

# SCS1620 USER INTERFACE TECHNOLOGIES

## Unit II

### Syllabus

Responsive Design: What is RWD – Introduction to RWD Techniques – Fluid Layout, Fluid Images and Media queries - Introduction to RWD Framework

Twitter Bootstrap – Bootstrap Background and Features - Getting Started with Bootstrap - Demystifying Grids – OffCanvas - Bootstrap Components - JS Plugins – Customization

### Responsive Web Design (RWD)

- To make the Web page look good on all devices
- Uses only HTML and CSS
- It is not a program or a JavaScript
- Web pages can be viewed using many different devices: desktops, tablets, and phones.
- Web page should look good, and be easy to use, regardless of the device.
- Web pages should not leave out information to fit smaller devices, but rather adapt its content to fit any device.

### Viewport

- The viewport is the user's visible area of a web page.
- The viewport varies with the device, and will be smaller on a mobile phone than on a computer screen.
- Before tablets and mobile phones, web pages were designed only for computer screens, and it was common for web pages to have a static design and a fixed size.
- Then, when we started surfing the internet using tablets and mobile phones, fixed size web pages were too large to fit the viewport. To fix this, browsers on those devices scaled down the entire web page to fit the screen.

### Grid View

- Many web pages are based on a grid-view, which means that the page is divided into columns.
- Using a grid-view is very helpful when designing web pages. It makes it easier to place elements on the page.
- A responsive grid-view often has 12 columns, and has a total width of 100%, and will shrink and expand as you resize the browser window

### Media Query

Media query is a CSS technique introduced in CSS3.

It uses the @media rule to include a block of CSS properties only if a certain condition is true.

## Design for Mobile First

Mobile First means designing for mobile before designing for desktop or any other device (This will make the page display faster on smaller devices).

Changes are to be carried out in CSS.

Instead of changing styles when the width gets smaller than 768px, change the design when the width gets larger than 768px.

### Example 1:

```
<!DOCTYPE html>
<html><head>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
* {
box-sizing: border-box;
}
.header {
border: 1px solid blue;
padding: 15px;
}
.menu {
width: 25%;
float: left;
padding: 15px;
border: 1px solid green;
}
.main {
width: 75%;
float: left;
padding: 15px;
border: 1px solid orange;
}
</style></head>
<body>
<div class="header">
<h1>School of Computing</h1>
</div>
<div class="menu">
<ul>
<li>B.E. CSE</li>
<li>B.Tech IT</li>
<li>M.E. CSE</li>
<li>M.Tech IT</li>
</ul>
</div>
<div class="main">
<h1>The City</h1>
<p>Department of Computer Science and Engineering</p>
</div>
</body>
</html>
```

## Example 2:

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
* {
box-sizing: border-box;
}
.row::after {
content: "";
clear: both;
display: table;
}
[class*="col-"] {
float: left;
padding: 15px;
}
.col-1 {width: 8.33%;}
.col-2 {width: 16.66%;}
.col-3 {width: 25%;}
.col-4 {width: 33.33%;}
.col-5 {width: 41.66%;}
.col-6 {width: 50%;}
.col-7 {width: 58.33%;}
.col-8 {width: 66.66%;}
.col-9 {width: 75%;}
.col-10 {width: 83.33%;}
.col-11 {width: 91.66%;}
.col-12 {width: 100%;}
html {
font-family: "Lucida Sans", sans-serif;
}
.header {
background-color: #9933cc;
color: #ffffff;
padding: 15px;
}
.menu ul {
list-style-type: none;
margin: 0;
padding: 0;
}
.menu li {
padding: 8px;
margin-bottom: 7px;
background-color: #33b5e5;
color: #ffffff;
box-shadow: 0 1px 3px rgba(0,0,0,0.12), 0 1px 2px rgba(0,0,0,0.24);
}

```

```

.menu li:hover {
background-color: #0099cc;
}
</style>
</head>
<body>
<div class="header">
<h1>School of Computing</h1>
</div>
<div class="row">
<div class="col-3 menu">
<ul>
<li>B.E. CSE</li>
<li>B.Tech IT</li>
<li>M.E. CSE</li>
<li>M.Tech IT</li>
</ul>
</div>
<div class="col-9">
<h1>Department of Computer Science and Engineering</h1>
<p>The department was established in the year 1987 and one of the oldest
department in the University.</p>
<p>The department offers UG and PG programmes.</p>
</div>
</div>
</body>
</html>

```

### Example 3:

