

Multimedia Website

Web Development

Time: 60 mins

Introduction

In this class, the student/s will learn to create a multimedia website with a collapsible navigation bar navigating to different webpages using the bootstrap framework. Student/s will also learn to make the navigation bar compatible with different screen sizes.

HTML Tags & CSS Properties Introduced

- `<meta charset="utf-8">` makes the website responsive to all screen sizes, characters, symbols, and browsers.
charset defines character encoding for browsers
- `<meta name="viewport" content="width=device-width, initial-scale=1" />` name: defines user's visible screen area,
content: fits the content to the device width,
initial-scale: sets screen without zoom in and zoom out.
- `class = "bg-light text-dark"` Sets the background and text theme colors for the page.
- `class="navbar-brand"` Adds the branding logo styling to remove the underline if any and increases the font size
- `class="navbar"` Adds margin from the top
- `` Groups inline elements
- `class="navbar-toggler"` Creates a button which can be used for toggling
- `class= "navbar-toggler-icon"` Adds a togglers icon to the button
- `class="navbar-nav"` Places the navigation items on a new line
- `class="nav-link"` Changes color with removing underline for hyperlink and adding appropriate spacing between the navigation items
- `class = "navbar-expand-lg"` Adds the responsive collapsing property
- `data-bs-toggle="collapse"` assigns collapse control of one or more collapsible elements
- `data-bs-target="css_selector"` accepts a CSS selector to apply the collapse to
- `class="container-fluid"` containerizes the content across viewport

Vocabulary

- **Bootstrap** is a free and open-source application framework for the creation and styling of websites and can be used for different sizes of screen. It provides templates with predefined classes, utilities, layouts, and functionalities.
- **bootstrap@5.0.2** is the version we will use for building the multimedia website.
- **bootstrap.min.css** is the minified version with extra and white spaces removed.

Learning Objectives

Student/s should be able to:

- **Demonstrate** how to make the website compatible on all screen sizes.
- **Recall** how to link web pages.
- **Explain** how to add navigation buttons.
- **Explain** how to create a collapsible navigation bar using the bootstrap framework.
- **Create** a multimedia website with a collapsible navigation bar.

Activities

1. Class Narrative: (2 mins)

- Brief the student/s that MMBFlix wants to deliver a wide range of multimedia content consisting of movies, music, and books. Student/s need to create and design this new multimedia website.

2. Concept Introduction Activity: (5 mins)

- Let the student/s click on the explore-activity and explore how the multimedia website should look.
- Lead student/s to answer how navigation is different on the multimedia website than the school website.
Expected answer: School website navigates to different sections on the same webpage while the multimedia website navigates to different webpages.
- Explain to the student/s the advantages and disadvantages of the single-page vs multi-page navigation. Brief to the students that limited content/words on single web pages limits the filters for ranking on searches.
- Introduce the student/s to Web Application Framework.
- Using the slides, explain what the student/s will learn using Bootstrap framework:
 - to create the navigation bar and webpages.
 - to add the navigation button
 - to make the navigation bar collapsible

3. Activity 1: Create the Navigation Bar and its Webpages: (12 mins)

Teacher Activity: (5 mins)

- Explain to the student/s how
 - to make the website compatible with all character sets, sizes, etc using the <meta> tag and its attributes.
 - to link the bootstrap framework stylesheet in the index.html file. Explain the versions to be used from the link.

Note: Reference link for bootstrap:

```
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet">
```

- Explain to the student/s how to create the navigation bar using the bootstrap framework and hyperlink the navigation items.
- Explain to the student/s how to create a new webpage for the Music section and link it in the navigation bar.

Student Activity: (7 mins)

- Guide the student/s to change and try different background color themes and hyperlink the title and Home to index.html file.
- Guide the student/s to create new webpages for the Movies and Books sections and link them in the navigation bar.

4. Activity 2: Add the Navigation Button: (10 mins)

Teacher Activity: (4 mins)

- Highlight that the student/s navigation will be difficult on the mobile view.
- Lead the student/s to use a dropdown menu to make the navigation bar responsive for the mobile screen.
- Explain to the student/s to create a menu for the navigation bar items using the bootstrap navbar classes.

Student Activity: (6 mins)

- Guide the student/s to style the navigation bar and button using the navbar component and its properties.

Probing question: Which class can be used to add a menu icon for the navigation bar?

