

Week 2

Front-End Web UI Frameworks and Tools: Bootstrap 4

Week 2

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Bootstrap CSS Components



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This module concentrates on Bootstrap's components that are designed using pure CSS classes. You will learn about Navigation and Navigation bar. Then, you will learn about buttons, forms, tables, cards, images and media, tags, alerts and progress ba...

[More](#)

Key Concepts

- Express the need for including navigation in your website
- Build navigation features into your website
- Build data presentation using tables and cards
- Prepare media to be included into your website
- Build means for providing user interaction with your website using forms and buttons

[Less](#)

Navigation and Navigation Bar

•

Reading: Navigation and Navigation Bar: Objectives and Outcomes

. Duration:10 min

•

Video: LectureNavigation and Navigation Bar

. Duration:9 min

-

Video: LectureExercise (Video): Navbar and Breadcrumbs

. Duration:30 min

-

Reading: Exercise (Instructions): Navbar and Breadcrumbs

. Duration:10 min

-

Video: LectureIcon Fonts

. Duration:4 min

-

Video: LectureExercise (Video): Icon Fonts

. Duration:12 min

-

Reading: Exercise (Instructions): Icon Fonts

. Duration:10 min

-

Reading: Navigation and Navigation Bar: Additional Resources

. Duration:10 min

User Input: Buttons and Forms

-

Reading: User Input: Buttons and Forms: Objectives and Outcomes

. Duration:10 min

-

Video: LectureUser Input

. Duration:4 min

-

Video: LectureExercise (Video): Buttons

. Duration:9 min

-

Reading: Exercise (Instructions): Buttons

. Duration:10 min

-

Video: LectureExercise (Video): Forms

. Duration:22 min

-

Reading: Exercise (Instructions): Forms

. Duration:10 min

-

Reading: User Input: Additional Resources

. Duration:10 min

Displaying Content: Tables and Cards

-

Reading: Displaying Content: Tables and Cards: Objectives and Outcomes

. Duration:10 min

-

Video: LectureBootstrap Tables and Cards

. Duration:4 min

-

Video: LectureExercise (Video): Displaying Content: Tables and Cards

. Duration:18 min

-

Reading: Exercise (Instructions): Displaying Content: Tables and Cards

. Duration:10 min

-

Reading: Displaying Content: Additional Resources

. Duration:10 min

Images and Media: Images, Thumbnails, Media Objects

-

Reading: Images and Media: Objectives and Outcomes

. Duration:10 min

-

Video: LectureImages and Media

. Duration:5 min

-

Video: LectureExercise (Video): Images and Media

. Duration:11 min

-

Reading: Exercise (Instructions): Images and Media

. Duration:10 min

-

Reading: Images and Media: Additional Resources

. Duration:10 min

Alerting Users: Badges, Alerts, Progress Bars

-

Reading: Alerting Users: Objectives and Outcomes

. Duration:10 min

-

Video: LectureAlerting Users

. Duration:6 min

-

Video: LectureExercise (Video): Alerting Users

. Duration:2 min

-

Reading: Exercise (Instructions): Alerting Users

. Duration:10 min

-

Reading: Alerting Users: Additional Resources

. Duration:10 min

Assignment 2

-

Video: LectureAssignment 2: Bootstrap CSS Components

. Duration:4 min

-

Peer-graded Assignment: Assignment 2: Bootstrap CSS Components

. Duration:1h

Review Your Peers: Assignment 2: Bootstrap CSS Components

-

Reading: Assignment 2: Resources

. Duration:10 min

Optional Honors Content

UI Design and Prototyping

-

Reading: UI Design and Prototyping: Objectives and Outcomes

. Duration:10 min

-

Reading: UI Design and Prototyping Report Template

. Duration:10 min

-

Honors Peer-graded Assignment: UI Design and Prototyping

. Duration:1h

Due Oct 5, 9:59 AM EAT

Review Your Peers: UI Design and Prototyping

Due Oct 8, 9:59 AM EAT

-

Reading: UI Design and Prototyping: Additional Resources

. Duration:10 min

Navigation and Navigation Bar: Objectives and Outcomes

In this lesson, you will be given an overview of navigation design and the importance of providing appropriate navigation support within your website. You will learn about support for navigation design elements available in Bootstrap, including the Navbar and Breadcrumbs. Other navigation aids will be covered in subsequent modules. In addition, the use of icon fonts in web page design will be covered. The exercises will concentrate on adding a responsive navigation bar to the website. At the end of this lesson, you will be able to:

- Understand the need for navigation support in a web project
- Use the Bootstrap navigation features including the Navbar and breadcrumbs in providing navigation support in websites
- Use icon fonts for decorating your website with meaningful graphical elements

Exercise (Instructions): Navbar and Breadcrumbs

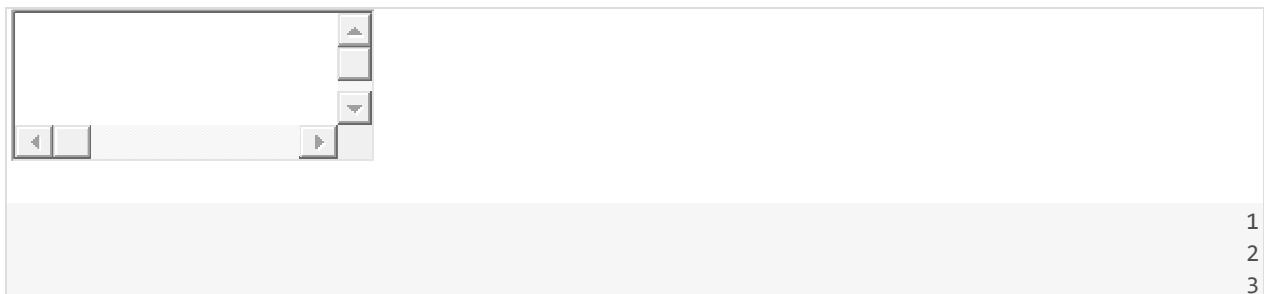
Objectives and Outcomes

In this exercise, we will examine the navigation support that we can build into a web page using the Navbar in Bootstrap. At the end of this exercise, you will be able to:

- Create a navigation structure for your website using the Navbar
- Add breadcrumbs to the website
- Include additional CSS classes into your project