```

<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
body {
background-color: lightgreen;
}
@media only screen and (max-width: 500px) {
body {
background-color: lightblue;
}
}
</style>
</head>
<body>
<p>Resize the browser window. When the width of this document is 500pixels or
less, the background-color is "lightblue", otherwise it is "lightgreen".</p>
</body>
</html>

```

**Example 4:**

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
* {
box-sizing: border-box;
}
.row::after {
content: "";
clear: both;
display: table;
}
[class*="col-"] {
float: left;
padding: 15px;
}
html {
font-family: "Lucida Sans", sans-serif;
}
.header {
background-color: #9933cc;
text-align: center;
color: #ffffff;
padding: 15px;
}
.menu ul {
list-style-type: none;
margin: 0;
padding: 0;
}
.menu li {
padding: 8px;
margin-bottom: 7px;
background-color: blue;
color: #ffffff;
box-shadow: 0 1px 3px rgba(0,0,0,0.12), 0 1px 2px rgba(0,0,0,0.24);
}
.menu li:hover {
background-color: green;
}
.aside {
background-color: orange;
padding: 15px;
color: #ffffff;
text-align: center;
font-size: 14px;
box-shadow: 0 1px 3px rgba(0,0,0,0.12), 0 1px 2px rgba(0,0,0,0.24);
}
```

```

.footer {
background-color: red;
color: #ffffff;
text-align: center;
font-size: 12px;
padding: 15px;
}
[class*="col-"] { /* For mobile phones: */
width: 100%;
}
@media only screen and (min-width: 600px) { /* For tablets: */
.col-m-1 {width: 8.33%;}
.col-m-2 {width: 16.66%;}
.col-m-3 {width: 25%;}
.col-m-4 {width: 33.33%;}
.col-m-5 {width: 41.66%;}
.col-m-6 {width: 50%;}
.col-m-7 {width: 58.33%;}
.col-m-8 {width: 66.66%;}
.col-m-9 {width: 75%;}
.col-m-10 {width: 83.33%;}
.col-m-11 {width: 91.66%;}
.col-m-12 {width: 100%;}
}
@media only screen and (min-width: 768px) { /* For desktop: */
.col-1 {width: 8.33%;}
.col-2 {width: 16.66%;}
.col-3 {width: 25%;}
.col-4 {width: 33.33%;}
.col-5 {width: 41.66%;}
.col-6 {width: 50%;}
.col-7 {width: 58.33%;}
.col-8 {width: 66.66%;}
.col-9 {width: 75%;}
.col-10 {width: 83.33%;}
.col-11 {width: 91.66%;}
.col-12 {width: 100%;}
}
</style>
</head>
<body>
<div class="header">
<h1>School of Computing</h1>
</div>
<div class="row">
<div class="col-2 col-m-3 menu">
<ul>
<li>B.E. CSE</li>
<li>B.Tech IT</li>
<li>M.E. CSE</li>

```

```

</li>M.Tech IT</li>
</ul>
</div>
<div class="col-7 col-m-9">
<h2>Department of Computer Science and Engineering</h2>
<p>The department was established in the year 1987 and one of the oldest
department in the University.</p>
<p>The department offers UG and PG programmes.</p>
</div>
<div class="col-3 col-m-12">
<div class="aside">
<h2>Electives</h2>
<p>User Interface Technologies</p>
    <p>Internet of Things</p>
    <p>Python Programming</p>
</div>
</div>
</div>
<div class="footer">
<p>Resize the browser window to see how the content respond to the resizing.</p>
</div>
</body>
</html>

```

### Example 5:

```

<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
body /* For width smaller than 400px: */
background-repeat: no-repeat;
background-image: url('SmallRose.jpg');
}
@media only screen and (min-width: 400px) /* For width 400px and larger: */
body {
background-image: url('BigRose.jpg');
}
}
</style>
</head>
<body>
<p style="margin-top:200px;">Resize the browser width and the background image
will change at 400px.</p>
<picture>
<source srcset="SmallRose.jpg" media="(max-width: 400px)">
<source srcset="BigRose.jpg">
<imgsrc="SmallRose.jpg" alt="Flowers" style="width:auto;">
</picture>
</body></html>

```

## Bootstrap

- Bootstrap 4 is the newest version of Bootstrap, which is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first websites.
- Bootstrap 4 is completely free to download and use!
- 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

Bootstrap can be obtained from  
MaxCDN (Content Delivery Network)  
[getbootstrap.com](https://getbootstrap.com)

## To include

```
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/
bootstrap.min.css">
<!-- jQuery library -->
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
<!-- Popper JS -->
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"
></script>
<!-- Latest compiled JavaScript -->
<scriptsrc="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.
js"></script>
```

## Basic Web page with Bootstrap 4

1. Bootstrap 4 uses HTML elements and CSS properties that require the HTML5 doctype. Always include the HTML5 doctype at the beginning of the page, along with the lang attribute and the correct character set:

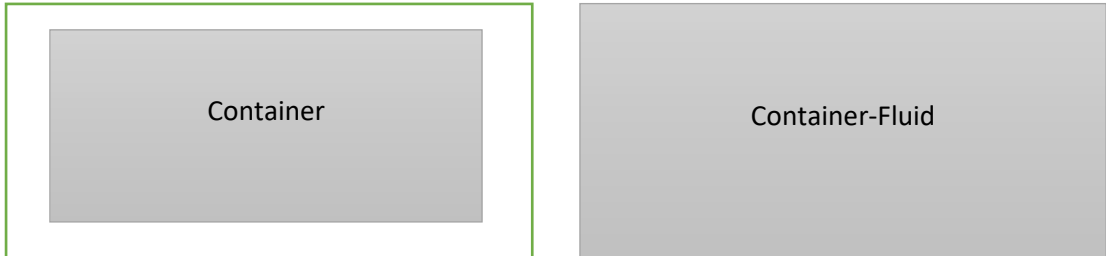
```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
</head>
</html>
```

2. Bootstrap 4 is designed to be responsive to mobile devices. Mobile-first styles are part of the core framework. To ensure proper rendering and touch zooming, add the following <meta> tag inside the <head> element:

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



3. Bootstrap 4 also requires a containing element to wrap site contents. There are two container classes to choose from:
  - a. The `.container` class provides a responsive fixed width container
  - b. The `.container-fluid` class provides a full width container, spanning the entire width of the viewport



**Example 1:**

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Bootstrap Example</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>

<div class="container">
<h1>Bootstrap Page with Container</h1>
<p>This part is inside a .container class.</p>
<p>The .container class provides a responsive fixed width container.</p>
</div>
<div class="container-fluid">
<h1>Bootstrap Page with container fluid</h1>
<p>This part is inside a .container-fluid class.</p>
<p>The .container-fluid class provides a full width container, spanning the entire
width of the viewport.</p>
</div>
</body>
</html>
```

## Bootstrap 4 Grid System

Bootstrap's grid system is built with flexbox and allows up to 12 columns across the page.

The columns can be grouped together to create wider columns

The grid system is responsive, and the columns will re-arrange automatically depending on the screen size.

Make sure that the sum adds up to 12 or fewer (it is not required that you use all 12 available columns).

span1	span1	span1	span1	span1	span1	span1	span1	span1	span1	span1	span1
span4				span4				span4			
span4				span8							
span6						span6					
span12											

## Grid Classes

The Bootstrap 4 grid system has five 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)

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

Each class scales up, to set the same widths for sm and md, it is enough to specify sm.

## Example 2:

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Bootstrap Example</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link
rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></scri
pt>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>
<div class="container-fluid">
<h1>Hello World!</h1>
<p>Three equal width columns! Try to add a new div with class="col" inside the row
class - this will create four equal-width columns.</p>
<div class="row">
<div class="col" style="background-color:lavender;">.col</div>
```

```

<div class="col" style="background-color:orange;">.col</div>
<div class="col" style="background-color:lavender;">.col</div>
</div>
<p>The columns will automatically stack on top of each other when the screen is
less than 576px wide.</p>
<div class="row">
<div class="col-sm-3" style="background-color:lavender;">.col-sm-3</div>
<div class="col-sm-3" style="background-color:lavenderblush;">.col-sm-3</div>
<div class="col-sm-3" style="background-color:lavender;">.col-sm-3</div>
<div class="col-sm-3" style="background-color:lavenderblush;">.col-sm-3</div>
</div>
<p>The columns will automatically stack on top of each other when the screen is
less than 576px wide.</p>
<div class="row">
<div class="col-sm-4" style="background-color:lavender;">.col-sm-4</div>
<div class="col-sm-8" style="background-color:lavenderblush;">.col-sm-8</div>
</div>
</div>
</body>
</html>

```

## Typography Examples

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
                                rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></scri
pt>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>
<div class="jumbotron jumbotron-fluid">
  <div class="container">
    <h1>Examples on Typography</h1>
  </div>
</div>

<div class="container">
  <h1>1. Normal Headings</h1>
  <h1>h1 Bootstrap heading (2.5rem = 40px)</h1>
  <h2>h2 Bootstrap heading (2rem = 32px)</h2>
  <h3>h3 Bootstrap heading (1.75rem = 28px)</h3>

```

```
<h4>h4 Bootstrap heading (1.5rem = 24px)</h4>
<h5>h5 Bootstrap heading (1.25rem = 20px)</h5>
<h6>h6 Bootstrap heading (1rem = 16px)</h6>
```

## <h1>2. Display Headings</h1>

<p>Display headings are used to stand out more than normal headings (larger font-size and lighter font-weight):</p>

```
<h1 class="display-1">Display 1</h1>
<h1 class="display-2">Display 2</h1>
<h1 class="display-3">Display 3</h1>
<h1 class="display-4">Display 4</h1>
```

## <h1>3. Lighter, Secondary Text</h1>

<p>The small element is used to create a lighter, secondary text in any heading:</p>

```
<h1>h1 heading <small>secondary text</small></h1>
<h2>h2 heading <small>secondary text</small></h2>
<h3>h3 heading <small>secondary text</small></h3>
<h4>h4 heading <small>secondary text</small></h4>
<h5>h5 heading <small>secondary text</small></h5>
<h6>h6 heading <small>secondary text</small></h6>
```

## <h1>4. Highlight Text</h1>

<p>Use the mark element to <mark>highlight</mark> text.</p>

## <h1>5. Abbreviations</h1>

<p>The abbr element is used to mark up an abbreviation or acronym:</p>

<p>The <abbr title="User Interface Technologies">UIT</abbr> elective course offered in association with Infosys</p>

## <h1>6. Blockquotes</h1>

<p>The blockquote element is used to present content from another source:</p>

```
<blockquote class="blockquote">
```

<p>For 50 years, WWF has been protecting the future of nature. The world's leading conservation organization, WWF works in 100 countries and is supported by 1.2 million members in the United States and close to 5 million globally.</p>

```
<footer class="blockquote-footer">From WWF's website</footer>
```

```
</blockquote>
```

## <h1>7. Description Lists</h1>

<p>The dl element indicates a description list:</p>

```
<dl>
```

```
<dt>HTML</dt>
```

```
<dd>- Hypertext Markup Language</dd>
```

```
<dt>XML</dt>
```

```
<dd>- Extensible Markup Language</dd>
```

```
</dl>
```

## <h1>8. Keyboard Inputs</h1>

<p>To indicate input that is typically entered via the keyboard, use the kbd element:</p>

<p>Use <kbd>ctrl + s</kbd> to open the Print dialog box.</p>

# <h1>9. Multiple Code Lines</h1>

<p>For multiple lines of code, use the pre element:</p>

