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Intro to Web Development

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LEARNING OUTCOMES

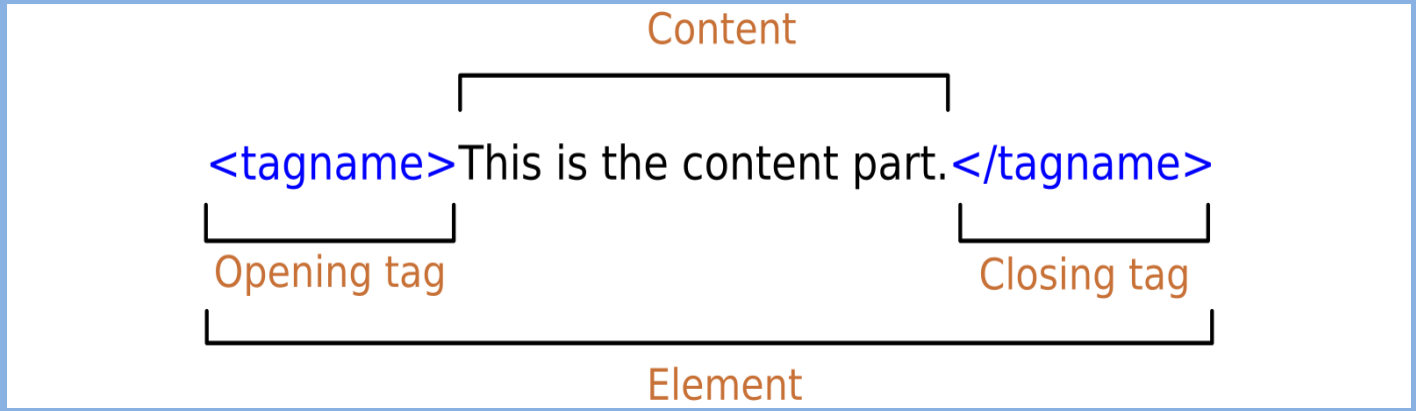
1. HTML Overview
2. HTML Basics
3. Activity
(Create an online library)

You want to change your life?
Change the way you think.

Recap

HTML

- Hyper Text Markup Language
- Used to create websites and webpages.
- Composed of many elements and these elements describe how the elements will appear on the browser.




```
<p>My First Paragraph</p>
```

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Recap

HTML


```
<p>My First Paragraph</p>
```

```
<!DOCTYPE html>
```

- Indicates that we're using HTML file.

```
<html>
```

- Element to start the document.

```
</html>
```

Recap

```
<head>
</head>
```

- Used for the title, styling, scripts and things to link in HTML file.

```
<body>
</body>
```

- Element that contains the main content of the web page.

HTML

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What is HTML?

HTML

```
<h1>Top level heading: Maybe a page title</h1>

<p>A paragraph of text. Some information we wo
uld like to communicate to the user. This can
be as long or short as we would like.</p>

<ol>
  <li>Number one on the list</li>
  <li>Number two</li>
  <li>A third item</li>
</ol>
```

Web Page

Top level heading: Maybe a page title

A paragraph of text. Some information we would like to communicate to the user. This can be as long or short as we would like.

1. Number one on the list
2. Number two
3. A third item

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Activity Time

Click the link provided in the chat box.

HTML Structure

```
<!DOCTYPE html>
<html>
<head>
    <title>My First HTML Website</title>
    <meta charset="UTF-8">
</head>
<body>
    Welcome to my first HTML Website!
</body>
</html>
```

Tags

Doctype
HTML Tag
Head Tag
Title Tag
Meta Tag
Body Tag

Tag Name	Description
<!DOCTYPE html>	meant to act as links to a set of rules that the HTML page had to follow
<html></html>	the parent tag or root element of a webpage
<head></head>	first child of html tag. Site page information for web browsers and Search engines.
<title></title>	displayed in browsers tab, used only once inside head tag
<meta>	used to define the charset family, description, keywords, Author, robots and Geo Location of a website
<body></body>	used to create the page structure or content; structure includes Headings, Paragraphs, images, tables, division, etc of the website

