Lab: Working with Bootstrap Alert Buttons

Estimated Time: 1 hour

About the Lab:

In this exercise, you will create a simple web page with Bootstrap alert buttons. When you click these buttons, there will be corresponding alert messages.

Objective:

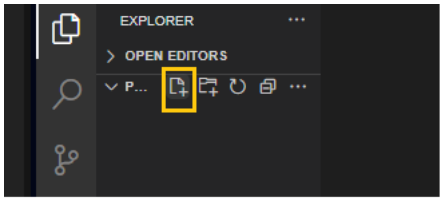
This practice exercise aims to enhance your understanding of integrating Bootstrap alerts and buttons with JavaScript interactivity. By completing this exercise, you will learn how to:

1. Include Bootstrap CSS and JavaScript in an HTML document
2. Create a set of buttons using Bootstrap classes
3. Implement JavaScript event listeners to show Bootstrap alert messages when clicking specific buttons
4. Use the Bootstrap alert component to display different types of messages (success, warning, and danger) with the ability to close them

Task 1: Getting Started

Step 1: Create a New HTML File

- Create a new HTML file and save it with a meaningful name, such as "alert_buttons.html"



Step 2: Set Up the HTML Structure

- Copy and paste the following HTML code into your HTML file:

```
<!DOCTYPE html>
<html>
    <head>
        <!-- Your head content goes here -->
    </head>
    <body>
        <!-- Your body content goes here -->
    </body>
</html>
```

Task 2: Head Section

You have created the HTML structure. Let's start adding the header section to our webpage.

1. Inside the `<head>` section of your HTML document, add the `<meta>` tags to set the character encoding and configure the viewport for responsive design. This is essential for mobile compatibility.
2. Set the title of your web page using the `<title>` element.
3. Include links to Bootstrap's CSS styles and Bootstrap Icons.
4. Include a script tag to link Bootstrap JavaScript.

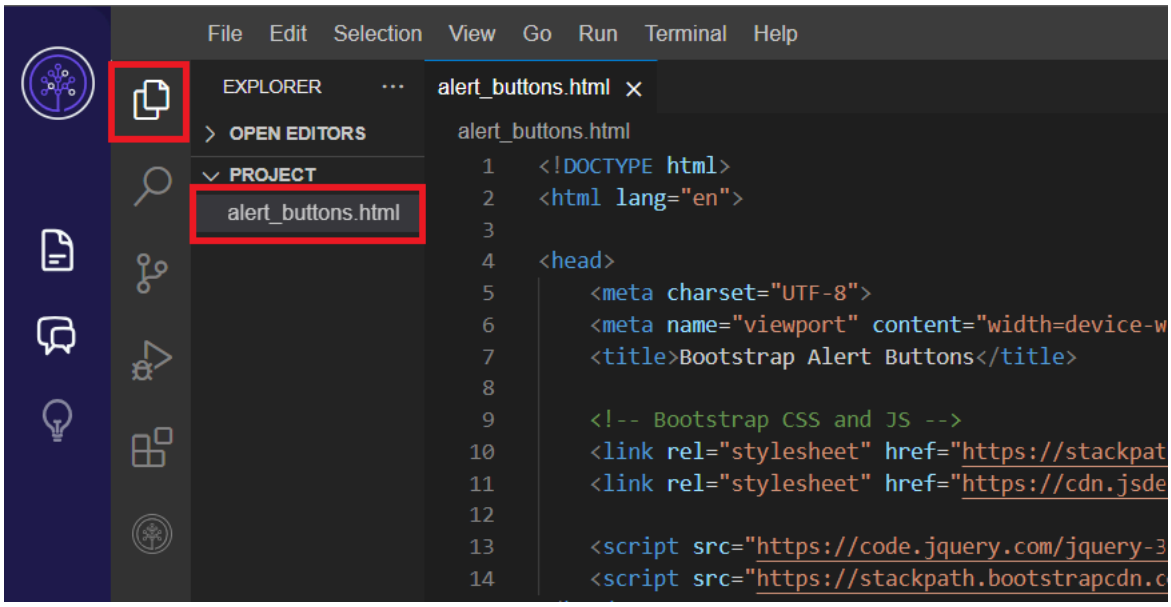
You may refer to the below solution code for the same:

```
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Your Web Page Title</title>
   <!-- Bootstrap CSS and JS -->
   <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet"
       integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC" crossorigin="anonymous">
   <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.11.0/font/bootstrap-icons.css">
   <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.min.js"
       integrity="sha384-cVKIPhGWiC2Al4u+LWgxfKTRIcfu0JTxR+EQDz/bgldoEyl4H0zUF0QKbrJ0EcQF"
       crossorigin="anonymous"></script>
</head>
```