```
<pre>
```

```
Text in a pre element  
is displayed in a fixed-width  
font, and it preserves  
both spaces and  
line breaks.
```

```
</pre>
```

<p>If you add the .pre-scrollable class, the pre element gets a max-height of 350px and provides a y-axis scrollbar:</p>

```
<pre class="pre-scrollable">Text in a pre element  
is displayed in a fixed-width  
font, and it preserves  
both spaces and  
line breaks.</pre>
```

# <h1>10. Font weight and italics</h1>

```
<p class="font-weight-bold">Bold text.</p>
```

```
<p class="font-weight-normal">Normal weight text.</p>
```

```
<p class="font-weight-light">Light weight text.</p>
```

```
<p class="font-italic">Italic text.</p>
```

## <h2>11. Paragraph lead</h2>

<p>Use the .lead class to make a paragraph "stand out":</p>

```
<p class="lead">This paragraph stands out.</p>
```

```
<p class="small">This paragraph is smaller.</p>
```

```
<p>This is a regular paragraph.</p>
```

# <h1>12. Text Alignment</h1>

```
<p class="text-left">Left-aligned text.</p>
```

```
<p class="text-right">Right-aligned text.</p>
```

```
<p class="text-center">Center-aligned text.</p>
```

```
<p class="text-justify">Justified text. Justified text. Justified text. Justified text.  
Justified text. Justified text.</p>
```

```
<p class="text-nowrap">No wrap text. No wrap text. No wrap text. No wrap  
text.</p>
```

<p><strong>Tip:</strong> Try to resize the browser window to see the behaviour of justify and nowrap.</p>

## <h2>13. Text Case</h2>

```
<p class="text-lowercase">Lowercased text.</p>
```

```
<p class="text-uppercase">Uppercased text.</p>
```

```
<p class="text-capitalize">Capitalized text.</p>
```

## <h2>14. List Inline</h2>

<p>The class .list-inline places all list items on a single line, when used together with the .list-inline-item:</p>

```
<ul class="list-inline">
```

```
  <li class="list-inline-item">Internet of Things</li>
```

```
  <li class="list-inline-item">Python Programming</li>
```

```
  <li class="list-inline-item">User Interface Technologies</li>
```

```
</ul>
```

## <h2>15. List Unstyled</h2>

<p>The class .list-unstyled removes the default list-style and left margin on list items (immediate children only):</p>

```
<ul class="list-unstyled">
  <li>Internet of Things</li>
  <li>User Interface Technologies
    <ul>
      <li>HTML 5</li>
      <li>CSS 3</li>
    </ul>
  </li>
  <li>Python Programming</li>
</ul>
</div>
</body>
</html>
```

### Colors Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
    href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
    rel="stylesheet"
  >
  <script
    src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
  <script
    src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></script>
  <script
    src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>
<div class="container">
  <h1>Colors</h1>
  <h2>1. Contextual Colors</h2>
  <p>Use the contextual classes to provide "meaning through colors":</p>
  <p class="text-muted">This text is muted.</p>
  <p class="text-primary">This text is important.</p>
  <p class="text-success">This text indicates success.</p>
  <p class="text-info">This text represents some information.</p>
  <p class="text-warning">This text represents a warning.</p>
  <p class="text-danger">This text represents danger.</p>
  <p class="text-secondary">Secondary text.</p>
  <p class="text-dark">This text is dark grey.</p>
  <p class="text-light">This text is light grey (on white background).</p>
  <p class="text-white">This text is white (on white background).</p>
  <h2>2. Contextual Link Colors</h2>
  <p>Hover over the links.</p>
```

```

<a href="#" class="text-muted">Muted link.</a>
<a href="#" class="text-primary">Primary link.</a>
<a href="#" class="text-success">Success link.</a>
<a href="#" class="text-info">Info link.</a>
<a href="#" class="text-warning">Warning link.</a>
<a href="#" class="text-danger">Danger link.</a>
<a href="#" class="text-secondary">Secondary link.</a>
<a href="#" class="text-dark">Dark grey link.</a>
<a href="#" class="text-light">Light grey link.</a>
<h2>3. Contextual Backgrounds</h2>
<p>Use the contextual background classes to provide "meaning through colors".</p>
<p>Note that you can also add a .text-* class if you want a different text color:</p>
<p class="bg-primary text-white">This text is important.</p>
<p class="bg-success text-white">This text indicates success.</p>
<p class="bg-info text-white">This text represents some information.</p>
<p class="bg-warning text-white">This text represents a warning.</p>
<p class="bg-danger text-white">This text represents danger.</p>
<p class="bg-secondary text-white">Secondary background color.</p>
<p class="bg-dark text-white">Dark grey background color.</p>
<p class="bg-light text-dark">Light grey background color.</p>
</div>
</body>
</html>

```

## Table Examples

### Example 1

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
    href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
    rel="stylesheet"
  >
  <script
    src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
  <script
    src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></script>
  <script
    src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>

<div class="container">
  <h2>Striped Rows</h2>
  <table class="table table-striped table-bordered table-hover">
    <thead>
      <tr>

```

