NGEE ANN
SCHOOL OF INFOCOMM TECHNOLOGY

Front End Development	Week 5
Diploma in CSF 2021/22 Semester 2	2 Hours
Bootstrap Responsive Navigation Bar	

Activities

Materials

- Download the following file from MeL for this practical exercise:
  - Week5Practical_Start.zip

- Unzip the file and copy the following folder and files to the **Week5Practical** project:
  - "**images**" folder
  - "**css**" folder (contains the external style sheets for Bootstrap.)
  - "**js**" folder (contains Bootstrap JavaScript/jQuery libraries.)
  - **index.html**
  - **header.html**
  - **footer.html**

Task – Implement a Collapsible Responsive Navigation Bar

1. Open the HTML file named as "**header.html**" in your project. The header section in this file was created in last week's practical exercise, we are now going to add a navigation bar for the "Black Goose Bakery" website in the header section.

2. Type the highlighted code for "**header.html**" page:

```html
<link rel="stylesheet" href="css/header-styles.css">
<header>
    <!-- To Do: Add Bootstrap navbar -->
    <nav class="navbar navbar-expand-md navbar-custom navbar-dark">
        <!-- Toggler/collapsibe Button -->
        <button class="navbar-toggler" type="button" data-toggle="collapse"
                data-target="#collapsibleNavbar">
            <span class="navbar-toggler-icon"></span>
        </button>
        <!-- Navbar links -->
        <div class="collapse navbar-collapse" id="collapsibleNavbar">
            <ul class="navbar-nav nav-custom mx-auto">
                <li class="nav-item">
                    <a class="nav-link" href="index.html">Home</a>
                </li>
                <li class="nav-item">
                    <a class="nav-link" href="flex-menu.html">Menu</a>
                </li>
                <li class="nav-item">
                    <a class="nav-link" href="#">News</a>
                </li>
                <li class="nav-item">
                    <a class="nav-link" href="#">About</a>
                </li>
```

```
                <li class="nav-item">
                    <a class="nav-link" href="#">Contact</a>
                </li>
            </ul>
        </div>
    </nav>
    <h1><img class="img-fluid" src="images/bgb_logo.png"
            alt="Black Goose Bakery"></h1>
    <p class="d-none d-md-block">The delicious baked goods you love at Black
Goose Bistro...now available to go!</p>
</header>
```

Note:

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). In our case, the navbar will expand on medium or above screen, and stacked on small or extra small screen.

Use the .bg-color classes to change the background color of the navbar, e.g., .bg-dark for black background and .bg-light for gray background. In our case we defined our customized color scheme through the .navbar-custom class.

Tip: Add a white text color to all links in the navbar with the .navbar-dark class, or use the .navbar-light class to add a black text color.

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. We use the .mx-auto (x-axis margin auto-adjusted) class in the <ul> element to centralize the display of links.

Very often, especially on small screens, you want to hide the navigation links and replace them with a button that should reveal them when clicked on.

To create a collapsible navigation bar, use a button with class="navbar-toggler", data-toggle="collapse" and data-target="#thetarget". Then wrap the navbar content (links, etc) inside a div element with class="collapse navbar-collapse", followed by an id that matches the data-target of the button: "thetarget".

3. Open **"header-styles.css"** in "css" folder, add the following CSS to the file:

```css
/* nav styles */
.navbar-custom {
    background-color: #783F27;
    padding: 0.25em;
    font-size: 0.8em;
    text-transform: uppercase;
    letter-spacing: 0.2em;
}

/* change the link color */
.navbar-custom .navbar-nav .nav-link {
    color: #F9AB33;
    border: 1px solid;
    border-radius: .5em;
    margin: 0.5em;
```

```
        padding: 0.2em;
        min-width: 8em;
}

/* change the color of active or hovered links */
.navbar-custom .nav-item.active .nav-link,
.navbar-custom .nav-item:hover .nav-link {
        color: #ffffff;
}

/* change the hamburger button outline color when it is clicked */
.navbar-toggler:focus, .navbar-toggler:active {
        outline-color: #F9AB33;
        margin: 0.5em; /* Set margin to align the border with menu text */
}
```

Note:
The CSS above defines the background color of the navbar, the text display of each link and the display of a hamburger button which will appear for toggling the navbar when it is collapsed. The link in the navbar has a rounded border and the color of the text will change to white upon hovering.

4. Save the "**header.html**" and "**header-styles.css**" files and we will test the navbar after completing the footer too.

Footer

1. Open "**index.html**" page, the page layout and content section were created in the last week's practical exercise, we are now going to add the header section in "**header.html**", and the footer section in "**footer.html**" to this page.

