



**FACULTY OF COMPUTER SCIENCE
AND INFORMATION TECHNOLOGY**

LAB 4

BIC21203: WEB DEVELOPMENT

NAME: WAN IKMAL AZIZI BIN WAN JUNIZAM

MATRIC NUMBER: AI220176

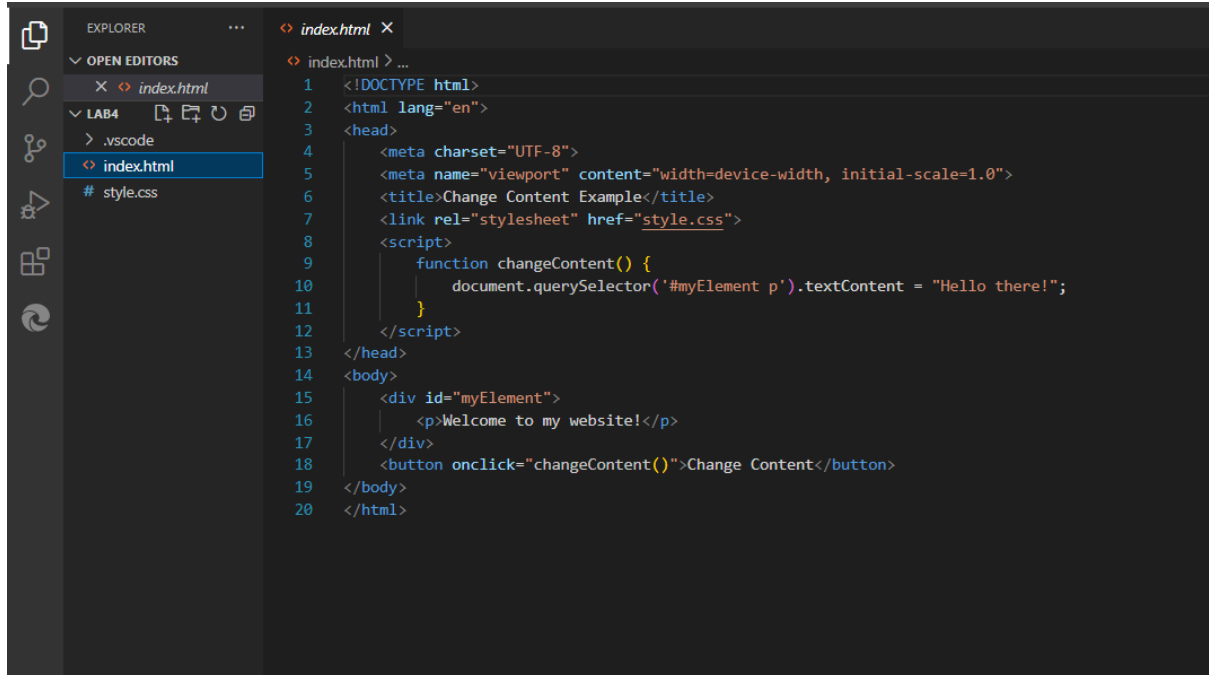
SECTION:6

Lab 4 a

Instruction: Answer all questions.