```

        <th>Firstname</th>
        <th>Lastname</th>
        <th>Email</th>
    </tr>
</thead>
<tbody>
    <tr>
        <td>John</td>
        <td>Doe</td>
        <td>john@example.com</td>
    </tr>
    <tr>
        <td>Mary</td>
        <td>Moe</td>
        <td>mary@example.com</td>
    </tr>
    <tr>
        <td>July</td>
        <td>Dooley</td>
        <td>july@example.com</td>
    </tr>
</tbody>
</table>
</div>

</body>
</html>

```

### Example2:

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Bootstrap Example</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link
        href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
        rel="stylesheet"
    >
    <script
        src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
    <script
        src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></scri
    pt>
    <script
        src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>

<div class="container">
    <h2>Contextual Classes</h2>

```



<p>Contextual classes can be used to color the table, table rows or table cells. The classes that can be used are: .table-primary, .table-success, .table-info, .table-warning, .table-danger, .table-active, .table-secondary, .table-light and .table-dark:</p>

```
<table class="table table-hover">
  <thead>
    <tr>
      <th>Firstname</th>
      <th>Lastname</th>
      <th>Email</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Default</td>
      <td>Defaultson</td>
      <td>def@somemail.com</td>
    </tr>
    <tr class="table-primary">
      <td>Primary</td>
      <td>Joe</td>
      <td>joe@example.com</td>
    </tr>
    <tr class="table-success">
      <td>Success</td>
      <td>Doe</td>
      <td>john@example.com</td>
    </tr>
    <tr class="table-danger">
      <td>Danger</td>
      <td>Moe</td>
      <td>mary@example.com</td>
    </tr>
    <tr class="table-info">
      <td>Info</td>
      <td>Dooley</td>
      <td>july@example.com</td>
    </tr>
    <tr class="table-warning">
      <td>Warning</td>
      <td>Refs</td>
      <td>bo@example.com</td>
    </tr>
    <tr class="table-active">
      <td>Active</td>
      <td>Activeson</td>
      <td>act@example.com</td>
    </tr>
    <tr class="table-secondary">
      <td>Secondary</td>
```

```

        <td>Secondson</td>
        <td>sec@example.com</td>
    </tr>
    <tr class="table-light">
        <td>Light</td>
        <td>Angie</td>
        <td>angie@example.com</td>
    </tr>
    <tr class="table-dark text-dark">
        <td>Dark</td>
        <td>Bo</td>
        <td>bo@example.com</td>
    </tr>
</tbody>
</table>
</div>

</body>
</html>

```

### Example 3

```

<!DOCTYPE html>
<html>
<head>
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
    href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
    rel="stylesheet"
  >
  <script
    src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
  <script
    src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></scri
pt>
  <script
    src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>

<div class="container">
  <h2>Responsive Table</h2>
  <p>The .table-responsive class creates a responsive table which will scroll
horizontally on screens that are less than 992px wide (if needed). When viewing on
anything larger than 992px, there is no difference:</p>

  <div class="table-responsive">
    <!-- table-responsive-sm, table-responsive-md, table-responsive-lg, table-
responsive-xl -->
    <table class="table">
      <thead>
        <tr>
          <th>#</th>

```

```

        <th>Firstname</th>
        <th>Lastname</th>
        <th>Age</th>
        <th>City</th>
        <th>Country</th>
        <th>Sex</th>
        <th>Example</th>
        <th>Example</th>
        <th>Example</th>
        <th>Example</th>
    </tr>
</thead>
<tbody>
<tr>
    <td>1</td>
    <td>Anna</td>
    <td>Pitt</td>
    <td>35</td>
    <td>New York</td>
    <td>USA</td>
    <td>Female</td>
    <td>Yes</td>
    <td>Yes</td>
    <td>Yes</td>
    <td>Yes</td>
</tr>
</tbody>
</table>
</div>
</div>

</body>
</html>

```

## Images

Example

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Bootstrap Example</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link
        href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
        rel="stylesheet"
    >
    <script
        src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
    <script
        src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></scri
pt>

```

```

<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>

<div class="container">
  <h2>Rounded Corners</h2>
  <p>The .rounded class adds rounded corners to an image:</p>
  
</div>
<div class="container">
  <h2>Circle</h2>
  <p>The .rounded-circle class shapes the image to a circle:</p>
  
</div>
<div class="container">
  <h2>Thumbnail</h2>
  <p>The .img-thumbnail class creates a thumbnail of the image:</p>
  
</div>
</body>
</html>

```

### Alert Messages

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
                                                                    rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></scri
pt>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>

<div class="container">
  <h2>Alerts</h2>
  <p>Alerts are created with the .alert class, followed by a contextual color
classes:</p>
  <div class="alert alert-success">

```

```

    <strong>Success!</strong> This alert box could indicate a successful or positive
action.
</div>
<div class="alert alert-info">
    <strong>Info!</strong> This alert box could indicate a neutral informative change
or action.
</div>
<div class="alert alert-warning">
    <strong>Warning!</strong> This alert box could indicate a warning that might
need attention.
</div>
<div class="alert alert-danger">
    <strong>Danger!</strong> This alert box could indicate a dangerous or potentially
negative action.
</div>
<div class="alert alert-primary">
    <strong>Primary!</strong> Indicates an important action.
</div>
<div class="alert alert-secondary">
    <strong>Secondary!</strong> Indicates a slightly less important action.
</div>
<div class="alert alert-dark">
    <strong>Dark!</strong> Dark grey alert.
</div>
<div class="alert alert-light">
    <strong>Light!</strong> Light grey alert.
</div>

<div class="alert alert-success alert-dismissible">
<button type="button" class="close" data-dismiss="alert">&times;</button>
<strong>Success!</strong> Indicates a successful or positive action.
</div>
<div class="alert alert-success alert-dismissible fade show">
<button type="button" class="close" data-dismiss="alert">&times;</button>
<strong>Success!</strong> Indicates a successful or positive action.
</div>
</div>

</body>
</html>