Create a basic navigation bar

- We will now add a simple navigation bar to the web page so that it provides links to the other pages on the website. Start by adding the following code to the body just above the header jumbotron.



```

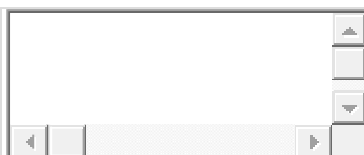
4
5
6
7
8
9
10
11
<nav class="navbar navbar-dark navbar-expand-sm bg-primary fixed-top">
  <div class="container">
    <a class="navbar-brand" href="#">Ristorante Con Fusion</a>
    <ul class="navbar-nav mr-auto">
      <li class="nav-item active"><a class="nav-link" href="#">
        >Home</a></li>
      <li class="nav-item"><a class="nav-link" href="/aboutus
        .html">About</a></li>
      <li class="nav-item"><a class="nav-link" href="#">Menu</a>
        <</li>
      <li class="nav-item"><a class="nav-link" href="#">Contact</a>
        <</li>
    </ul>
  </div>
</nav>

```

In the above code, we can see the use of the `nav` element to specify the navigation information for the website. This `nav` element is styled by the `navbar` that declares it as a navigation bar, and the `navbar-dark` class to specify that the page should use the dark navigation bar. You will now notice the addition of a link with the name of the restaurant. This is the brand name for the website. You can replace this with the logo for the website. This is created by the `` tag. In addition the inner `ul` is used to specify the items to be put in the navigation bar. This `ul` is styled with `navbar-nav` class to specify that the items should be displayed inline inside the navigation bar. We also use the `container` class inside the navigation bar.

Creating a responsive navigation bar

- We would like the navigation bar elements to collapse for shorter screens, to be replaced by a toggle button so that the items can be toggled on or off when required on small and extra small screens. This can be achieved by adding the following code to the navigation bar, just below the container div



```

1
2
3
<button class="navbar-toggler" type="button" data-toggle="collapse"

```

```

data-target="#Navbar">
  <span class="navbar-toggler-icon"></span>
</button>

```

This creates a button with three horizontal lines. For medium to extra large screens, this button is hidden. For small and extra small screens, this button becomes visible. This button will act as the toggle for the navbar items.

- To hide the items from the navigation bar for the small screens, we need to enclose the *ul* within another div as follows:



```

1 <div class="collapse navbar-collapse" id="Navbar">
2   <ul class="navbar-nav mr-auto"> ... </ul>
3 </div>

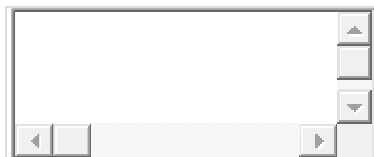
```

By doing this, we are specifying that this div with *collapse* and *navbar-collapse* classes and with the id *Navbar* will be collapsed on small and xs screens, but can be toggled on or off when the toggle button is clicked. Note the use of *data-toggle="collapse" data-target="#Navbar"* within the button above. This specifies that the menu items are collapsed on small and xs screens when the toggle button is visible. They can be displayed or hidden by clicking the toggle button.

- Copy and paste the entire navbar code also into *aboutus.html* to add the navigation also to that page. Make sure to change the ** corresponding to "About" to *active*, and remove the *active* class from the Home link. Also, update the home link to take you back to *index.html*. Update the navbar-brand tag also to take you back to *index.html*.

Modifications to the CSS styles

- We would like to have the navigation bar displayed in darker purple color, instead of the current color. In addition, when we use the fixed navigation bar, we should give the body of the page an upper margin of 50px, so that the top 50px of the page does not get hidden under the navigation bar. We accomplish these by adding these CSS customisations to the *styles.css* file



```

1
2
3

```

```
body{
  padding:50px 0px 0px 0px;
  z-index:0;
}
.navbar-dark {
  background-color: #512DA8;
}
```

- Remember to delete the *bg-primary* class from the `<nav>` element in both *index.html* and *aboutus.html*.
- We are already beginning to see the page format close to the final format for this module.

Adding Breadcrumbs

- To add breadcrumbs to our pages, we take the help of the breadcrumb and breadcrumb-item classes to add the following to the row containing the About Us title in *aboutus.html*.



```
<ol class="col-12 breadcrumb">
  <li class="breadcrumb-item"><a href="./index.html">Home</a></li>
  <li class="breadcrumb-item active">About Us</li>
</ol>
```

- Save all the changes and commit to your Git repository with a message "Navbar and Breadcrumbs".

Conclusions

In this exercise you learnt about adding a navigation bar and breadcrumbs to your website.

Exercise (Instructions): Icon Fonts

Objectives and Outcomes

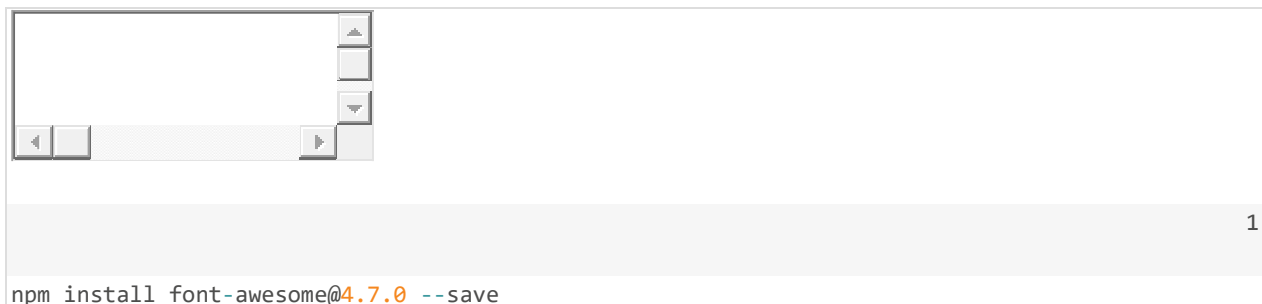
In this exercise, we will learn the use of icons in web page design using Font Awesome icons, and bootstrap-social icons. At the end of this exercise, you will be able to:

- Use icons within your website to represent various entities making use of the glyphicons, font-awesome icons and bootstrap-social icons

Note: Some people have pointed out that if they have AdBlocker installed, then the font icons are not showing up in their browser.