Expected answer: navbar-toggler-icon

5. Activity 3: Make the Navigation Bar Collapsible: (10 mins)

Teacher Activity: (4 mins)

- Highlight to the student/s that the navigation bar does not collapse even after adding the menu icon.
- Explain to the student/s how to add the collapsible effect.

Student Activity: (6 mins)

- Guide the student/s to add styling to make the navigation bar collapsible.

6. Introduce the Post class project: (2 min)

- Create a collapsible navigation bar for an Art Gallery website with links to the different web pages.

7. Test and Summarize the class learnings: (5 mins)

- Check for understanding through quizzes and summarize learning after respective missions.
- Summarize the overall class learning towards the end of the class.

8. Additional activities:

- Encourage the student/s to create a new webpage for Podcast and link it to the navigation bar.
- Encourage the student/s to debug the code to fix the navigating problem to the Podcast page.

9. State the Next Class Objective: (1 min)

- We will learn to create an image carousel for the multimedia platform.

U.S. Standards:

CSTA:

Links Table		
Activity	Activity Name	Link
Class Presentation	Multimedia Website	https://s3-whjr-curriculum-uploads.whjr.online/015bb28d-bbbe-4fc0-943e-c7a792d9a1e6.html
Explore Activity	Multimedia Website - Explore Activity	https://tynker.com/code/view/6360a36f0d5ea552916a7a52/
Teacher Activity 1.1	Create a Navigation Bar	https://tynker.com/code/project/63636a412332d31d3b0bbf42
Teacher Activity 1.1 Solution	Create a Navigation Bar - Solution	https://tynker.com/code/project/6363664fc07cc172341e5a92
Student Activity 1.1	Add styling and links to the webpage	https://tynker.com/code/project/639c0d8503ba3929bc5ee5f7
Teacher Reference: Student Activity 1.1 Solution	Add styling and links to the webpage - Solution	https://tynker.com/code/project/639c0e06f33cbf4bc4680ca2
Teacher Activity 1.2	Create and Hyperlink web page for Music	https://tynker.com/code/project/63636c49e2c3dd726e261e82
Teacher Activity 1.2 Solution	Create and Hyperlink web page for Music- Solution	https://tynker.com/code/project/63636ac773146a66c3224f32
Student Activity 1.2	Create web pages for Movies and Books and hyperlink them	https://tynker.com/code/project/6347f51b4a3a0c2a892b5142
Teacher Reference: Student Activity 1.2 Solution	Create web pages for Movies and Books and hyperlink them - Solution	https://tynker.com/code/project/6347f45720ae9228c30b0bd2
Teacher Activity 2	Add the Navigation Button	https://tynker.com/code/project/634fd5b07d0a39546d19dd22
Teacher Activity 2 Solution	Add the Navigation Button - Solution	https://tynker.com/code/project/634fd5d1c47a5660ee462c82
Student Activity 2	Add the Navigation Button	https://tynker.com/code/project/6347f591ca662e42b556d662
Teacher Reference: Student Activity 2 Solution	Add the Navigation Button - Solution	https://tynker.com/code/project/6347f45e2553ed704c7dcce2

Teacher Activity 3	Make the Navigation Bar Collapsible	https://tynker.com/code/project/63a2daf39b0ced506817a5a2
Teacher Activity 3 Solution	Make the Navigation Bar Collapsible - Solution	https://tynker.com/code/project/6347f4662be28f7dfe0f7612
Student Activity 3	Make the Navigation Bar Collapsible	https://tynker.com/code/project/6347f6001f5c2155be3f9662
Teacher Reference: Student Activity 3 Solution	Make the Navigation Bar Collapsible - Solution	https://tynker.com/code/project/6347f4662be28f7dfe0f7612
Student's Additional Activity 1	Add Podcast Page to the Nav Bar	https://tynker.com/code/project/634fdb4ec6f6873349712752
Teacher Reference: Student's Additional Activity 1 Solution	Add Podcast Page to the Nav Bar - Solution	https://tynker.com/code/project/634fd9277762fa01df1afd92
Student's Additional Activity 2	Customize the Navigation for Nav bar	https://tynker.com/code/project/634fe061d1412108c47c2c32
Teacher Reference: Student's Additional Activity 2 Solution	Customize the Navigation for Nav bar - Solution	https://tynker.com/code/project/634fddb6a74d63104f2a0dd2
Post Class Project	Art Gallery - I	https://tynker.com/code/project/6368be70c4e37014407eeb22
Teacher Reference: Post Class Project Solution	Art Gallery - I - Solution	https://tynker.com/code/project/6368bcdabb4224f7186063862