INTRODUCTION TO WEB DEVELOPMENT
(BOOTSTRAP & WORDPRESS)

SESSION ONE

Objectives

At the end of this session, the student will be able to:
1. Understand what a framework is and how to install bootstrap.
2. Setting up bootstrap to design a website.
3. Bootstrap Layout/Grid System.

Bootstrap 4

What is a framework?
Broad overview, outline, or skeleton of interlinked items which supports a particular approach to a specific objective, and serves as a guide that can be modified as required by adding or deleting items.

What is a CSS framework?
CSS frameworks provide a basic structure for designing consistent solutions to tackle common recurring issues across front end web development. They provide generic functionality which can be overridden for specific scenarios and applications.

What is Bootstrap CSS framework?
Bootstrap is a free and open-source front-end **framework** for designing websites and web applications. It contains HTML- and **CSS**-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions.

How to use Bootstrap

How to use Bootstrap
1. Use CDN (Content Delivery Network).
2. Download the source files.

Install Bootstrap
1. Download the source files.
2. Create a folder (bootstrap) on your desktop.
3. Create additional folders(css & js) inside the bootstrap folder.
4. Download jquery file.

Start Working with Bootstrap

1. Copy boiler template and paste it into your index.html
2. Replace the cdn with your local files.

Layout/Grid System

What is Bootstrap Grid System
Bootstrap grid system provides the quick and convenient way to create responsive website layouts. Bootstrap 4 introduces the new mobile-first flexbox grid system that appropriately scales up to 12 columns as the device or viewport size increases. Bootstrap's grid system uses a series of containers, rows, and columns to layout and align content. It's built with flexbox and is fully responsive.

Containers
Containers are the most basic layout element in Bootstrap and are **required when using our default grid system**. Containers are used to contain, pad, and (sometimes) center the content within them. While containers *can* be nested, most layouts do not require a nested container.

Bootstrap comes with two different containers:
.container, which sets a max-width at each responsive breakpoint
.container-fluid, which is width: 100% at all breakpoints

Creating two Column Layouts

The following example will show you how to create two column layouts for medium, large and extra large devices like tables, laptops and desktops etc. first create a container that acts as a wrapper for your rows and columns using the `.container` class, after that create rows inside the container using the `.row` class, and to create columns inside any row you can use the `.col-*`, `.col-sm-*`, `.col-md-*`, `.col-lg-*` and `.col-xl-*` classes.

```
1   <div class="container">
2       <!--Row with two equal columns-->
3       <div class="row">
4           <div class="col-md-6">Column left</div>
5           <div class="col-md-6">Column right</div>
6       </div>
7
8       <!--Row with two columns divided in 1:2 ratio-->
9       <div class="row">
10          <div class="col-md-4">Column left</div>
11          <div class="col-md-8">Column right</div>
12      </div>
13
14      <!--Row with two columns divided in 1:3 ratio-->
15      <div class="row">
16          <div class="col-md-3">Column left</div>
17          <div class="col-md-9">Column right</div>
18      </div>
19  </div>
```

Creating Three Column Layouts

Similarly, you can create other layouts based on the above principle. For instance, the following example will typically create three column layouts for laptops and desktops screens. It also works in tablets in landscape mode if screen resolution is more than or equal to 992 pixels (e.g. Apple iPad).

```
1   <div class="container">
2       <!--Row with three equal columns-->
3       <div class="row">
4           <div class="col-lg-4">Column left</div>
5           <div class="col-lg-4">Column middle</div>
6           <div class="col-lg-4">Column right</div>
7       </div>
8
9       <!--Row with three columns divided in 1:4:1 ratio-->
10      <div class="row">
11          <div class="col-lg-2">Column left</div>
12          <div class="col-lg-8">Column middle</div>
13          <div class="col-lg-2">Column right</div>
14      </div>
15
16      <!--Row with three columns divided unevenly-->
17      <div class="row">
18          <div class="col-lg-3">Column left</div>
19          <div class="col-lg-7">Column middle</div>
20          <div class="col-lg-2">Column right</div>
21      </div>
22  </div>
```

Creating Three Column Layouts

Similarly, you can create other layouts based on the above principle. For instance, the following example will typically create three column layouts for laptops and desktops screens. It also works in tablets in landscape mode if screen resolution is more than or equal to 992 pixels (e.g. Apple iPad). However, in portrait mode the grid columns will be horizontal as usual.

```html
1   <div class="container">
2       <!--Row with three equal columns-->
3       <div class="row">
4           <div class="col-lg-4">Column left</div>
5           <div class="col-lg-4">Column middle</div>
6           <div class="col-lg-4">Column right</div>
7       </div>
8
9       <!--Row with three columns divided in 1:4:1 ratio-->
10      <div class="row">
11          <div class="col-lg-2">Column left</div>
12          <div class="col-lg-8">Column middle</div>
13          <div class="col-lg-2">Column right</div>
14      </div>
15
16      <!--Row with three columns divided unevenly-->
17      <div class="row">
18          <div class="col-lg-3">Column left</div>
19          <div class="col-lg-7">Column middle</div>
20          <div class="col-lg-2">Column right</div>
21      </div>
22  </div>
```

Bootstrap Typography

Working with Headings

You can define all HTML headings, <h1> through <h6> — In the same way you define in simple HTML document. You can also utilize the heading classes .h1 through .h6 on other elements, if you want to apply the style on element's text same as headings.