Using Icon Fonts and Other CSS classes

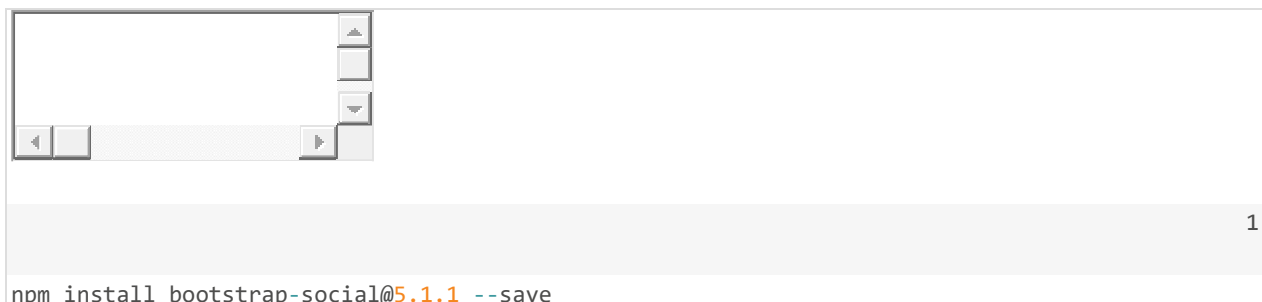
- One of the most popular icon font toolkit is Font Awesome. Go to its website <http://fontawesome.io/> to check out more details about this icon font. You can get Font Awesome using npm by typing the following at the prompt:



```
npm install font-awesome@4.7.0 --save
```

A terminal window with a light gray background. The command `npm install font-awesome@4.7.0 --save` is entered. The version number `4.7.0` is highlighted in orange. A small number `1` is visible in the bottom right corner of the terminal window.

- Another module that we install is Bootstrap Social that enables the addition of Social buttons to our site. You can find more information about it at <https://lipis.github.io/bootstrap-social/>. To install it using npm, type the following at the prompt:



```
npm install bootstrap-social@5.1.1 --save
```

A terminal window with a light gray background. The command `npm install bootstrap-social@5.1.1 --save` is entered. The version number `5.1.1` is highlighted in orange. A small number `1` is visible in the bottom right corner of the terminal window.

- We now need to include the CSS files for font awesome and bootstrap-social in the index.html file. Add the following code to the head of the file after the links for importing Bootstrap CSS classes. Do the same change to aboutus.html file:



```
1  
2  
  
<link rel="stylesheet" href="node_modules/font-awesome/css/font-awesome.min  
  
.css">  
  
<link rel="stylesheet" href="node_modules/bootstrap-social/bootstrap-social  
  
.css">
```

- Let us now use some font icons in our web page and decorate it. Update the navbar's ul list items as follows in index.html:



```
1  
2  
3  
4  
  
<li class="nav-item active"><a class="nav-link" href="#"  
  
><span class="fa fa-home fa-lg"></span> Home</a></li>  
  
<li class="nav-item"><a class="nav-link" href="./aboutus  
  
.html"><span class="fa fa-info fa-lg"></span> About</a  
  
></li>  
  
<li class="nav-item"><a class="nav-link" href="#"><span  
  
class="fa fa-list fa-lg"></span> Menu</a></li>
```

```
<li class="nav-item"><a class="nav-link" href="#"><span
class="fa fa-address-card fa-lg"></span> Contact</a></li>
```

- Similarly update the navbar's ul list items as follows in aboutus.html:



1
2
3
4

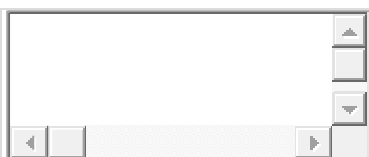
```
<li class="nav-item"><a class="nav-link" href="./index.html"
><span class="fa fa-home fa-lg"></span> Home</a></li>

<li class="nav-item active"><a class="nav-link" href="#"
><span class="fa fa-info fa-lg"></span> About</a></li>

<li class="nav-item"><a class="nav-link" href="#"><span
class="fa fa-list fa-lg"></span> Menu</a></li>

<li class="nav-item"><a class="nav-link" href="#"><span
class="fa fa-address-card fa-lg"></span> Contact</a></li>
```

- Next, in both index.html and aboutus.html, go down to the address in the footer of the page and replace the "Tel.", "Fax" and "Email" with the corresponding font awesome based icons as follows:



1
2

3

4

5

```

<i class="fa fa-phone fa-lg"></i>: +852 1234 5678<br>

<i class="fa fa-fax fa-lg"></i>: +852 8765 4321<br>

<i class="fa fa-envelope fa-lg"></i>:

<a href="mailto:confusion@food.net">confusion@food.net</a>

```

- Finally, let us use the bootstrap-social CSS classes to create the social buttons in the footer in both index.html and aboutus.html, by replacing the social sites' links with the following code:



1

2

3

4

5

6

7

8

9

```

<div class="text-center">
  <a class="btn btn-social-icon btn-google" href="http
    ://google.com/+><i class="fa fa-google-plus"></i></a>
  <a class="btn btn-social-icon btn-facebook" href="http
    ://www.facebook.com/profile.php?id="><i class="fa fa
    -facebook"></i></a>
  <a class="btn btn-social-icon btn-linkedin" href="http
    ://www.linkedin.com/in/"><i class="fa fa-linkedin"></i
    ></a>
  <a class="btn btn-social-icon btn-twitter" href="http
    ://twitter.com/"><i class="fa fa-twitter"></i></a>
  <a class="btn btn-social-icon btn-google" href="http
    ://youtube.com/"><i class="fa fa-youtube"></i></a>
  <a class="btn btn-social-icon" href="mailto:"><i class
    ="fa fa-envelope-o"></i></a>
</div>

```

- Save all the changes and commit to your Git repository with the message "Icon Fonts".

Conclusions

We learnt about using icon fonts in a web project.

Navigation and Navigation Bar: Additional Resources

PDFs of Presentations

1-Navigation.pdf PDF File

2-Icon Fonts.pdf PDF File

Official Bootstrap Resources

- [Navbar](#)
- [Breadcrumbs](#)

General

- [Accessible Rich Internet Applications \(ARIA\)](#) (Accessibility support and screen reader support)

Information Architecture

- [Information Architecture 101: Techniques and Best Practices](#) (Quick introduction to Information architecture with respect to website design)
- [Web Site Information Architecture models](#) (Another good resource on information architecture)
- [What is information architecture?](#) (Good definition and explanation about the topic)
- [Information Architecture Tutorial](#) (Comprehensive look from a website design perspective)

Navigation Bar Design

- [Designing A Winning Navigation Menu: Ideas and Inspirations](#) (Good suggestions on how to design navigation for a website)
- [Are You Making These Common Website Navigation Mistakes?](#) (Worth reading at least to learn what not to do)
- [3 Reasons We Should Stop Using Navigation Bars](#) (A provocative view on navigation bars)

Breadcrumbs

- [Breadcrumb Navigation Examined: Best Practices & Examples](#) (Great suggestions on using breadcrumbs for navigation)
- [Breadcrumb Navigation: A Guide On Types, Benefits And Best Practices](#) (Another great resource on types and usage of breadcrumbs)

Icon Fonts

- [Why And How To Use Icon Fonts](#) (a good overview of icon fonts)
- [Icon Fonts are Awesome](#) (another good introduction to icon fonts)
- [Font Awesome](#) (one of the most popular icon fonts)
- [Get started with FontAwesome](#) (good official help)
- [Bootstrap-Social](#)
- [The Final Nail in the Icon Fonts Coffin?](#) (a controversial opinion piece on icon fonts)
- [Using SVGs](#) (alternative to icon fonts)

User Input: Buttons and Forms: Objectives and Outcomes

In this lesson we review the support for user input through the use of buttons and forms in a web page. We review Bootstrap button classes and Forms classes. At the end of this lesson you will be able to:

- Create and style buttons on a web page using Bootstrap button classes
- Create and style forms on a web page using Bootstrap form classes

Exercise: Buttons

Objectives and Outcomes

In this exercise, we will examine user input for a website through the use of Buttons support in Bootstrap. At the end of this exercise, you will be able to:

- Create, style and activate buttons in a web page using the button classes
- Use a Button Group to group together related buttons.

