



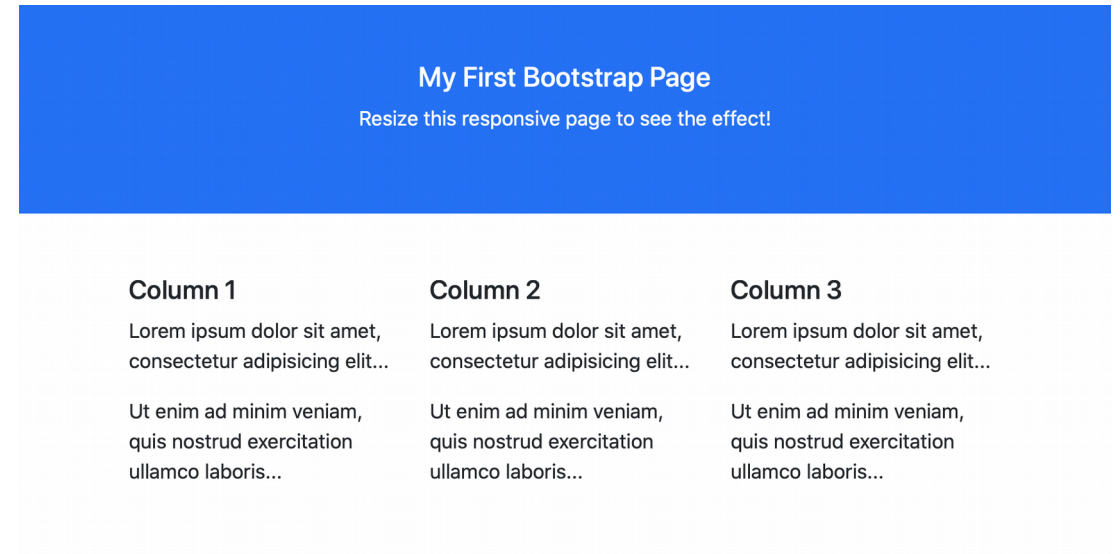
Bootstrap

- Bootstrap is a free front-end framework for faster and easier web development
- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins
- Bootstrap also gives you the ability to easily create responsive designs



What is Responsive Web Design?

- Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.



FirstBootstrap.html

Why Use Bootstrap?

- Easy to use: Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
- Responsive features: Bootstrap's responsive CSS adjusts to phones, tablets, and desktops
- Mobile-first approach: In Bootstrap, mobile-first styles are part of the core framework
- Browser compatibility: Bootstrap 5 is compatible with all modern browsers (Chrome, Firefox, Edge, Safari, and Opera).

Where to Get Bootstrap 5?

- Include Bootstrap 5 from a CDN ((Content Delivery Network).)

```
<!-- Latest compiled and minified CSS -->  
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/css/bootstrap.min.css" rel="stylesheet">  
  
<!-- Latest compiled JavaScript -->  
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/js/bootstrap.bundle.min.js"></script>
```

- Download Bootstrap 5 from getbootstrap.com

Create Web Page With Bootstrap 5

1. Add the HTML5 doctype: Always include the HTML5 doctype at the beginning of the page, along with the lang attribute and the correct title and character set