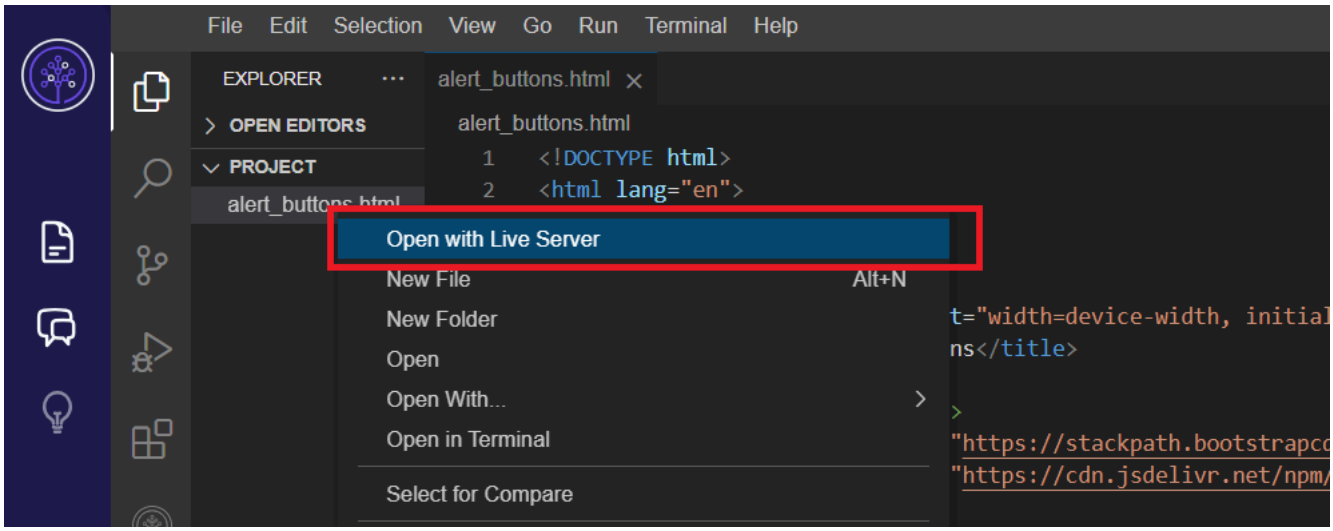
Preview your HTML File

To preview your file, use the built-in Live Server extension by following the instructions below.

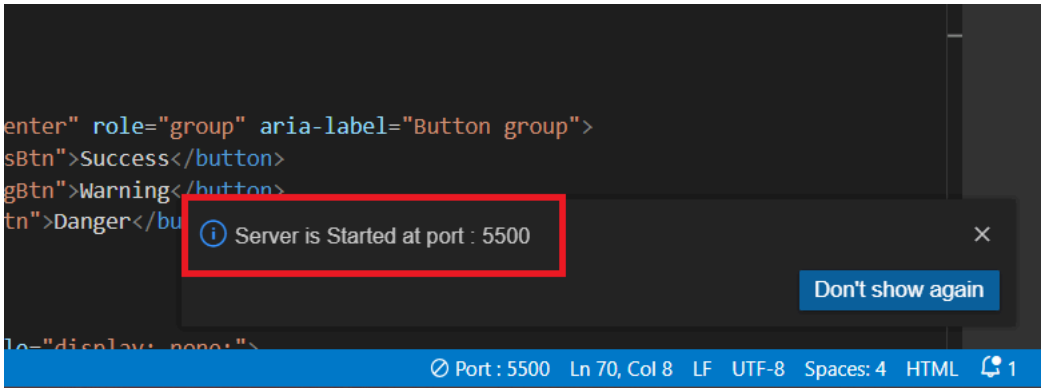
1. Open the file explorer and navigate to your file.