div id

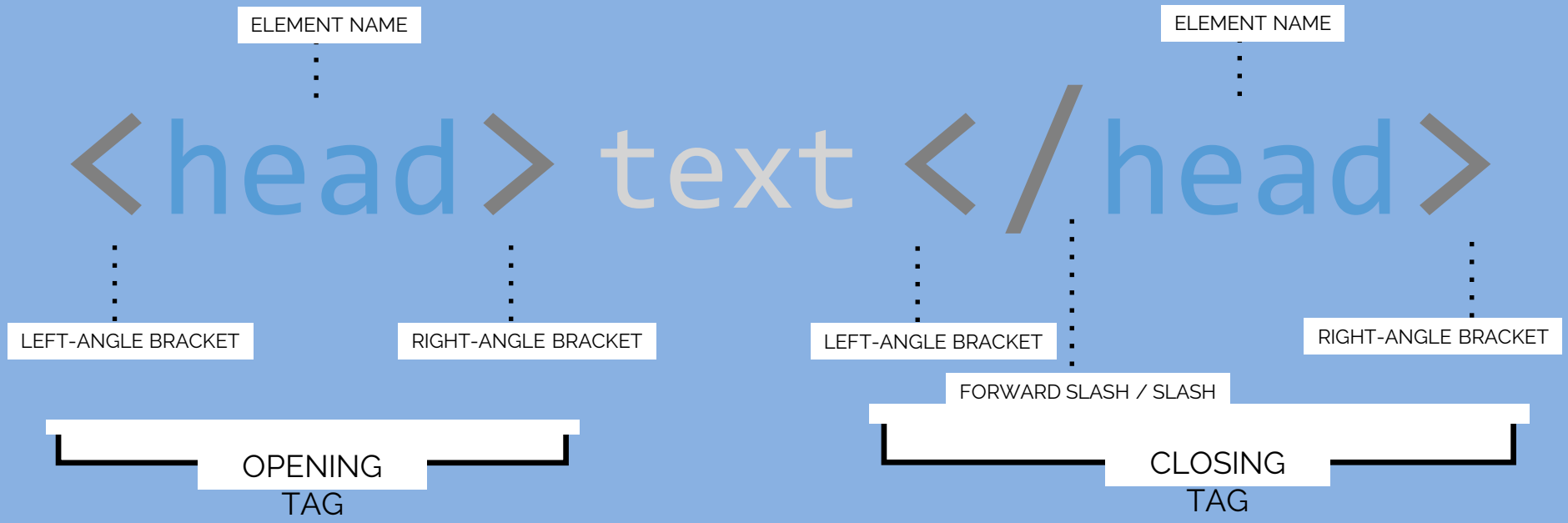
```
<div id= “div1”>This is a block element </div>
```

div class

```
<div class="countries">
  <h2>Japan</h2>
  <p>Tokyo is the capital of Japan.</p>
</div>

<div class="countries">
  <h2>India</h2>
  <p>New Delhi is the capital of India. </p>
</div>
```

HTML Syntax



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HTML Elements

Elements usually have opening and closing tags that surround and give meaning to the content.

Examples

- Body
- Head
- Title
- Meta

```
<p>My First Paragraph</p>
```

Kinds of Tags

Container Tags

always wrap around text or graphics and comes in a set with an opening and closing tag.

<title> My First Webpage </title>

Empty Tags

do not have to be wrapped around text and do not require a closing tag; stand alone

<meta>

Tag Name	Description
	A section heading level 1. Headings are up to
	A paragraph tag
<a> 	Hyperlink, formerly anchor tag
<img>	An image tag
	Bold text
	Division, a block-level element for grouping
	An inline level grouping element
<!--- -->	Insert comment in the source code. A short description of code. Not displayed in the browser

Nesting Elements

Elements can be placed within other elements.