Exercise Resources

[contactus.html.zip](#)

Set up for the Exercise

- Download the *contactus.html.zip* file given above, unzip it and move the *contactus.html* to the **conFusion** folder. This file is already pre-formatted with some content.
- Set up the links in the navigation bars for all the three pages, *index.html*, *aboutus.html* and *contactus.html* so that we can navigate from one to the other with ease.
- Also set up the links in the footer correctly to point to the appropriate pages.

Adding a Button Bar

- We are now going to add content to *contactus.html* file to learn more about buttons and button bars. Go to the div where we specify "Button group goes here", and replace it with the following code to create a button bar containing three buttons:



```
<div class="btn-group" role="group">
  <a role="button" class="btn btn-primary" href="tel
    :+85212345678"><i class="fa fa-phone"></i> Call</a>
  <a role="button" class="btn btn-info"><i class="fa fa-skype"
    ></i> Skype</a>
  <a role="button" class="btn btn-success" href="mailto
    :confusion@food.net"><i class="fa fa-envelope-o"></i>
    Email</a>
</div>
```

Note how we define the button bar using the *btn-group* class, and then add the three buttons using the *<a>* tag. In this case, the three buttons are hyperlinks that cause an action and have an *href* associated with them. So we decided to use the *<a>* tag instead of the *<button>* tag. Note how the *<a>* tags have been styled using the *btn* class.

- Remember to do a Git commit with the message "Buttons"

Conclusions

We have learnt how to add buttons and button groups to a web page.

Exercise: Forms

Objectives and Outcomes

In this exercise, we will examine user input for a website through the use of Forms support in Bootstrap. At the end of this exercise, you will be able to:

- Design a form using various form elements and style the form using Bootstrap form classes

Adding a Basic Form

- We will add a simple form to the page at the location identified by "Form goes here". Add the following code to page to create a simple horizontal form with two fields:



```
<form>
  <div class="form-group row">
    <label for="firstname" class="col-md-2 col-form-label">
      >First Name</label>
    <div class="col-md-10">
```

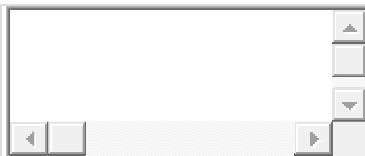
```

        <input type="text" class="form-control" id
            ="firstname" name="firstname" placeholder="First
            Name">
    </div>
</div>
<div class="form-group row">
    <label for="lastname" class="col-md-2 col-form-label"
        >Last Name</label>
    <div class="col-md-10">
        <input type="text" class="form-control" id
            ="lastname" name="lastname" placeholder="Last
            Name">
    </div>
</div>
</form>

```

This creates a form with two elements in the form. Note that the class `row` in the form enables us to use the Bootstrap grid system. Hence we can style the contents using the column classes as appropriate.

- Let us add fields to seek user's telephone number and email:



```

<div class="form-group row">
    <label for="telnum" class="col-12 col-md-2 col-form
        -label">Contact Tel.</label>
    <div class="col-5 col-md-3">
        <input type="tel" class="form-control" id="areacode"
            name="areacode" placeholder="Area code">
    </div>
    <div class="col-7 col-md-7">
        <input type="tel" class="form-control" id="telnum"
            name="telnum" placeholder="Tel. number">
    </div>
</div>

```

```

        </div>
    </div>
    <div class="form-group row">
        <label for="emailid" class="col-md-2 col-form-label">
            Email</label>
        <div class="col-md-10">
            <input type="email" class="form-control" id
                ="emailid" name="emailid" placeholder="Email">
        </div>
    </div>
</div>

```

Adding a Checkbox and Select

- We now see the addition of a checkbox and a select element to the form. Note the styling of these elements using Bootstrap classes:



```

<div class="form-group row">
    <div class="col-md-6 offset-md-2">
        <div class="form-check">
            <input type="checkbox" class="form-check-input"
                name="approve" id="approve" value="">
            <label class="form-check-label" for="approve">
                <strong>May we contact you?</strong>
            </label>
        </div>
    </div>
    <div class="col-md-3 offset-md-1">
        <select class="form-control">
            <option>Tel.</option>
            <option>Email</option>
        </select>
    </div>
</div>

```

```

        </select>
      </div>
    </div>

```

Adding a textarea

- Next we add a textarea for the users to submit their feedback comments as follows:



```

1
2
3
4
5
6
    <div class="form-group row">
      <label for="feedback" class="col-md-2 col-form-label">
        Your Feedback</label>
      <div class="col-md-10">
        <textarea class="form-control" id="feedback" name="feedback" rows="12"></textarea>
      </div>
    </div>

```

Adding the Submit Button

- Finally, we add the submit button to the form as follows:



```

1
2
3
4
5
    <div class="form-group row">
      <div class="offset-md-2 col-md-10">
        <button type="submit" class="btn btn-primary">Send
          Feedback</button>
      </div>
    </div>

```

Note the declaration of the type for the button to *submit*.

- Remember to do a Git commit with the message "Forms"

Conclusions

We have learnt how to add a form and style the form using Bootstrap form classes.

User Input: Additional Resources

PDFs of Presentations

3-User-Input.pdf PDF File

Exercise Resources

[contactus.html.zip](#)

Bootstrap Resources

- [Bootstrap Buttons](#)
- [Bootstrap Button Groups](#)
- [Bootstrap Forms](#)

Other Useful Resources

- [The Difference Between Anchors, Inputs and Buttons](#) (Semantic differences in the usage)
- [When To Use The Button Element](#) (The multifaceted button element)

Displaying Content: Tables and Cards: Objectives and Outcomes

In this lesson we will be reviewing the support for tables in Bootstrap. In addition we will look at a versatile component called card that enables the display of content in myriad ways. At the end of this lesson you will be able to:

- Present and style tabular data in a table form using Bootstrap support for tables
- Display content using a card on a web page.