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Bootstrap 5 Example</title>
    <meta charset="utf-8">
  </head>
</html>
```

2. Bootstrap 5 is mobile-first

- The width=device-width part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).
- The initial-scale=1 part sets the initial zoom level when the page is first loaded by the browser.

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

3. Containers

- Bootstrap 5 also requires a containing element to wrap site contents.
 - There are two container classes to choose from:
 1. The .container class provides a responsive **fixed width container**

ContainerExample.html

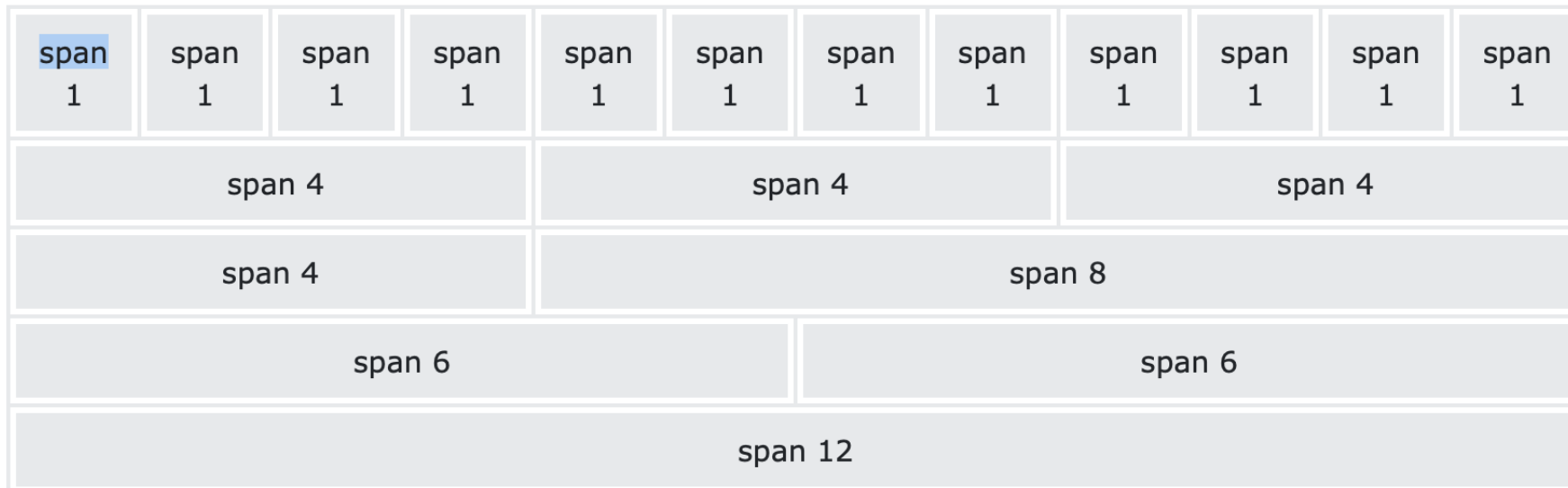
2. The .container-fluid class provides a **full width container**, spanning the entire width of the the screen (width is always 100%)

ContainerFluidExample.html

Open both files, resize the browser window to see that the container width will change at different breakpoints

Bootstrap 5 Grid System

- Bootstrap's grid system is built with flexbox and allows up to 12 columns across the page.
- If you do not want to use all 12 columns individually, you can group the columns together to create wider columns:





Bootstrap Columns

- The basic principle behind Bootstrap is to structure your page into columns. Your page will adjust the number of columns to display based on the screen width.
- You, as a designer, can control how many columns you want in your page at its full width. You can have up to 12 columns.
- Use the correct class based on how many columns you want.

col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1
----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

col-sm-3	col-sm-3	col-sm-3	col-sm-3
----------	----------	----------	----------

col-sm-4	col-sm-4	col-sm-4
----------	----------	----------

col-sm-6	col-sm-6
----------	----------

col-sm-12

Grid Classes

- The Bootstrap 5 grid system has six classes:
- .col- (extra small devices - screen width less than 576px)
- .col-sm- (small devices - screen width equal to or greater than 576px)
- .col-md- (medium devices - screen width equal to or greater than 768px)
- .col-lg- (large devices - screen width equal to or greater than 992px)
- .col-xl- (xlarge devices - screen width equal to or greater than 1200px)
- .col-xxl- (xxlarge devices - screen width equal to or greater than 1400px)

Basic Structure of a Bootstrap 5 Grid

- First example: create a row (`<div class="row">`). Then, add the desired number of columns (tags with appropriate `.col-*` classes). The first star (*) represents the responsiveness: sm, md, lg, xl or xxl, while the second star represents a number, which should add up to 12 for each row.