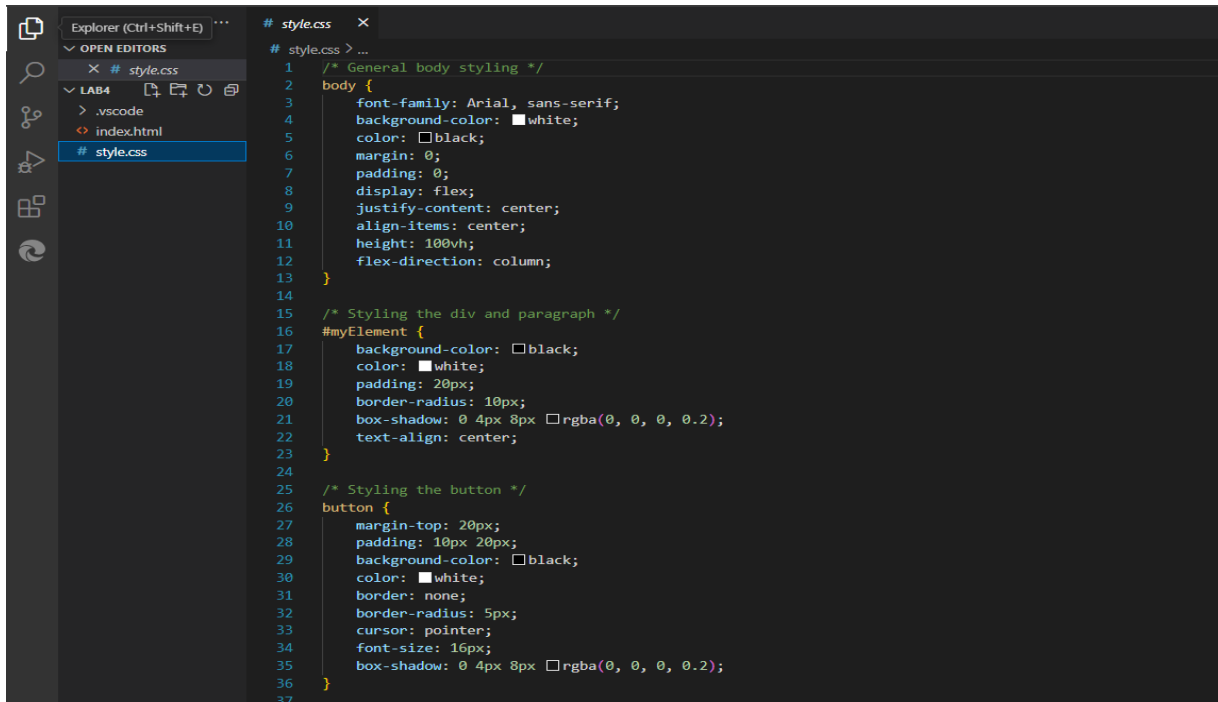
1. Write an HTML with JavaScript statements to change the content of the to “Hello there!”.

Welcome to my website!



```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Change Content Example</title>
7   <link rel="stylesheet" href="style.css">
8   <script>
9     function changeContent() {
10       document.querySelector('#myElement p').textContent = "Hello there!";
11     }
12   </script>
13 </head>
14 <body>
15   <div id="myElement">
16     <p>Welcome to my website!</p>
17   </div>
18   <button onclick="changeContent()">Change Content</button>
19 </body>
20 </html>
```

Figure 1: index.html coding



```
1 /* General body styling */
2 body {
3   font-family: Arial, sans-serif;
4   background-color: #white;
5   color: #black;
6   margin: 0;
7   padding: 0;
8   display: flex;
9   justify-content: center;
10  align-items: center;
11  height: 100vh;
12  flex-direction: column;
13 }
14
15 /* Styling the div and paragraph */
16 #myElement {
17   background-color: #black;
18   color: #white;
19   padding: 20px;
20   border-radius: 10px;
21   box-shadow: 0 4px 8px #rgba(0, 0, 0, 0.2);
22   text-align: center;
23 }
24
25 /* Styling the button */
26 button {
27   margin-top: 20px;
28   padding: 10px 20px;
29   background-color: #black;
30   color: #white;
31   border: none;
32   border-radius: 5px;
33   cursor: pointer;
34   font-size: 16px;
35   box-shadow: 0 4px 8px #rgba(0, 0, 0, 0.2);
36 }
37
```