Exercise (Instructions): Displaying Content: Tables and Cards

Objectives and Outcomes

In this exercise, we will examine tables and Bootstrap classes for styling tables. We will also examine Bootstrap cards and their use for displaying content. At the end of this exercise, you will be able to:

- Create, style and present tabular data in tables in a web page using the Bootstrap table classes
- Display content in a web page using Bootstrap cards

Set up for the Exercise

- In this exercise we will be modifying the *aboutus.html* page to add a table, a card with some content and a card with a quotation.
- Let us get started by opening *aboutus.html* page in a text editor.

Bootstrap Tables

- In this part, we will add a new row of content after the Corporate Leadership row in the page. We first start by adding a row and columns to the page as follows:

```

1
2
3
4
5
6
7
8
<div class="row row-content">
  <div class="col-12 col-sm-9">
    <h2>Facts & Figures</h2>
  </div>
  <div class="col-12 col-sm-3">
  </div>
</div>

```

- Inside the first column of this row, insert the table as follows:

[illegible]

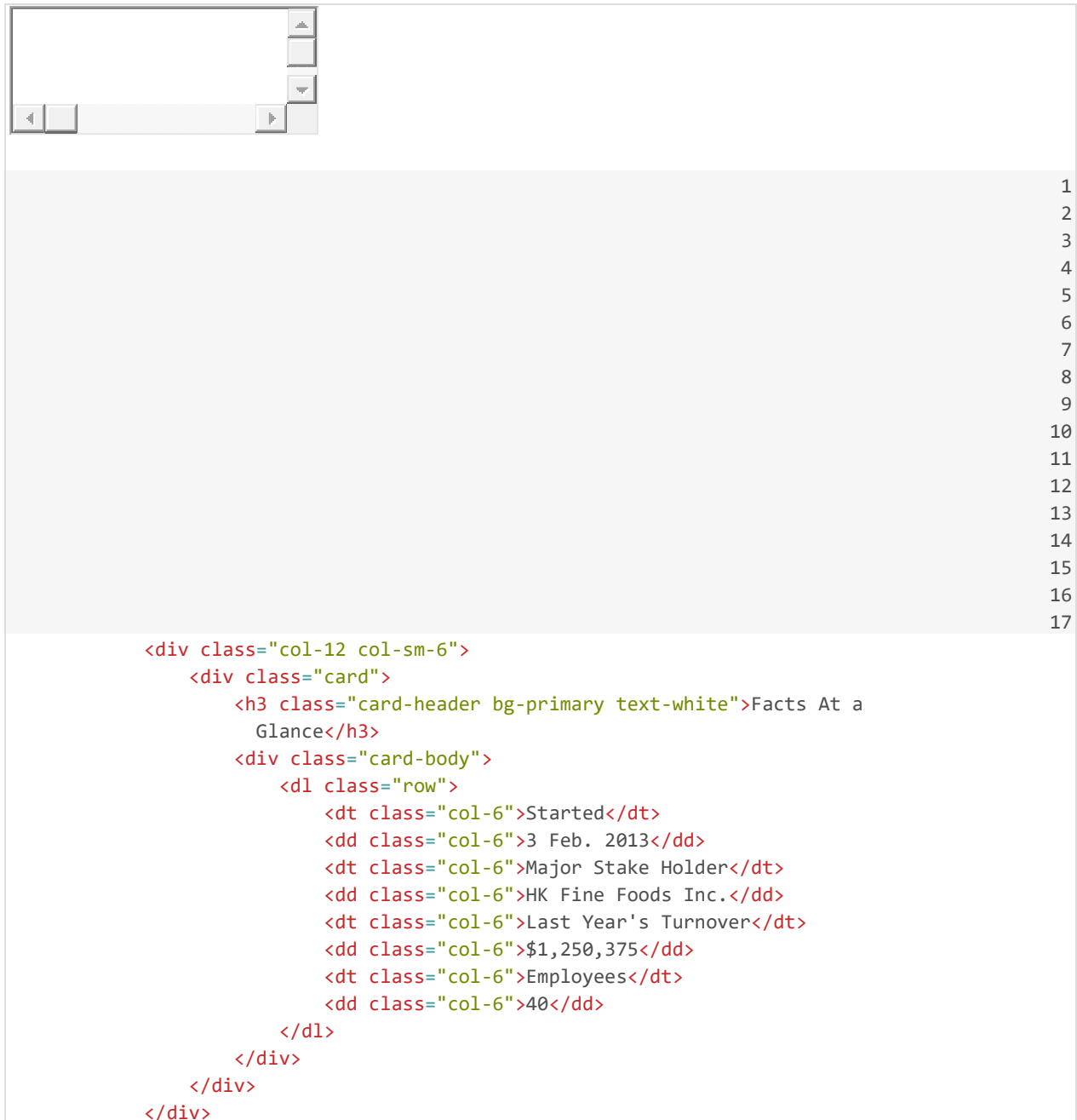
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38

```
<div class="table-responsive">
  <table class="table table-striped">
    <thead class="thead-dark">
      <tr>
        <th>&nbsp;</th>
        <th>2013</th>
        <th>2014</th>
        <th>2015</th>
      </tr>
    </thead>
    <tbody>
      <tr>
        <th>Employees</th>
        <td>15</td>
        <td>30</td>
        <td>40</td>
      </tr>
      <tr>
        <th>Guests Served</th>
        <td>15000</td>
        <td>45000</td>
        <td>100,000</td>
      </tr>
      <tr>
        <th>Special Events</th>
        <td>3</td>
        <td>20</td>
        <td>45</td>
      </tr>
      <tr>
        <th>Annual Turnover</th>
        <td>$251,325</td>
        <td>$1,250,375</td>
        <td>~$3,000,000</td>
      </tr>
    </tbody>
  </table>
</div>
```

Note the use of *table-responsive* class to create a responsive table, and the *table-striped* and *thead-inverse* classes for styling the table.


Bootstrap Cards

- Next we add a card to the second div in the first content row as follows, updating the div first by adding the classes `col-12 col-sm-6` to it and then adding the card:



```
<div class="col-12 col-sm-6">
  <div class="card">
    <h3 class="card-header bg-primary text-white">Facts At a
      Glance</h3>
    <div class="card-body">
      <dl class="row">
        <dt class="col-6">Started</dt>
        <dd class="col-6">3 Feb. 2013</dd>
        <dt class="col-6">Major Stake Holder</dt>
        <dd class="col-6">HK Fine Foods Inc.</dd>
        <dt class="col-6">Last Year's Turnover</dt>
        <dd class="col-6">$1,250,375</dd>
        <dt class="col-6">Employees</dt>
        <dd class="col-6">40</dd>
      </dl>
    </div>
  </div>
</div>
```

- Next, we add a Bootstrap card and include a quotation in the card using the blockquote typography style:



```

1
2
3
4
5
6
7
8
9
10
11
12
<div class="col-12">
  <div class="card card-body bg-light">
    <blockquote class="blockquote">
      <p class="mb-0">You better cut the pizza in four pieces
        because
        I'm not hungry enough to eat six.</p>
      <footer class="blockquote-footer">Yogi Berra,
        <cite title="Source Title">The Wit and Wisdom of
          Yogi Berra,
          P. Pepe, Diversion Books, 2014</cite>
        </footer>
      </blockquote>
    </div>
  </div>
</div>

```

Note the use of the `<blockquote>` tag to create a block quote in the card. We can use a `<footer>` inside the block quote to specify the attribution of the quote to its origin.