2. Right click your file & click on 'Open with Live Server'

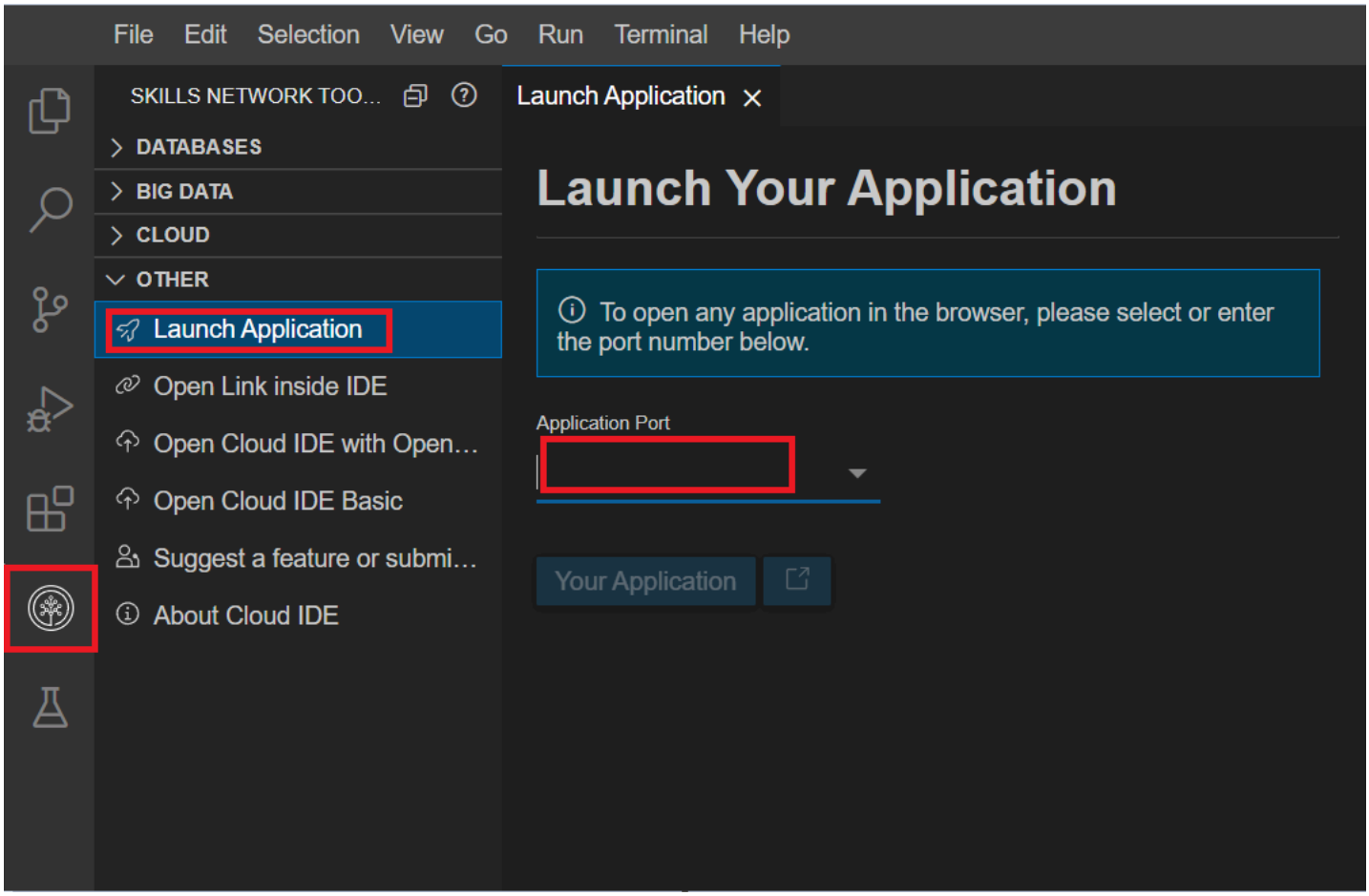


3. This should show a notification mentioning that the server has started on port 5500.

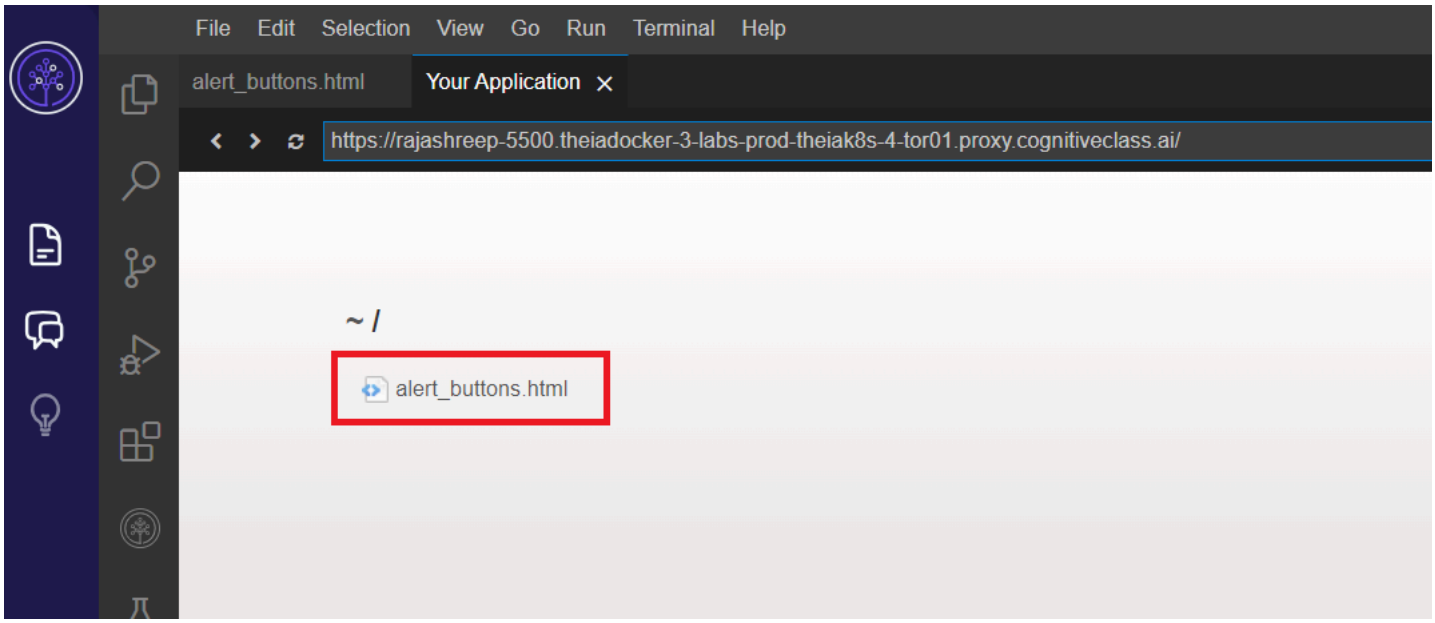


4. Click below to launch the application or click Skills Network on the left to open the "Skills Network Toolbox". Click "Other" then "Launch Application". From there, enter the port number as 5500 and launch your application.

Preview HTML



5. Click on the file name to view its preview.



Task 3: Creating Bootstrap Alert Buttons

Now that we have created the HTML structure and added a headers section. It's time to add Bootstrap alert buttons.