```

## Buttons

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Bootstrap Example</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link
                                                                    rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">

```

```
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></scri
pt>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>
```

```
<div class="container">
<h2>Button Styles</h2>
<button type="button" class="btn">Basic</button>
<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-info">Info</button>
<button type="button" class="btn btn-warning">Warning</button>
<button type="button" class="btn btn-danger">Danger</button>
<button type="button" class="btn btn-dark">Dark</button>
<button type="button" class="btn btn-light">Light</button>
<button type="button" class="btn btn-link">Link</button>
</div>
```

```
<div class="container">
<h2>Button Outline</h2>
<button type="button" class="btn btn-outline-primary">Primary</button>
<button type="button" class="btn btn-outline-secondary">Secondary</button>
<button type="button" class="btn btn-outline-success">Success</button>
<button type="button" class="btn btn-outline-info">Info</button>
<button type="button" class="btn btn-outline-warning">Warning</button>
<button type="button" class="btn btn-outline-danger">Danger</button>
<button type="button" class="btn btn-outline-dark">Dark</button>
<button type="button" class="btn btn-outline-light text-dark">Light</button>
</div>
```

```
<div class="container">
<h2>Button Sizes</h2>
<button type="button" class="btn btn-primary btn-lg">Large</button>
<button type="button" class="btn btn-primary btn-md">Default</button>
<button type="button" class="btn btn-primary btn-sm">Small</button>
</div>
```

```
<div class="container">
<h2>Block Level Buttons</h2>
<button type="button" class="btn btn-primary btn-block">Button 1</button>
<button type="button" class="btn btn-default btn-block">Button 2</button>
```

```
<h2>Large Block Level Buttons</h2>
<button type="button" class="btn btn-primary btn-lg btn-block">Button 1</button>
<button type="button" class="btn btn-default btn-lg btn-block">Button 2</button>
```

```
<h2>Small Block Level Buttons</h2>
```

```

<button type="button" class="btn btn-primary btn-sm btn-block">Button 1</button>
<button type="button" class="btn btn-default btn-sm btn-block">Button 2</button>
</div>
<div class="container">
  <h2>Button States</h2>
  <button type="button" class="btn btn-primary">Primary Button</button>
  <button type="button" class="btn btn-primary active">Active Primary</button>
  <button type="button" class="btn btn-primary" disabled>Disabled Primary</button>
  <a href="#" class="btn btn-primary disabled">Disabled Link</a>
</div>
</body>
</html>

```

## Button Groups

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
    href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
    rel="stylesheet"
  >
  <script
    src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
  <script
    src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></scri
    pt>
  <script
    src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>

<div class="container">
  <h2>Button Groups Sizes</h2>
  <p>Add class .btn-group-* to size all buttons in a button group.</p>
  <h3>Large Buttons:</h3>
  <div class="btn-group btn-group-lg">
    <button type="button" class="btn btn-primary">Internet of Things</button>
    <button type="button" class="btn btn-primary">Python Programming</button>
    <button
      type="button"
      class="btn
        btn-primary">User
      Interface
      Technologies</button>
  </div>
  <h3>Default Buttons:</h3>
  <div class="btn-group">
    <button type="button" class="btn btn-primary">Internet of Things</button>
    <button type="button" class="btn btn-primary">Python Programming</button>
    <button
      type="button"
      class="btn
        btn-primary">User
      Interface
      Technologies</button>
  </div>
  <h3>Small Buttons:</h3>

```

```

<div class="btn-group btn-group-sm">
  <button type="button" class="btn btn-primary">Internet of Things</button>
  <button type="button" class="btn btn-primary">Python Programming</button>
  <button type="button" class="btn btn-primary">User Interface
Technologies</button>
</div>
</div>
<div class="container">
  <h2>Vertical Button Group</h2>
  <p>Use the .btn-group-vertical class to create a vertical button group:</p>
  <div class="btn-group-vertical">
    <button type="button" class="btn btn-primary">Internet of Things</button>
    <button type="button" class="btn btn-primary">Python Programming</button>
    <button type="button" class="btn btn-primary">User Interface
Technologies</button>
  </div>
</div>
<div class="container">
  <h2>Nesting Button Groups</h2>
  <p>Nest button groups to create dropdown menus:</p>
  <div class="btn-group">
    <button type="button" class="btn btn-primary">Internet of Things</button>
    <button type="button" class="btn btn-primary">Python Programming</button>
    <div class="btn-group">
      <button type="button" class="btn btn-primary dropdown-toggle" data-
toggle="dropdown">
        User Interface Technologies
      </button>
      <div class="dropdown-menu">
        <a class="dropdown-item" href="#">HTML5</a>
        <a class="dropdown-item" href="#">CSS3</a>
      </div>
    </div>
  </div>
</div>
</div>
</body>
</html>