- Remember to commit the changes to your Git repository with the message "Tables and Cards"

Conclusions

In this exercise, we constructed a table and styled it with the Bootstrap table classes. Thereafter, we added two cards to the web page. We also saw the use of the description list and the block quote in the content.

Displaying Content: Additional Resources

PDFs of Presentations

4-Bootstrap-Tables.pdf PDF File

5-Bootstrap-Cards.pdf PDF File

Bootstrap Classes

- [Bootstrap Tables](#)
- [Bootstrap Card](#)
- [Bootstrap Blockquote](#)

Images and Media: Objectives and Outcomes

In this lesson we will look at the use of images and media on websites. In particular we will review the Bootstrap classes to support the inclusion of images and media, supporting responsiveness of images and media, and the use of these as thumbnails and part of other components, in particular the media component. At the end of this lesson you will be able to:

- Use images and media and include them in your website
- Support responsive images and media using responsive Bootstrap classes for images and media
- Use thumbnails and media components using Bootstrap classes

Exercise (Instructions): Images and Media

Objectives and Outcomes

In this exercise, we will explore the Bootstrap classes to support image and media on a website. In particular, we will look at how to include images on a website, how to make use of images within a media objects. At the end of this exercise you will be able to:

- Use Bootstrap classes to include a responsive images in a website
- Use a media object to include images and description on a website

Exercise Resources

[img.zip](#)

Set up for the Exercise

- Download the `img.zip` file that we provide above and unzip it in the *conFusion* folder. This should create a folder named *img* there.
- We will now update the *index.html* file to include images and media objects on the web page.

Adding the Restaurant Logo

- We will now add the restaurant logo to the Jumbotron. In *index.html* go to the header row inside the jumbotron and replace the second `<div>` column with the following code:

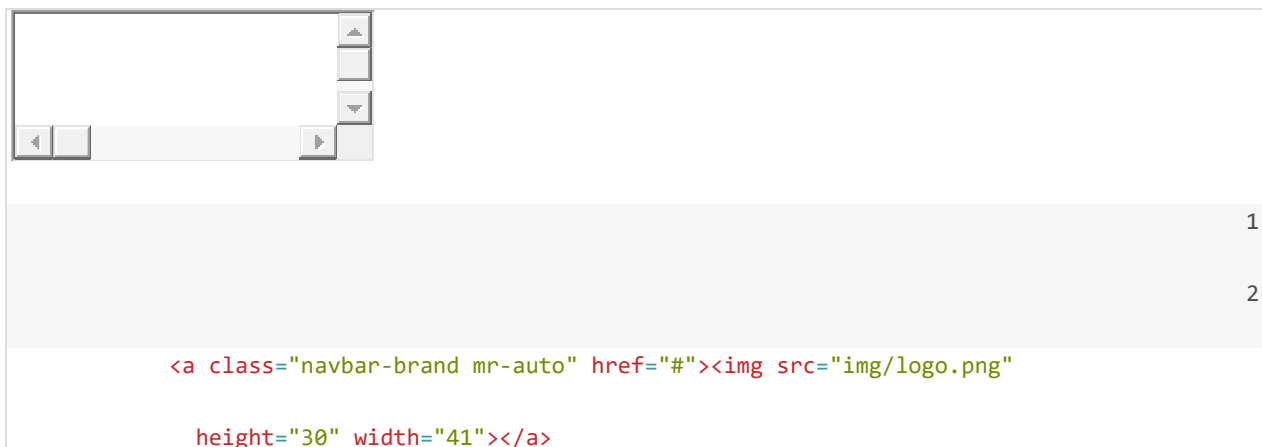
A code editor window with a toolbar at the top containing icons for undo, redo, and search. The editor area shows a code snippet for adding a logo to the Jumbotron. The code is as follows:

```
<div class="col-12 col-sm align-self-center">
  
</div>
```

The code is highlighted in a light blue background. The line numbers 1, 2, and 3 are visible on the right side of the editor.

You will immediately notice the restaurant logo being displayed in the jumbotron.

- Next, we will add the logo to the navbar where we display the restaurant brand. Go to the navbar and replace the code there for the `<a>` tag with the "navbar-brand" class with the following code:

A code editor window with a toolbar at the top containing icons for undo, redo, and search. The editor area shows a code snippet for adding a logo to the navbar. The code is as follows:

```
<a class="navbar-brand mr-auto" href="#"></a>
```


The code is highlighted in a light blue background. The line numbers 1 and 2 are visible on the right side of the editor.

Note the inclusion of the logo in the navbar.

- Repeat the above two steps for the *aboutus.html* and the *contactus.html* page also to update their navbars and jumbotrons.

Adding Media Objects

- Next we will work with the content on the web page and use the media object classes to style the content in the content rows.
- Go to the first content row, and replace the content in the second column containing the description of Uthappizza with the following code:



```
1
2
3
4
5
6
7
8
9
10
11
12
<div class="media">
  
  <div class="media-body">
    <h2 class="mt-0">Uthappizza</h2>
    <p class="d-none d-sm-block">A unique combination of
      Indian Uthappam (pancake) and
      Italian pizza, topped with Cerignola olives, ripe
      vine
      cherry tomatoes, Vidalia onion, Guntur chillies and
      Buffalo Paneer.</p>
  </div>
</div>
```

Note the use of the *media* class and the related Bootstrap classes to style the content.

- Next, we will go to the third row and replace the contents of the second column containing the description about Alberto with the following content:



- Finally, do a Git commit with a message "Images and Media".

Conclusions

In this exercise, we learnt about the Bootstrap classes to support images and media in a web page. We saw how we can include responsive images on a web page. In addition, we saw the use of images within a media object to style and display content.

