script>

  <br>
  <br>
  <Footer>
    <Center>
    <p>&copy; S. Buchanan</p>
    </Center>
  </Footer>

</body>
</html>
```



# CSS

## jokeslist.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Joke List</title>
  <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
</head>
<body>
  <div class="container">
    <h1>Joke List</h1>
    <ul id="joke-list" class="list-group"></ul>
  </div>

  <br>
  <br>
  <div class="container">
    <center><a href="/" class="btn btn-primary">Home</a></center>
  </div>

  <script src=""></script>

  <br>
  <br>
<footer>
  <Center>
    <p>&copy; S. Buchanan</p>
  </Center>
</footer>

</body>
</html>
```



# Demo

**Demo: add CSS to the HTML files**



# Summary

## In this module we covered:

- ❑ Reviewed our web apps components & architecture
- ❑ Looked at HTML, DOM, CRUD, FORMS for review
- ❑ Built out the HTML code for our Web App
- ❑ Added forms to the HTML code of our web app
- ❑ Explored how we will use JavaScript in our HTML to show a list of data
- ❑ Finished up by adding CSS to our HTML

## Why this is important:?

- ❑ We focused on the HTML and CSS of our web app along with the components we will build, along with its architecture. This is a foundational need for the layout, style, and CRUD operations before adding JavaScript to our web app.