2. Add the highlighted code below to the <head> section. This is to reference to the JavaScript library needed for including a HTML page:

```
<head>
    . . . . . . .
    <link rel="stylesheet" href="css/bakery-styles.css">
    <!-- To Do: Reference to the JavaScript library for including
                a HTML page -->
    <script src="https://www.w3schools.com/lib/w3.js"></script>
</head>
```

3. Look for the "**<!-- To Do: Include the header section -->**" comment line in the first row of Bootstrap grid, add the highlighted code to include the HTML defined in the "header.html" file to "index.html":

```
    <!-- Create a full width Bootstrap container-->
    <div class="container-fluid">
        <!-- 1st row - Header -->
        <div class="row">
            <div class="col-sm-12">
                <!-- To Do: Include the header section -->
                <div w3-include-html="header.html"></div>
            </div>
        </div>
```
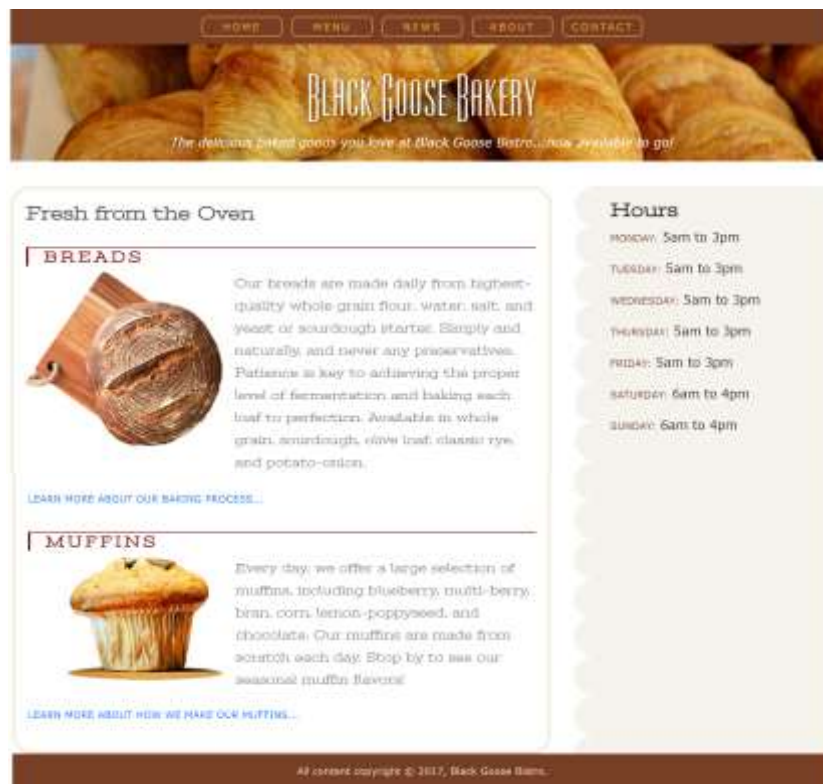
4. Look for the "**<!-- To Do: Include the footer section -->**" comment line in the third row of Bootstrap grid, add the highlighted code to include the HTML defined in the "footer.html" file to "index.html":

```
<!-- 3rd row - Footer -->
<div class="row">
    <div class="col-sm-12">
        <!-- To Do: Include the footer section -->
        <div w3-include-html="footer.html"></div>
    </div>
</div>
</div> <!-- end #container div -->
```
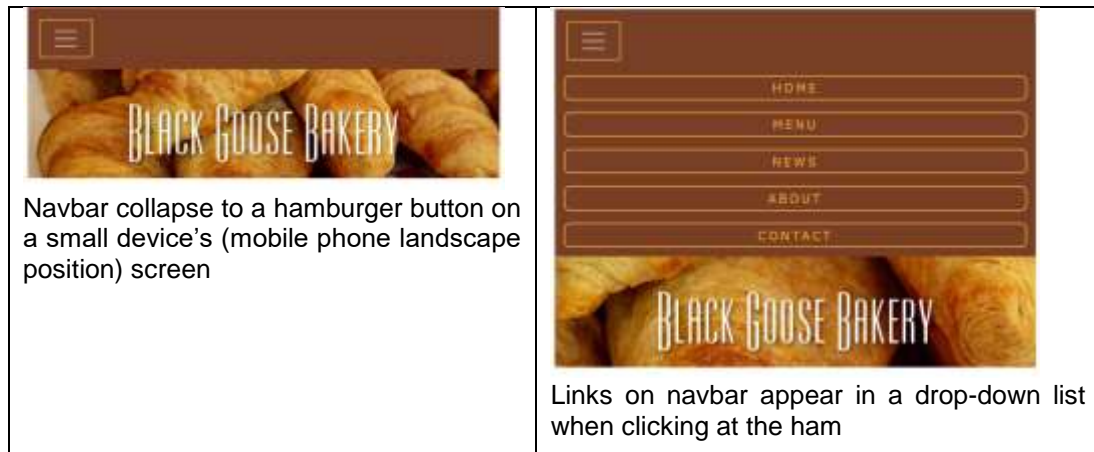
5. Add the highlighted JavaScript block before the </body> tag. This is to call the **includeHTML()** function provided by the JavaScript library we reference in step 2 to complete the inclusion of HTML files when loading the "index.html" page:

```
<!-- To Do: Call the includeHTML() function when loading the page -->
<script>
    w3.includeHTML();
</script>
</body>
```

6. Test the "**index.html**" page in browser through Visual Sudio (*Note: You need the localhost server to run the includeHTML() function*). Observe that the header (with bootstrap navbar) and footer sections are included on this page:

7. Adjust the screen width of your browser to observe the Bootstrap navbar collapse to a hamburger button:

Navbar collapse to a hamburger button on a small device's (mobile phone landscape position) screen

Links on navbar appear in a drop-down list when clicking at the ham

8. Save the file and view in Browser.

9. Zipped the entire **Week5Practical** folder and submit in MEL submission.

(Zip filename format as instructed in ppt slides)

== End of Worksheet ==