Images and Media: Additional Resources

PDFs of Presentations

6-Images-Media.pdf PDF File

Exercise Resources

[img.zip](#)

- (download this to conFusion, unzip it to create an "img" folder there)

Bootstrap Resources

- [Bootstrap Image Classes](#)
- [Bootstrap Media Object Classes](#)

Alerting Users: Objectives and Outcomes

In this lesson we examine various ways of delivering alert information to users. We examine labels, badges, alerts and progress bars. At the end of this lesson, you will be able to:

- Include labels and badges in your web page
- Create, style and include alerts in your web page
- Appreciate the use of progress bars and controlling the state of the progress bars.

Exercise (Instructions): Alerting Users

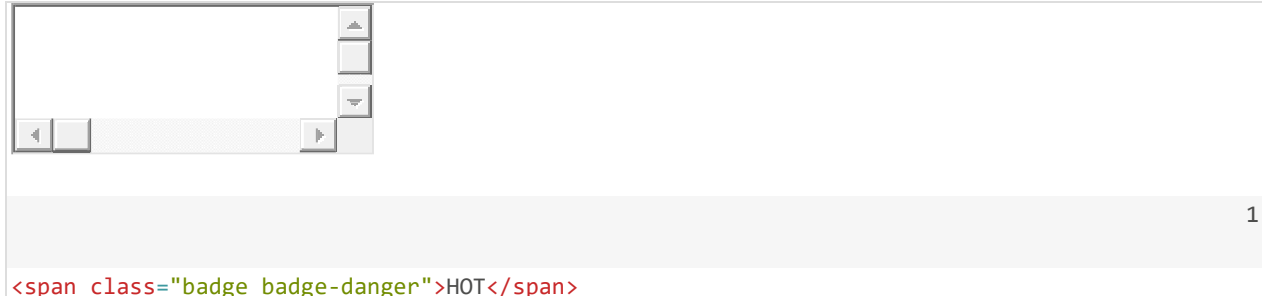
Objectives and Outcomes

In this short exercise we will examine the use of badges as a way of alerting users. At the end of this exercise, you will be able to:

- Add a badge to your web page using the Bootstrap badge class

Adding Badges

- We will continue to edit the *index.html* file. In this file, we will add a badge *HOT* next to the name of the dish Uthappizza in the first content row. To do this, add the following code inside the `<h2>` containing the name of the dish:

A screenshot of a code editor with a light gray background. The editor has a toolbar at the top with icons for undo, redo, and search. The code area shows a single line of HTML code: `HOT`. The line is highlighted in light gray. A small number '1' is visible in the bottom right corner of the editor area.

```
<span class="badge badge-danger">HOT</span>
```

- Next we will add a badge as a badge-pill right next to the earlier tag in the web page. Add the following code to the `<h2>` tag:

A screenshot of a code editor with a light gray background. The editor has a toolbar at the top with icons for undo, redo, and search. The code area shows a single line of HTML code: `$4.99`. The line is highlighted in light gray. A small number '1' is visible in the bottom right corner of the editor area.

```
<span class="badge badge-pill badge-secondary">$4.99</span>
```

- Remember to commit the changes to the Git repository with message "Alerting Users".

Conclusions

In this short exercise, we learnt how to add badges to our web page.

Alerting Users: Additional Resources

PDFs of Presentations

7-Alerting-Users.pdf PDF File

Bootstrap Resources

- [Bootstrap Badge](#)
- [Bootstrap Alerts](#)
- [Bootstrap Progress](#)

Peer-graded Assignment: Assignment 2: Bootstrap CSS Components

You passed!

Congratulations. You earned 100 / 100 points. Review the feedback below and continue the course when you are ready. You can also help more peers by reviewing their submissions.

[Review assignments](#)

1. Instructions

2. My submission

3. Discussions

Objectives and Outcomes

In this assignment, you will continue to work with the website that you have been developing in the exercises. You will edit the *home* page (*index.html*). You will start with the current home page at the end of the last exercise in this module. At the end of this assignment, you should have completed the following tasks:

- Designed a form to enable users to submit a reservation request for a table. Note that at this stage the form will be inactive. This form should have been included in a new content row that you create just before the footer of the page.
- Formatted the contents of the second row of the page using media class. The content column of the row should have been converted to a media object. In addition it should include a badge.
- Added a button to the Jumbotron to enable users to access the form to reserve a table at the restaurant. Clicking on this button should take you to the reservation form at the bottom of the page.

Assignment and Requirements

This assignment requires you to complete the following three tasks. Detailed instructions for each task are given below. The picture of the completed web page included below indicates the location within the web page that will be updated by the three tasks.

Task 1

In this task you will be adding another content row to the page. The content row should contain the following:

- You should create a reservation form for the user to reserve a table. The reservation form should contain a field using radio that enables the users to specify the number of guests (1-6).
- The form should contain fields to specify the date and time of the reservation. The fields should contain appropriate placeholder information to identify the purpose of the fields.
- The form should contain a button named Reserve to initiate reservation of the table.
- The form should be enclosed inside a card with the heading "Reserve a Table". The card should occupy 8 columns and centred in the row for small to extra-large screens. For extra-small screens, the card should span the entire row.

Task 2

In this task you will be formatting the content in the second row of the page. The formatting should result in the following:

- Format the content of the second column with the media class together with the media object class. Use the *buffet.png* image file provided for you in the *img* folder. The image should be displayed to the right of the content description. See figure below.
- Add a badge with the word "NEW" to the content as shown in the figure below.

Task 3

In this task you will be adding a block-sized button to the Jumbotron to the right of the restaurant logo:

- The block-level button and the restaurant logo should share the right six columns of the row. The restaurant name and description can now be reduced to occupy the left six columns. Use the small button (*btn-sm*).
- Clicking on the button should take you down to the form for reserving a table.

Ristorante con Fusion

We take inspiration from the World's best cuisines, and create a unique fusion experience. Our lipsmacking creations will tickle your culinary senses!



Reserve Table

Task 3



Uthappizza **HOT** \$4.99

A unique combination of Indian Uthappam (pancake) and Italian pizza, topped with Cerignola olives, ripe vine cherry tomatoes, Vidalia onion, Guntur chillies and Buffalo Paneer.

Our
Lipsmacking
Culinary
Creations

This Month's Promotions

Task 2

Weekend Grand Buffet **NEW**

Featuring mouthwatering combinations with a choice of five different salads, six enticing appetizers, six main entrees and five choicest desserts. Free flowing bubbly and soft drinks. All for just \$19.99 per person



Alberto Somayya Executive Chef

Award winning three-star Michelin chef with wide International experience having worked closely with whos-who in the culinary world, he specializes in creating mouthwatering Indo-Italian fusion experiences.