Display Headings

Bootstrap 4 introduces display headings that can be used when you need a heading to stand out. Display headings are displayed in larger [font-size](#) but lighter [font-weight](#). We have from .display-1 to .display-4

Working with Paragraphs

Bootstrap's global default font-size is 1rem (typically 16px), with a line-height of 1.5. This is applied to the <body> and all paragraphs. In addition to that a bottom margin of half their line-height (10px by default) is applied to the all paragraphs i.e. the <p> elements.
You can also make a paragraph stand out by adding the class .lead on it.

Text Transformation

You can also transform the text to lowercase, uppercase or make them capitalize.

Text Coloring

Colors are the powerful method of conveying important information in website design.
Bootstrap has handful of emphasis utility classes that can be used for this purpose such as showing success message in green color, warning or error message in red color, etc.

Bootstrap Tables

What is Table

The HTML tables are used to present data in grid manner like row and columns. Using Bootstrap you can greatly improve the appearance of table in a quick and easy way.

Creating a Simple Table with Bootstrap
You can create tables with basic styling that has horizontal dividers and small cell padding (8px by default), by just adding the Bootstrap's class .table to the <table> element.

Styling a table
Class="table"
Class="table table-dark"
Class="table table-striped"
Class="table table-bordered"

Setting Table Head Colors
You can also specify different background colors for the table head using the modifier classes .thead-light or .thead-dark on the <thead> element.

Bootstrap Forms

Bootstrap provides three different types of form layouts:
  Vertical Form (default form layout)

```html
1   <form>
2       <div class="form-group">
3           <label for="inputEmail">Email</label>
4           <input type="email" class="form-control" id="inputEmail"
    placeholder="Email">
5       </div>
6       <div class="form-group">
7           <label for="inputPassword">Password</label>
8           <input type="password" class="form-control" id="inputPassword"
    placeholder="Password">
9       </div>
10      <div class="form-group">
11          <label class="form-check-label"><input type="checkbox"> Remember
    me</label>
12      </div>
13      <button type="submit" class="btn btn-primary">Sign in</button>
14  </form>
```

Bootstrap Forms

Bootstrap provides three different types of form layouts:

Horizontal Form

```
1   <form>
2       <div class="form-group row">
3           <label for="inputEmail" class="col-sm-2 col-form-label">Email</label>
4           <div class="col-sm-10">
5               <input type="email" class="form-control" id="inputEmail"
        placeholder="Email">
6           </div>
7       </div>
8       <div class="form-group row">
9           <label for="inputPassword" class="col-sm-2 col-form-
        label">Password</label>
10          <div class="col-sm-10">
11              <input type="password" class="form-control" id="inputPassword"
        placeholder="Password">
12          </div>
13      </div>
14      <div class="form-group row">
15          <div class="col-sm-10 offset-sm-2">
16              <label class="form-check-label"><input type="checkbox"> Remember
        me</label>
17          </div>
18      </div>
19      <div class="form-group row">
20          <div class="col-sm-10 offset-sm-2">
21              <button type="submit" class="btn btn-primary">Sign in</button>
22          </div>
23      </div>
24  </form>
```

Bootstrap Forms

Bootstrap provides three different types of form layouts:
Inline Form

```html
<form class="form-inline">
    <div class="form-group mr-2">
        <label class="sr-only" for="inputEmail">Email</label>
        <input type="email" class="form-control" id="inputEmail"
placeholder="Email">
    </div>
    <div class="form-group mr-2">
        <label class="sr-only" for="inputPassword">Password</label>
        <input type="password" class="form-control" id="inputPassword"
placeholder="Password">
    </div>
    <div class="form-group mr-2">
        <label><input type="checkbox" class="mr-1"> Remember me</label>
    </div>
    <button type="submit" class="btn btn-primary">Sign in</button>
</form>
```

Bootstrap Buttons

Bootstrap Button Styles

Different classes are available in Bootstrap for styling the buttons as well as to indicate the different states or semantic. Button styles can be applied to any element. However, it is applied normally to the <a>, <input>, and <button> elements for the best rendering.

```
<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-danger">Danger</button>
<button type="button" class="btn btn-warning">Warning</button>
<button type="button" class="btn btn-info">Info</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>
```

Practice

Use practice file **story.txt** in resources folder
Show students how to copy this file into their HTML document

Thank you