Figure 2: styles.css coding

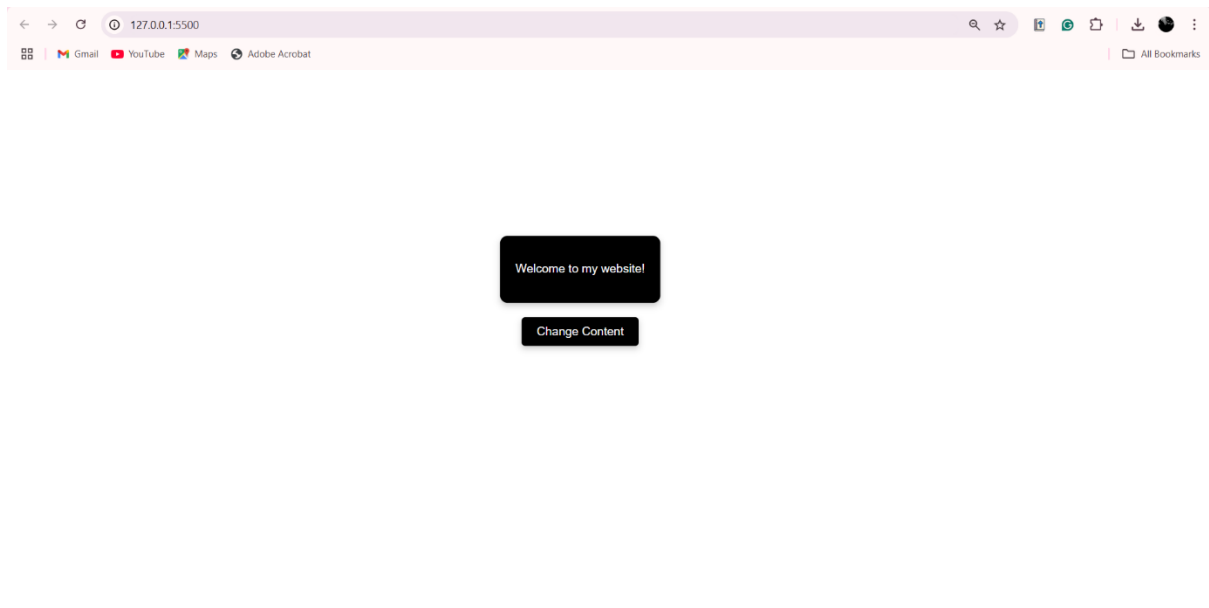


Figure 3: webpage

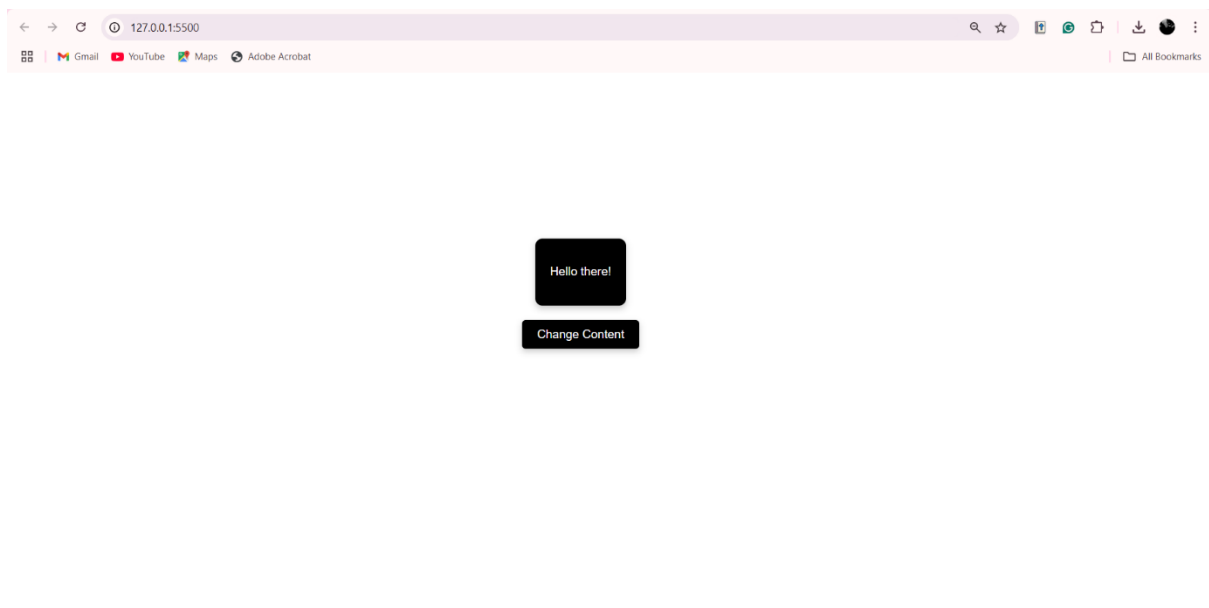


Figure 3: webpage

2. Based on the HTML code below, write an HTML with a JavaScript function named `checkInput()` that uses if else condition to validate if the number entered is lower or higher than 10. If it is lower than 10, then make an alert of “The number is lower than 10”, otherwise “The number is higher than 10”. If the user entered other than numbers (eg:alphabets), alert “Please insert a number!”.

```
<input type="text" id="userInput" placeholder="Enter a number"> <button  
onlick="checkInput ()">Check</button>
```

```

1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Number Validation</title>
7   <link rel="stylesheet" href="style1.css">
8 </head>
9 <script>
10   function checkInput() {
11     // Get the value from the input field
12     var input = document.getElementById("userInput").value;
13
14     // Check if the input is a valid number
15     if (isNaN(input)) {
16       alert("Please insert a number!");
17     } else {
18       // Convert the input to a number
19       var number = Number(input);
20
21       // Check if the number is lower or higher than 10
22       if (number < 10) {
23         alert("The number is lower than 10");
24       } else {
25         alert("The number is higher than 10");
26       }
27     }
28   }
29 </script>
30 </head>
31 <body>
32   <div id="container">
33     <h1>Number Validator</h1>