```
<!-- Control the column width, and how  
they should appear on different devices  
-->
```

```
<div class="row">  
  <div class="col-**-**"></div>  
  <div class="col-**-**"></div>  
</div>
```

```
<div class="row">  
  <div class="col-**-**"></div>  
  <div class="col-**-**"></div>  
  <div class="col-**-**"></div>  
</div>
```

```
<!-- Or let Bootstrap automatically  
handle the layout -->
```

```
<div class="row">  
  <div class="col"></div>  
  <div class="col"></div>  
  <div class="col"></div>  
</div>
```

- Second example: instead of adding a number to each col, let bootstrap handle the layout, to create equal width columns: two "col" elements = 50% width to each col, while three cols = 33.33% width to each col. Four cols = 25% width, etc. You can also use .col-sm|md|lg|xl|xxl to make the columns responsive.

Three Equal Columns.html



Try to add a new div with class="col" inside the row class - this will create four equal-width columns.

Responsive Columns

- The following example shows how to create four equal-width columns starting at tablets and scaling to extra large desktops. **On mobile phones or screens that are less than 576px wide, the columns will automatically stack on top of each other:**

```
<div class="row">
  <div class="col-sm-3">.col-sm-3</div>
  <div class="col-sm-3">.col-sm-3</div>
  <div class="col-sm-3">.col-sm-3</div>
  <div class="col-sm-3">.col-sm-3</div>
</div>
```

ResponsiveColumns.html



Resize the browser window to see the effect.

The columns will automatically stack on top of each other when the screen is less than 576px wide.

.col

Two Unequal Responsive Columns

- The following example shows how to get two various-width columns starting at tablets and scaling to large extra desktops:

```
<div class="row">  
  <div class="col-sm-4">.col-sm-4</div>  
  <div class="col-sm-8">.col-sm-8</div>  
</div>
```

UnequalResponsiveColumns.html

.col-sm-4

.col-sm-8



Bootstrap Example

```
<div class="container">
  <div class="row" style="margin-top:52px;">
    <div id="currency" class="col-sm-6">
      <div class="label">Currency App</div>
    </div>
    <div id="prayer" class="col-sm-6">
      <div class="label">Prayer App</div>
    </div>
    <div id="weather" class="col-sm-6">
      <div class="label">Weather App</div>
    </div>
    <div id="sentiment" class="col-sm-6">
      <div class="label">Sentiment App</div>
    </div>
  </div>
</div>
```



[See Lab 5](#)

col-sm-6

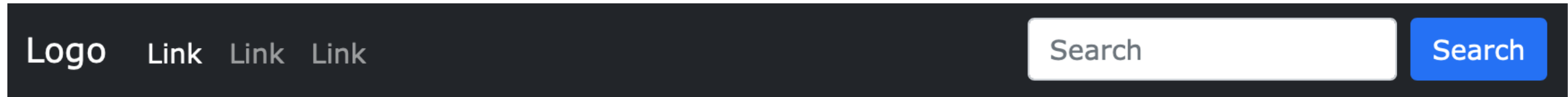
col-sm-6

col-sm-6

col-sm-6

Bootstrap 5 Navbars

- A navigation bar is a navigation header that is placed at the top of the page:



Basic Navbar

- With Bootstrap, a navigation bar can extend or collapse, depending on the screen size.
- A standard navigation bar is created with the `.navbar` class, followed by a responsive collapsing class: `.navbar-expand-xxl|xl|lg|md|sm` (stacks the navbar vertically on xlarge, extra large, large, medium or small screens).
- To add links inside the navbar, use either an `` element (or a `<div>`) with `class="navbar-nav"`. Then add `` elements with a `.nav-item` class followed by an `<a>` element with a `.nav-link` class:

[Link 1](#) [Link 2](#) [Link 3](#)

Basic Navbar

```
<!-- A grey horizontal navbar that becomes  
vertical on small screens -->
```