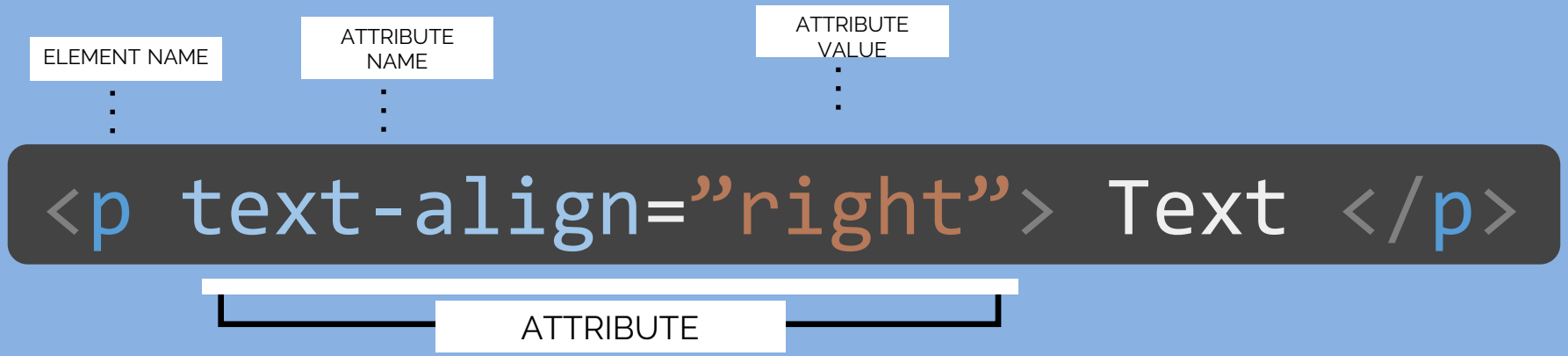
Example

```
<p>My name is <strong>Juan Pedro</strong></p>

<p>My name is <strong>Juan Pedro</p></strong>
```

Attributes

Provides additional information about the html tags or elements



Attribute Name	Description
href	Hypertext Reference specifies the url (web address) for a link. <a **href=”about.html”**>About
src	Source of media elements like images, iframes, Audio, Video. <img **src=”logo.png”**>
id	Set unique id of single element <h1 **id=“MyHeader"**> My First HTML Page </h1>
class	Group single or multiple elements. <p **class=“intro"**>This is an Introduction</p>
style	Specifies an inline style for an element <p **style="color:green"**>This is color green paragraph.</p>
alt	Specifies an alternative text. <img src="logo.png" alt=“Company Logo“>
title	Tooltip of an element. <img src="logo.png" title=“This is Company logo”>

Unordered List

Non sequential list. List with bullets. In HTML5, type attribute of unordered list is deprecated.

UL Example 1: Bullet List

```
<ul>
    <li>Coffee</li>
    <li>Milk</li>
    <li>Tea</li>
</ul>
```

- Coffee
- Milk
- Tea

UL Example 2: Square List

```
<ul type=”square”>
    <li>Coffee</li>
    <li>Milk</li>
    <li>Tea</li>
</ul>
```

- Coffee
- Milk
- Tea

Ordered List

Sequential list. Use numbers, alphabets and Roman characters as list style.

OL Example 1: Uppercase Alphabet List

```
<ol type="A">
    <li>Coffee</li>
    <li>Milk</li>
    <li>Tea</li>
</ol>
```

1. Coffee
2. Milk
3. Tea

OL Example 2: Roman Numeral List

```
<ol type="I">
    <li>Coffee</li>
    <li>Milk</li>
    <li>Tea</li>
</ol>
```

I. Coffee
II. Milk
III. Tea

Description List

List with description term and description data.

Syntax:

```
<dl>
    <dt>Description Term</dt>
    <dd>Description Data</dd>
</dl>
```

DL Example 1:

```
<dl>
    <dt>HTML</dt>
    <dd>Language to create a website. </dd>
</dl>
```

HTML

Language To create web page.

Exercise 1: Re-create The World's First Website

1. Create a new file
2. Save the file as Lastname_B12Exercise1A.html and Lastname_B12Exercise1B.html
3. Recreate the World's First Website using what you have learned today.
4. Save changes.
5. Run the html file on a browser.

World Wide Web

The WorldWideWeb (W3) is a wide-area hypermedia information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an executive summary of the project, Mailing lists , Policy , November's W3 news , Frequently Asked Questions .

What's out there?
: Pointers to the world's online information, subjects , W3 servers, etc.

Help
: on the browser you are using

Software Products
: A list of W3 project components and their current state. (e.g. Line Mode ,X11 Viola , NeXTStep , Servers , Tools , Mail robot , Library)

Technical
: Details of protocols, formats, program internals etc

Bibliography
: Paper documentation on W3 and references.

People
: A list of some people involved in the project.

History
: A summary of the history of the project.

How can I help ?
: If you would like to support the web..

Getting code
: Getting the code by anonymous FTP , etc.

HTML Tables

HTML Tables are used to arrange data like text, images, links, other tables, etc. into rows and columns of cells.

Note: To add borders to the table you can use the **border** attribute.

To define the width of the table you can also use the **width** attribute.