```

### Badges Example

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>

```



```
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></scri
pt>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>
<div class="container">
  <h2>Badges</h2>
  <h1>Example heading <span class="badge badge-secondary">New</span></h1>
  <h2>Example heading <span class="badge badge-secondary">New</span></h2>
  <h3>Example heading <span class="badge badge-secondary">New</span></h3>
  <h4>Example heading <span class="badge badge-secondary">New</span></h4>
  <h5>Example heading <span class="badge badge-secondary">New</span></h5>
  <h6>Example heading <span class="badge badge-secondary">New</span></h6>
</div>
<div class="container">
  <h2>Contextual Badges</h2>
  <span class="badge badge-primary">Primary</span>
  <span class="badge badge-secondary">Secondary</span>
  <span class="badge badge-success">Success</span>
  <span class="badge badge-danger">Danger</span>
  <span class="badge badge-warning">Warning</span>
  <span class="badge badge-info">Info</span>
  <span class="badge badge-light">Light</span>
  <span class="badge badge-dark">Dark</span>
</div>
<div class="container">
  <h2>Pill Badges</h2>
  <span class="badge badge-pill badge-primary">Primary</span>
  <span class="badge badge-pill badge-secondary">Secondary</span>
  <span class="badge badge-pill badge-success">Success</span>
  <span class="badge badge-pill badge-danger">Danger</span>
  <span class="badge badge-pill badge-warning">Warning</span>
  <span class="badge badge-pill badge-info">Info</span>
  <span class="badge badge-pill badge-light">Light</span>
  <span class="badge badge-pill badge-dark">Dark</span>
</div>
<div class="container">
  <h2>Badge inside a Button</h2>
  <button type="button" class="btn btn-primary">
    Messages <span class="badge badge-light">4</span>
  </button>
  <button type="button" class="btn btn-danger">
    Notifications <span class="badge badge-light">7</span>
  </button>
</div>
</body>
</html>
```

## List Box

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></scri
pt>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>
<div class="container">
  <h2>Basic List Group</h2>
  <ul class="list-group">
    <a href="#" class="list-group-item list-group-item-action">First item</a>
    <a href="#" class="list-group-item list-group-item-action">Second item</a>
    <a href="#" class="list-group-item list-group-item-action">Third item</a>
  </ul>
</div>
<div class="container">
  <h2>Active and Disabled Item in a List Group</h2>
  <ul class="list-group">
    <li class="list-group-item active">Active item</li>
    <li class="list-group-item disabled">Second item</li>
    <li class="list-group-item">Third item</li>
  </ul>
</div>
<div class="container">
  <h2>Linked Items With Contextual Classes</h2>
  <p>Move the mouse over the linked items to see the hover effect:</p>
  <div class="list-group">
    <a href="#" class="list-group-item list-group-item-action">Action item</a>
    <a href="#" class="list-group-item list-group-item-success">Success item</a>
    <a href="#" class="list-group-item list-group-item-secondary">Secondary item</a>
    <a href="#" class="list-group-item list-group-item-info">Info item</a>
    <a href="#" class="list-group-item list-group-item-warning">Warning item</a>
    <a href="#" class="list-group-item list-group-item-danger">Danger item</a>
    <a href="#" class="list-group-item list-group-item-primary">Primary item</a>
    <a href="#" class="list-group-item list-group-item-dark">Dark item</a>
    <a href="#" class="list-group-item list-group-item-light">Light item</a>
  </div>
</div>
</body></html>
```

## DropDown Box

```
<!DOCTYPE html>
<html>
<head>
  <title>Bootstrap Example</title>
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></scri
pt>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
</head>
<body>

<div class="container">
  <h2>Dropdowns</h2>
  <p>The .dropdown-divider class is used to separate links inside the dropdown
menu with a thin horizontal line:</p>
  <div class="dropdown">
    <button type="button" class="btn btn-primary dropdown-toggle" data-
toggle="dropdown">
      Dropdown button
    </button>
    <div class="dropdown-menu">
      <h5 class="dropdown-header">Dropdown header</h5>
      <a class="dropdown-item active" href="#">Link 1</a>
      <a class="dropdown-item disabled" href="#">Link 2</a>
      <a class="dropdown-item" href="#">Link 3</a>
      <div class="dropdown-divider"></div>
      <a class="dropdown-item" href="#">Another link</a>
    </div>
  </div>
</div>

<div class="container">
  <h2>Dropdown Split Buttons</h2>
  <div class="btn-group">
    <button type="button" class="btn btn-primary">Primary</button>
    <button type="button" class="btn btn-primary dropdown-toggle dropdown-toggle-
split" data-toggle="dropdown">
      <span class="caret"></span>
    </button>
    <div class="dropdown-menu">
      <a class="dropdown-item" href="#">Link 1</a>
      <a class="dropdown-item" href="#">Link 2</a>
    </div>
  </div>
</div>
```

```
<div class="btn-group">
  <button type="button" class="btn btn-secondary">Secondary</button>
  <button type="button" class="btn btn-secondary dropdown-toggle dropdown-
toggle-split" data-toggle="dropdown">
  <span class="caret"></span>
</button>
<div class="dropdown-menu">
  <a class="dropdown-item" href="#">Link 1</a>
  <a class="dropdown-item" href="#">Link 2</a>
</div>
</div>
```

```
<div class="btn-group">
  <button type="button" class="btn btn-success">Success</button>
  <button type="button" class="btn btn-success dropdown-toggle dropdown-
toggle-split" data-toggle="dropdown">
  <span class="caret"></span>
</button>
<div class="dropdown-menu">
  <a class="dropdown-item" href="#">Link 1</a>
  <a class="dropdown-item" href="#">Link 2</a>
</div>
</div>
```

```
<div class="btn-group">
  <button type="button" class="btn btn-info">Info</button>
  <button type="button" class="btn btn-info dropdown-toggle dropdown-
toggle-split" data-toggle="dropdown">
  <span class="caret"></span>
</button>
<div class="dropdown-menu">
  <a class="dropdown-item" href="#">Link 1</a>
  <a class="dropdown-item" href="#">Link 2</a>
</div>
</div>
```

```
<div class="btn-group">
  <button type="button" class="btn btn-warning">Warning</button>
  <button type="button" class="btn btn-warning dropdown-toggle dropdown-
toggle-split" data-toggle="dropdown">
  <span class="caret"></span>
</button>
<div class="dropdown-menu">
  <a class="dropdown-item" href="#">Link 1</a>
  <a class="dropdown-item" href="#">Link 2</a>
</div>
</div>
```

```
<div class="btn-group">
```

```

<button type="button" class="btn btn-danger">Danger</button>
<button type="button" class="btn btn-danger dropdown-toggle dropdown-toggle-
split" data-toggle="dropdown">
  <span class="caret"></span>
</button>
<div class="dropdown-menu">
  <a class="dropdown-item" href="#">Link 1</a>
  <a class="dropdown-item" href="#">Link 2</a>
</div>
</div>
</div>
</body>
</html>