1. Inside your HTML document's `<body>` section, create a `<div>` with the class `container` to contain your content. Add a `<h1>` element within this container with the classes `display-4` and `text-center` to create a centered heading and write your desired heading.
   在您的 HTML 文档的 `<body>` 部分中，创建一个 `<div>`，并赋予其类 `container` 以包含您的内容。在此容器内添加一个带有类 `display-4` 和 `text-center` 的 `<h1>` 元素，以创建居中的标题并写入您想要的标题。

2. Below the heading, create a `<div>` with the classes `btn-group`, `d-flex`, `justify-content-center`, and `align-items-center`. These classes will style the button group and center it horizontally and vertically.
   在标题下方，创建一个 `<div>`，包含类 `btn-group` 、 `d-flex` 、 `justify-content-center` 和 `align-items-center` 。这些类将设置按钮组的样式并使其水平和垂直居中。

3. Inside this `<div>`, add three buttons representing success, warning, and danger alerts. Each button should have a Bootstrap class corresponding to its alert type (`btn-success`, `btn-warning`, and `btn-danger`). Additionally, you can use Bootstrap spacing classes like `mx-2` to add a horizontal margin between the buttons.
在 `<div>` 中添加代表成功、警告和危险警报的三个按钮。每个按钮应具有对应其警报类型的 Bootstrap 类（`btn-success` 、 `btn-warning` 和 `btn-danger`）。此外，您还可以使用 Bootstrap 间距类如 `mx-2` 在按钮之间添加水平间距。

You may refer to the below solution code for the same:

```
<div class="container mt-5">
        <h1 class="display-4 text-center">Bootstrap Alert Buttons</h1>
        <br/>
        <!-- Buttons -->
            <div class="btn-group d-flex justify-content-center align-items-center" role="group" aria-label="Button group">
                <button type="button" class="btn btn-success mx-2" id="successBtn">Success</button>
                <button type="button" class="btn btn-warning mx-2" id="warningBtn">Warning</button>
                <button type="button" class="btn btn-danger mx-2" id="dangerBtn">Danger</button>
            </div>
</div>
```

NOTE:Launch the application on port 5500 to preview the output. If the application is already running, kindly reload the "Your Application" page.

Your output should look similar to this:



Task 4: Creating Alert Messages

Let's create alert messages for the Bootstrap alert buttons we added.

1. Create three separate `<div>` elements inside the container div created in the previous Task, each representing an alert message. Add classes to style these messages accordingly (`alert`, `alert-success`, `alert-warning`, and `alert-danger` for different styles).
创建三个独立的 `<div>` 元素在上一任务中创建的容器 div 内，每个代表一个警告信息。为这些信息添加类以相应地样式化（`alert` 、 `alert-success` 、 `alert-warning` 和 `alert-danger` 用于不同的样式）。

2. Use the `id` attribute to uniquely identify each alert message (`successAlert`, `warningAlert`, and `dangerAlert`). Set the `style` attribute to `display: none;` to initially hide these messages.
使用 `id` 属性来唯一标识每个警报消息（`successAlert` 、 `warningAlert` 和 `dangerAlert`）。将 `style` 属性设置为 `display: none;` 以最初隐藏这些消息。

3. Create `<div>` elements inside each alert div and apply the `d-flex`, `justify-content-between`, and `align-items-center` classes to style the contents of the alert messages.
在 each alert div 内部创建 `<div>` 元素，并将 `d-flex` 、 `justify-content-between` 和 `align-items-center` 类应用于样式化 alert 消息的内容。

4. Include the content of the alert messages inside these `<div>` elements. You can add an icon (Bootstrap icon) and a message text.
包含警报消息的内容在这些 `<div>` 元素内。您可以添加一个图标（Bootstrap 图标）和消息文本。

5. Add a close button (`<button>`) with the class `btn-close` and the attributes `data-bs-dismiss="alert"` and `aria-label="Close"` to allow users to close the messages.
添加一个带有类 `btn-close` 和属性 `data-bs-dismiss="alert"` 以及 `aria-label="Close"` 的关闭按钮（`<button>`），以便用户关闭消息。