HTML Tables

<table>

<thead>

<th> Name </th>	<th> Age </th>	<th> Email </th>
<td> John </td>	<td> 29 </td>	john@email.com
<td> Jane </td>	<td> 27 </td>	jane@email.com

</thead>

<tr>

</tr>

<tr>

</tr>

</table>

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HTML Table Head

Table Head is used to group the **header content** of an HTML table.

Table head is uses the tag:
<thead> </thead>

HTML Table Row

Table Row is used to define a **row** inside the table. The table row can contain **1** or more **<th>** or **<td>**.

Table Row is uses the tag:
<tr> </tr>

HTML Table Data

Table Data is used to define a **data cell** inside the table.

Table Data is uses the tag:
<td> </td>

<th>Name</th>	<th>Age</th>	<th>Email</th>
<td>John</td>	<td>29</td>	<td>john@email.com</td>
<td>Jane</td>	<td>27</td>	<td>jane@email.com</td>

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HTML Tables

<table>

<thead>

<th> Name </th>	<th> Age </th>	<th> Email </th>
<td> John </td>	<td> 29 </td>	john@email.com
<td> Jane </td>	<td> 27 </td>	jane@email.com

</thead>

<tr>

</tr>

<tr>

</tr>

</table>

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HTML Table Colspan

Colspan attribute is used to make a cell span for **more than 1 column**.

Syntax:
<td colspan=”2”>

Name	Contact Number	
Bill	12345	67890
Steve	13579	24680

HTML Table Rowspan

Rowspan attribute is used to make a cell span for **more than 1 row**.

Syntax:
<td rowspan="2">

NAME	Bill	Steve
Contact Number	12345	13579
	67890	24680

HTML Table Forms

HTML Forms are used to collect different kinds of user inputs, such as contact details like name, email address, phone numbers, or details like credit card information, etc.

HTML Structure

```
<form action="#" method="#">
        <label for="input-name">Full Name</label>
        <input type="text" name="full_name" id="input-name">
        <!-- other form elements here -->
</form>
```

HTML Forms

The form structure consists of an opening and closing tag of **<form>**. This is to declare that you are creating an **HTML Form**.

The **action** form attribute defines **where** should the form-data go after it is submitted.

While the **method** form attribute defines **how** the form-data is passed

HTML Forms

Labelling form controls are needed to make the form more **user-friendly**. As it shows the user what should be filled up inside the input field.

To label form controls:

```
<label for="input-id">Label Name</label>
```

Note: The **for attribute** should be **equal to the id of the input field**.

HTML Form Controls

Form Controls are used to 'control' the different types of data or values inputted by the user.

- Text Input
- Password Input
- Date
- Email
- Text Area
- Radio Button
- Checkbox
- Dropdown List Box
- Multiple Select Box
- File Input Box
- Submit Button
- Image Button
- Button
- Form Validation
- Placeholder

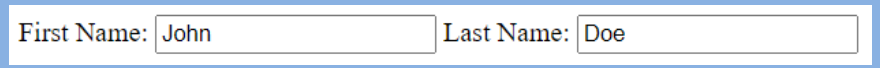
HTML Text Input

Syntax

```
<label for="first-name">First Name</label>
<input type="text" name="first-name"
id="first-name">

<label for="last-name">Last Name</label>
<input type="text" name="last-name" id="flast-
name">
```

Web Page



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HTML Password Input

Syntax

```
<label for="password">Password</label>
<input type="password" name="user_password"
id="password">
```

Web Page

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HTML Date Input

Syntax

```
<label for="date">Date</label>
<input type="date" name="date" id="date">
```

Web Page

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HTML Email Input

Syntax

```
<label for="email">Email</label>
<input type="email" name="email" id="email">
```

Web Page

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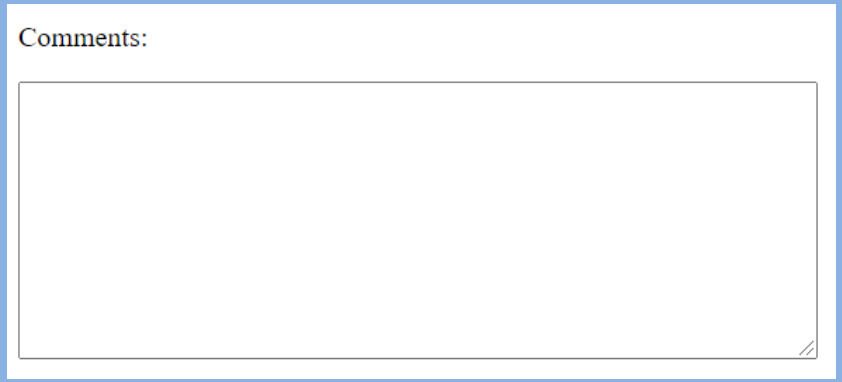
HTML Text Area