Meet our
Culinary
Specialists

Task 1

Reserve a Table

Number
of Guests

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

Date and
Time

Date

Time

Reserve

Links

[Home](#)
[About](#)
[Menu](#)
[Contact](#)

Our Address

121, Clear Water Bay Road
Clear Water Bay, Kowloon
HONG KONG
☎: +852 1234 5678
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✉: confusion@food.net

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[Reserve Table](#)

Our Lipsmacking Culinary Creations



Uthappizza

HOT

\$4.99

This Month's Promotions

Weekend Grand Buffet **NEW**



Meet our Culinary Specialists



Alberto Somayya
Executive Chef

Reserve a Table

Number of Guests

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

Date and Time

Date

Time

[Reserve](#)

Links

[Home](#)
[About](#)
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Submission

1. You should submit the updated *index.html* file with all the tasks completed. A reviewer should easily be able to take your file and substitute it into their own web project and see it working correctly.
2. Also upload a screenshot of your browser window showing the completed *index.html* page in png or jpg format.

Review criteria

Upon completion of the assignment, your submission will be reviewed based on the following criteria:

Task 1

- The new content row is correctly formatted and includes the reservation form and the “Reserve a Table” card header.
- The form contains the radios to enable specification of the number of guests.
- The form includes a date field
- The form includes a time field
- The form contains a reserve button.

Task 2

- The content in the row has been correctly formatted using the media class
- The image is displayed to the right of the content using the correct media-* classes and at the correct position.
- The badge is correctly displayed in the second row.

Task 3

- The Reserve Table button is correctly included in the Jumbotron and is a block size button.
- The button is correctly enclosed inside a div with the correct column specification.
- The reserve button when clicked takes us to the form. The link in the button should be set up correctly to take us to the form.

Peer-graded Assignment: Assignment 2: Bootstrap CSS Components

Reviews 6 complete

You've finished your peer reviews

Well done! You sent 6 peers feedback that will help them. If you have time, please review one or two more. Every review you do helps another peer complete the course!

Ready to review your classmates?

Reviewing another person's work is a valuable way to learn and providing quality feedback is a useful skill to master. Here are some tips to help you provide the most helpful, accurate, and consistent feedback possible:

- Remember, English isn't everyone's native language. Focus primarily on how well the work meets the grading criteria.
- When writing critical feedback, use a constructive and polite tone.

Everyone enrolled in the course must review at least 5 other submissions to ensure everyone receives a grade; however, many learners complete more to help their classmates who are still waiting. Ready to get started?

Assignment 2: Resources

Assignment Screenshots

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Reserve Table

Task 3



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Our
Lipsmacking
Culinary
Creations

This Month's Promotions

Task 2

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Meet our
Culinary
Specialists

Task 1

Reserve a Table

Number
of Guests

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

Date and
Time

Date

Time

Reserve

Links


[Home](#)
[About](#)
[Menu](#)
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Reserve Table

Our Lipsmacking Culinary Creations



Uthappizza

HOT

\$4.99

This Month's Promotions

Weekend Grand Buffet **NEW**



Meet our Culinary Specialists



Alberto Somayya
Executive Chef

Reserve a Table

Number of Guests

☐ 1
 ☐ 2
 ☐ 3
 ☐ 4
 ☐ 5
 ☐ 6

Date and Time

Date

Time

Reserve

Links

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Bootstrap Resources

- [Navbar](#)
- [Breadcrumbs](#)
- [Bootstrap Buttons](#)
- [Bootstrap Button Groups](#)
- [Bootstrap Forms](#)
- [Bootstrap Tables](#)
- [Bootstrap Card](#)
- [Bootstrap Blockquote](#)
- [Bootstrap Image Classes](#)
- [Bootstrap Media Object Classes](#)
- [Bootstrap Responsive Helpers](#)
- [Bootstrap Badges](#)
- [Bootstrap Alerts](#)
- [Bootstrap Progress](#)

UI Design and Prototyping: Objectives and Outcomes

Now that you are more clear about your project idea, it's time to conceive how your project is going to look like for the end-users. This is the time to design the user interface and the flow of your application. User interface design and prototyping helps you to conceptualize the look and feel of your application. This can be achieved in two ways: using wireframe diagrams, or using prototyping tools. We provide links to wireframing and prototyping tools in the additional resources. The focus in this lesson is to be able to visually represent various UI elements to enable designing your application. The aim is to deliver an reasonable representation of the end-user experience with your application. At the end of this lesson, you should be able to:

- Construct a wireframe diagram to visually represent the structure of your user interface
- Construct a prototype to enable understanding the flow of your application

UI Design and Prototyping Report Template

Project Title

1. Introduction

- Give a brief introduction to your project and the list of features. Summarize in a few sentences what you proposed in the ideation report.

2. User Interface Design and Prototype

- Give some sample user interface layouts for your application. You can use either wireframe diagrams or prototyping tools to construct the mock representations of your UI design
- Briefly explain the rationale behind designing your UI and how it is geared towards supporting the list of features for your application.

3. Navigation Structure

- Give a brief overview of the navigation structure for your application.
- Briefly indicate a typical flow of your application in terms of user experience. You can use any way of representing the flow. You can also construct a prototype using one of the prototyping tools to illustrate this.

4. References

- Provide any references relevant to the report.

Honors Peer-graded Assignment: UI Design and Prototyping

Submit your assignment soon

Even though your assignment is due on Oct 5, 9:59 AM EAT, try to submit it 1 or 2 days early if you can. Submitting early gives you a better chance of getting the peer reviews you need in time.

1. Instructions

2. My submission

3. Discussions

In this assignment you will be submitting a written report that includes some user interface designs and the flow of your application and the navigation structure. The report should follow the report template structure given earlier in this lesson.

Review criteria less

Your submission will be reviewed based on the following criteria by peers in order to provide you with constructive feedback on your project idea:

1. Does the report provide a brief overview of the project and the list of features ?
2. Does the report contain some user interface designs that showcase the realization of the features listed above?
3. Does the report contain information about the application flow and navigation structure?
4. Does the report provide references to suitable sources in support of the project?

UI Design and Prototyping: Additional Resources

Wireframing, Mockups and UI Design

- [Wireframe.cc](https://www.wireframe.cc)
- [Moqups.com](https://moqups.com)
- [Axure](https://axure.com)
- proto.io
- framerjs.com
- [The 20 best wireframe tools](#)
- [Web Design Inspirations](#)
- [Adobe Experience Design](#)
- [Free Bootstrap Wireframing Set for PowerPoint](#)

UI Templates

- [Bootstrap Expo](#)

- [Ionic Showcase](#)

Information Architecture

- [A visual vocabulary for describing information architecture and interaction design](#)
- [The Elements of User Experience](#)
- [The Elements of User Experience: User-Centered Design for the Web and Beyond \(2nd Edition\) \(Voices That Matter\)](#)