   You may refer to the below solution code for the same:

```
<div class="alert alert-success mt-3 fade show" id="successAlert" style="display: none;">
        <div class="d-flex justify-content-between align-items-center">
            <div>
                <i class="bi bi-1-circle-fill"></i> Yay - Success!
            </div>
            <button type="button" class="btn-close" data-bs-dismiss="alert" aria-label="Close"></button>
        </div>
    </div>
    <div class="alert alert-warning mt-3 fade show" id="warningAlert" style="display: none;">
        <div class="d-flex justify-content-between align-items-center">
            <div>
                <i class="bi bi-2-circle-fill"></i> Warning - Be careful!
            </div>
            <button type="button" class="btn-close" data-bs-dismiss="alert" aria-label="Close">
            </button>
        </div>
```

```
        </div>
        <div class="alert alert-danger mt-3 fade show" id="dangerAlert" style="display: none;">
            <div class="d-flex justify-content-between align-items-center">
                <div>
                    <i class="bi bi-3-circle-fill"></i> Danger - Something went wrong!
                </div>
                <button type="button" class="btn-close" data-bs-dismiss="alert" aria-label="Close">
                </button>
            </div>
        </div>
```

NOTE: Since we've set the display property to "none" for the alert messages, you won't be able to view them in the output. To view them temporarily, you can change the display to "block".

Task 5: Adding JavaScript Functionality to Bootstrap Alert Buttons

The final step is to add JavaScript functionality to the Bootstrap alert buttons.

1. Create a `<script>` block in your HTML file, either within the `<head>` section or just before the closing `</body>` tag.
2. Inside the `<script>` block, add JavaScript code that listens for button clicks and shows the corresponding alert messages when clicked.
3. Use the addEventListener method to attach click event listeners to each button element (`successBtn`, `warningBtn`, and `dangerBtn`). Inside the event listeners, change the style attribute of the alert message elements to `display: block;` to make them visible.

You may refer to the below solution code for the same:

```
<script>
    // JavaScript to show alert messages on button click
    document.getElementById("successBtn").addEventListener("click", function () {
        document.getElementById("successAlert").style.display = "block";
    });
    document.getElementById("warningBtn").addEventListener("click", function () {
        document.getElementById("warningAlert").style.display = "block";
    });
      document.getElementById("dangerBtn").addEventListener("click", function () {
        document.getElementById("dangerAlert").style.display = "block";
    });
</script>
```

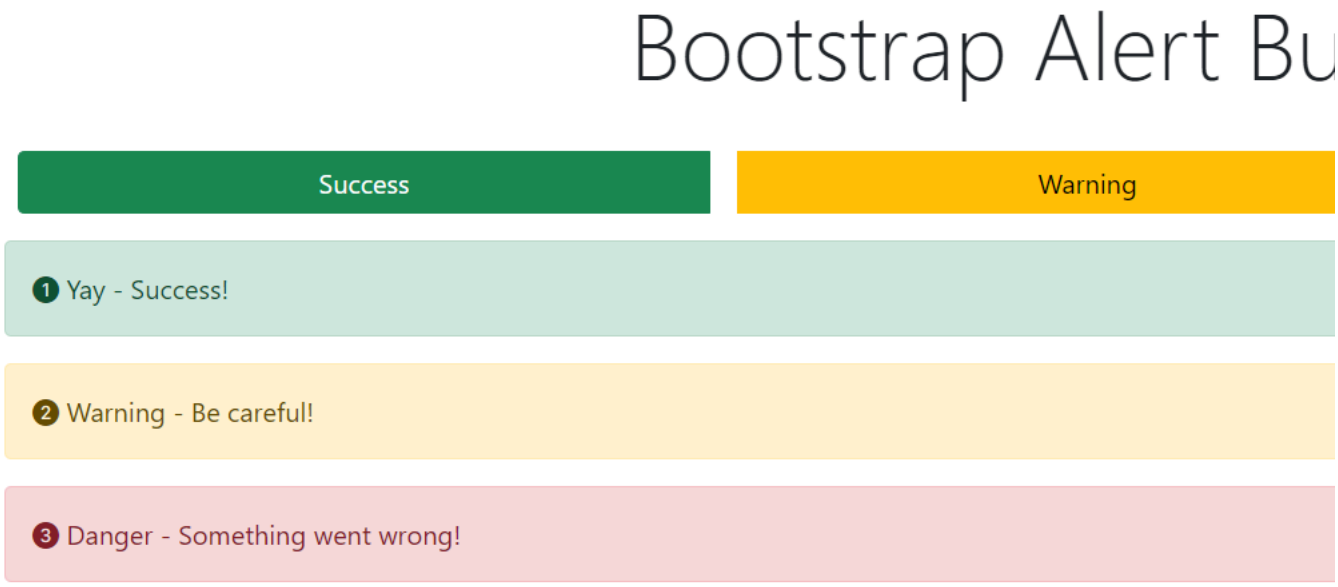
NOTE: To preview the output, launch the application on port 5500. If the application is already running, kindly reload the "Your Application" page.