Syntax

```
<textarea name="comments" id="comments"
cols="60" rows="10"></textarea>
```

Web Page



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HTML Radio Button

Syntax

```
<p>Please select your music genre:</p>
<input type="radio" name=“genre" id="rock"
value="rock">
<label for="rock">Rock</label>
<input type="radio" name=“genre" id=“pop"
value="pop">
<label for="rock">Rock</label>
<input type="radio" name=“genre" id=“jazz"
value="jazz">
<label for="rock">Rock</label>
```

Web Page

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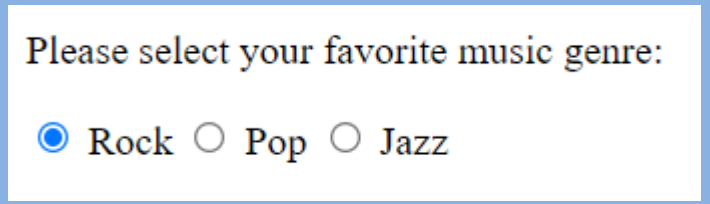
HTML Checkbox

Syntax

```
<p>Please select your favorite food:</p>
<input type="checkbox" name="food"
id="ramen" value="ramen">
<label for="ramen">Ramen</label>
<input type="checkbox" name="food"
id="sushi" value="sushi">
<label for="sushi">Sushi</label>
<input type="checkbox" name="food"
id="curry" value="curry">
<label for="curry">Curry</label>
```

Web Page



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HTML Dropdown List

Syntax

```
<p>What is your device?</p>
<select name="device" id="device">
          <option
value="macbook">Macbook</option>
          <option value="ipad">iPad</option>
          <option
value="iphone">iPhone</option>
</select>
```

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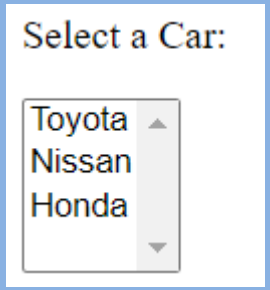
HTML Select Box

Syntax

```
<p>Select a Car:</p>
<select name="car" id="car" multiple>
          <option
value="toyota">Toyota</option>
          <option
value="nissan">Nissan</option>
          <option
value="honda">Honda</option>
</select>
```

Web Page



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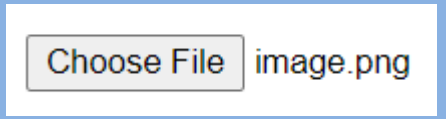
HTML Input Box

Syntax

```
<input type="file" name="file" id="file">
```

Web Page



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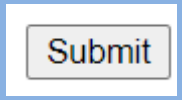
HTML Submit Button

Syntax

```
<input type="submit" name="submit" id="submit"
value="Submit">
```

Web Page



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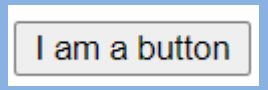
HTML Button

Syntax

```
<button>I am a button</button>
```

Web Page



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HTML Image Button

Syntax

```
<input type="image" src="submit-button.png"
name="submit" id="submit" width="15%"
height="15%">
```

Web Page

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HTML Form Validation

HTML5 has the ability to validate most user data once submitted.

This is done by using validation attributes in the form elements.

- **required** = checks whether the input field is filled in or not before being submitted.
- **min** and **max** = limits the minimum or maximum value of the numerical type input fields.

HTML Form Validation

placeholder attribute provides a **small hint or description** for the users on what they will put in the input field.

ACTIVITY 3 : Online Library

1. Create 2 new files
2. Save the files as
    I. Nickname_First Letter of your Surname_WD28E1.html
    II. Nickname_First Letter of your Surname_WD28E2.html
3. [First Page E1 (EXERCISE 1)]

Create a table with the following content

Book Title

- Author
- Year Published
- Add to Cart, Add to Wishlist and Checkout [Links to E2] Buttons
- Search bar
- Filter

4. [Second Page E2 (EXERCISE 2)]

    Order form

Thank you!