```
<nav class="navbar navbar-expand-sm bg-  
light">
```

```
  <div class="container-fluid">
```

```
    <!-- Links -->
```

```
    <ul class="navbar-nav">
```

```
      <li class="nav-item">
```

```
        <a class="nav-link" href="#">Link
```

```
1</a>
```

```
      </li>
```

```
      <li class="nav-item">
```

```
        <a class="nav-link" href="#">Link
```

```
2</a>
```

```
      </li>
```

```
      <li class="nav-item">
```

```
        <a class="nav-link" href="#">Link
```

```
3</a>
```

```
      </li>
```

BasicNavbar.html

Collapsible Navigation Bar

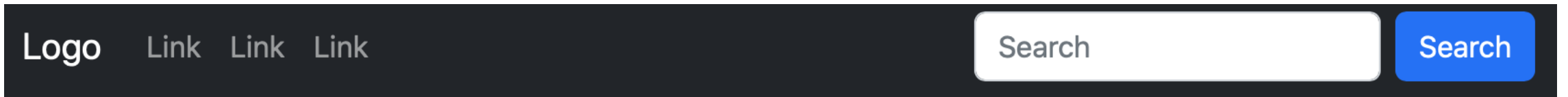
- Very often, especially on small screens, you want to hide the navigation links and replace them with a button that should reveal them when clicked on.
- To create a collapsible navigation bar, use a button with `class="navbar-toggler"`, `data-bs-toggle="collapse"` and `data-bs-target="#thetarget"`. Then wrap the navbar content (links, etc) inside a `<div>` element with `class="collapse navbar-collapse"`, followed by an id that matches the data-bs-target of the button: "thetarget".

```
nav class="navbar navbar-expand-sm bg-dark navbar-dark">
  <div class="container-fluid">
    <a class="navbar-brand" href="#">Logo</a>
    <button class="navbar-toggler" type="button" data-bs-
toggle="collapse" data-bs-target="#collapsibleNavbar">
      <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="collapsibleNavbar">
      <ul class="navbar-nav">
        <li class="nav-item">
          <a class="nav-link" href="#">Link</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#">Link</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#">Link</a>
        </li>
      </ul>
    </div>
  </div>
</nav>
```

CollapsibleNavbar.htm

Navbar Forms and Buttons

- You can also include forms inside the navigation bar:

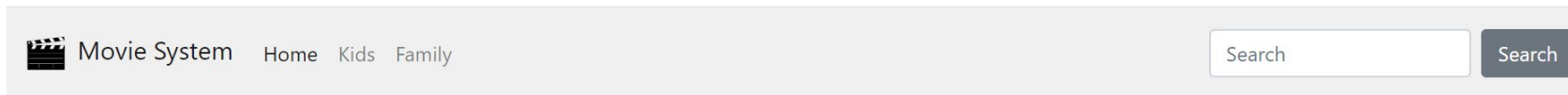


```
<nav class="navbar navbar-expand-sm navbar-dark bg-dark">
  <div class="container-fluid">
    <a class="navbar-brand" href="javascript:void(0)">Logo</a>
    <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#mynavbar">
      <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="mynavbar">
      <ul class="navbar-nav me-auto">
        <li class="nav-item">
          <a class="nav-link" href="javascript:void(0)">Link</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="javascript:void(0)">Link</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="javascript:void(0)">Link</a>
        </li>
      </ul>
      <form class="d-flex">
        <input class="form-control me-2" type="text" placeholder="Search">
        <button class="btn btn-primary" type="button">Search</button>
      </form>
    </div>
  </div>
</nav>
```

NavbarForms.html

Bootstrap & Navbar

Add a responsive menu to your project



Alice in Wonderland



Dora



Farah and Marah



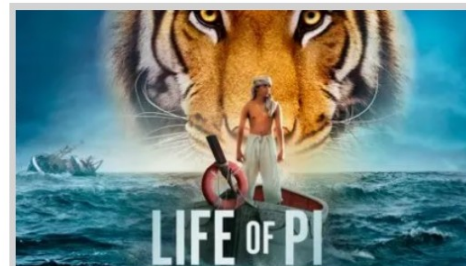
Frozen



Jawab



Life of Pi



Moana

Mosafer

Pirates of Caribbean

Bootstrap & Navbar