▼ Complete solution code

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Bootstrap Alert Buttons</title>
    <!-- Bootstrap CSS and JS -->
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet"
        integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC" crossorigin="anonymous">
    <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.11.0/font/bootstrap-icons.css">
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.min.js"
        integrity="sha384-cVKIPhGWiC2Al4u+LWgxfKTRIcfu0JTxR+EQDz/bgldoEyl4H0zUF0QKbrJ0EcQF"
        crossorigin="anonymous"></script>
</head>
<body>
    <div class="container mt-5">
        <h1 class="display-4 text-center">Bootstrap Alert Buttons</h1>
        <br />
        <!-- Buttons -->
        <div class="btn-group d-flex justify-content-center align-items-center" role="group" aria-label="Button group">
            <button type="button" class="btn btn-success mx-2" id="successBtn">Success</button>
            <button type="button" class="btn btn-warning mx-2" id="warningBtn">Warning</button>
            <button type="button" class="btn btn-danger mx-2" id="dangerBtn">Danger</button>
        </div>
        <!-- Alert Messages -->
        <div class="alert alert-success mt-3 fade show" id="successAlert" style="display: none;">
            <div class="d-flex justify-content-between align-items-center">
                <div>
                    <i class="bi bi-1-circle-fill"></i> Yay - Success!
                </div>
                <button type="button" class="btn-close" data-bs-dismiss="alert" aria-label="Close"></button>
            </div>
        </div>
        <div class="alert alert-warning mt-3 fade show" id="warningAlert" style="display: none;">
            <div class="d-flex justify-content-between align-items-center">
                <div>
                    <i class="bi bi-2-circle-fill"></i> Warning - Be careful!
                </div>
                <button type="button" class="btn-close" data-bs-dismiss="alert" aria-label="Close">
                </button>
            </div>
        </div>
        <div class="alert alert-danger mt-3 fade show" id="dangerAlert" style="display: none;">
            <div class="d-flex justify-content-between align-items-center">
                <div>
                    <i class="bi bi-3-circle-fill"></i> Danger - Something went wrong!
                </div>
                <button type="button" class="btn-close" data-bs-dismiss="alert" aria-label="Close">
                </button>
            </div>
        </div>
```

```
        </div>
        <script>
            // JavaScript to show alert messages on button click
            document.getElementById("successBtn").addEventListener("click", function () {
                document.getElementById("successAlert").style.display = "block";
            });
            document.getElementById("warningBtn").addEventListener("click", function () {
                document.getElementById("warningAlert").style.display = "block";
            });
            document.getElementById("dangerBtn").addEventListener("click", function () {
                document.getElementById("dangerAlert").style.display = "block";
            });
        </script>
    </body>
    </html>
```

Your output should look similar to this:



Explanation of the output:

On the web page, you will see three buttons (Success, Warning, Danger).

Click each button to display the corresponding alert message (Success, Warning, or Danger).

The alert messages can be closed by clicking the x button in the top right corner of each alert.

Congratulations! You have successfully created a web page with Bootstrap alert buttons and JavaScript functionality.

Author(s)

Rajashree Patil
Manvi Gupta

Changelog

Date	Version	Changed by	Change Description
2023-09-18	0.2	Mary Stenberg	QA Pass with edits
2023-09-12	0.1	Rajashree, Manvi	Initial version created