```

## Navigation Bars

- 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-*xl|lg|md|sm* (stacks the navbar vertically on extra large, large, medium or small screens).
- To add links inside the navbar, use a <ul> element with class="navbar-nav". Then add <li> elements with a .nav-item class followed by an <a> element with a .nav-link class

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
                                                                    rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></
script>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></scri
pt>
</head>
<body>

```

```

<nav class="navbar navbar-expand-sm bg-dark">
<a class="navbar-brand" href="#">Logo</a>
<a class="navbar-brand" href="#">
  
</a>
<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>
  <li class="nav-item">
    <a class="nav-link disabled" href="#">Disabled</a>
  </li>
</ul>
</nav>
<br>
<nav class="navbar navbar-expand-md bg-dark navbar-dark">
  <a class="navbar-brand" href="#">Navbar</a>
  <button class="navbar-toggler" type="button" data-toggle="collapse" data-
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="#">Link1</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">Link2</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">Link3</a>
      </li>
      <li class="nav-item dropdown">
        <a class="nav-link dropdown-toggle" href="#" id="navbardrop" data-
toggle="dropdown">
          Dropdown link
        </a>
        <div class="dropdown-menu">
          <a class="dropdown-item" href="#">Link 1</a>
          <a class="dropdown-item" href="#">Link 2</a>
          <a class="dropdown-item" href="#">Link 3</a>
        </div>
      </li>
    </ul>
  </div>
</nav>
<br>
<nav class="navbar navbar-expand-sm bg-dark navbar-dark">
  <form class="form-inline" action="/action_page.php">
    <input class="form-control" type="text" placeholder="Search">

```

```

    <button class="btn btn-success" type="submit">Search</button>
  </form>
</nav>
<br>
<div class="container-fluid">
  <h3>Basic Navbar Example</h3>
  <p>A navigation bar is a navigation header that is placed at the top of the
page.</p>
  <p>The navbar-expand-xl|lg|md|sm class determines when the navbar should
stack vertically (on extra large, large, medium or small screens).</p>
</div>

</body>
</html>

```

## Carousel

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link
                                                                    rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></
script>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></scri
pt>
  <style>
/* Make the image fully responsive */
.carousel-inner img {
  width: 100%;
  height: 100%;
}
</style>
</head>
<body>

<div id="demo" class="carousel slide" data-ride="carousel">
  <ul class="carousel-indicators">
    <li data-target="#demo" data-slide-to="0" class="active"></li>
    <li data-target="#demo" data-slide-to="1"></li>
    <li data-target="#demo" data-slide-to="2"></li>
    <li data-target="#demo" data-slide-to="3"></li>
  </ul>
  <div class="carousel-inner">

```

```
<div class="carousel-item active">
  
  <div class="carousel-caption">
    <h3>Admin Block</h3>
    <p></p>
  </div>
</div>
<div class="carousel-item">
  
  <div class="carousel-caption">
    <h3>SATHYABAMA Satellite</h3>
    <p></p>
  </div>
</div>
<div class="carousel-item">
  
  <div class="carousel-caption">
    <h3>Campus</h3>
    <p>Garden</p>
  </div>
</div>
<div class="carousel-item">
  
  <div class="carousel-caption">
    <h3>Admin Block</h3>
    <p>NIGHT</p>
  </div>
</div>
</div>
<a class="carousel-control-prev" href="#demo" data-slide="prev">
  <span class="carousel-control-prev-icon"></span>
</a>
<a class="carousel-control-next" href="#demo" data-slide="next">
  <span class="carousel-control-next-icon"></span>
</a>
</div>
</body>
</html>
```