34     <input type="text" id="userInput" placeholder="Enter a number">
35     <button onclick="checkInput()">Check</button>
36   </div>
37 </body>
38 </html>

```

Figure 4: index1.html coding q2

```

1 /* General body styling */
2 body {
3   font-family: Arial, sans-serif;
4   background-color: #1a1a1a;
5   color: #000000;
6   margin: 0;
7   padding: 0;
8   display: flex;
9   justify-content: center;
10  align-items: center;
11  height: 100vh;
12 }
13
14 /* Container styling */
15 #container {
16   background-color: #1a1a1a;
17   color: #000000;
18   padding: 40px;
19   border-radius: 15px;
20   box-shadow: 0 8px 16px #000000;
21   text-align: center;
22 }
23
24 /* Heading styling */
25 h1 {
26   margin-bottom: 20px;
27 }
28
29 /* Input field styling */
30 input[type="text"] {
31   padding: 10px;
32   width: 200px;
33   margin-right: 10px;
34   border: 2px solid #000000;
35   border-radius: 5px;
36   background-color: #1a1a1a;
37   color: #000000;
38 }
39
40 /* Button styling */
41 button {

```

Figure 5: styles2.css coding q2



Figure 6: webpage q2

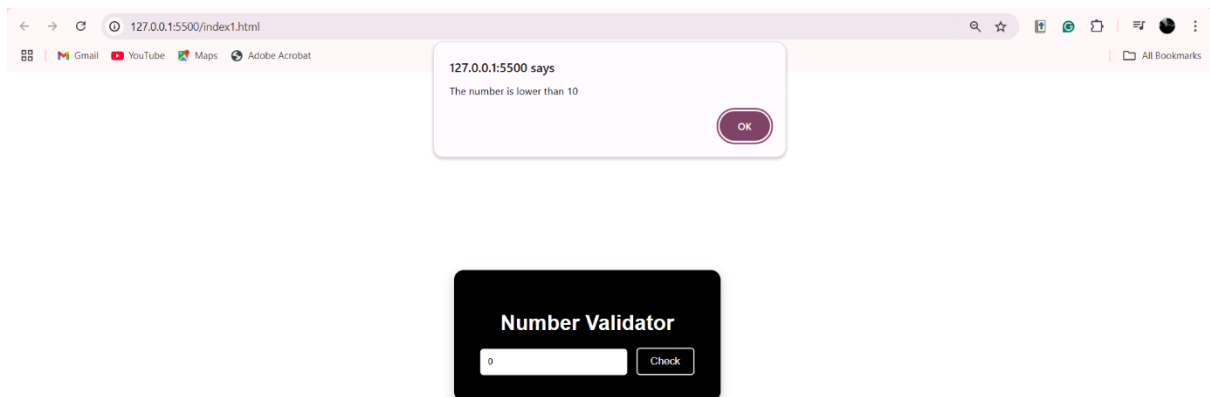


Figure 7: webpage q2

- Complete the JavaScript code below to produce the expected output. Write your answer in a complete HTML code.

```
<p id="demo"></p>
```

```
<script> let text = ""; for (let i = 0; //complete your
answer here) { text += "The number is " //complete
your answer here
}
```

```
document.getElementById("demo").innerHTML = text;

</script>
```

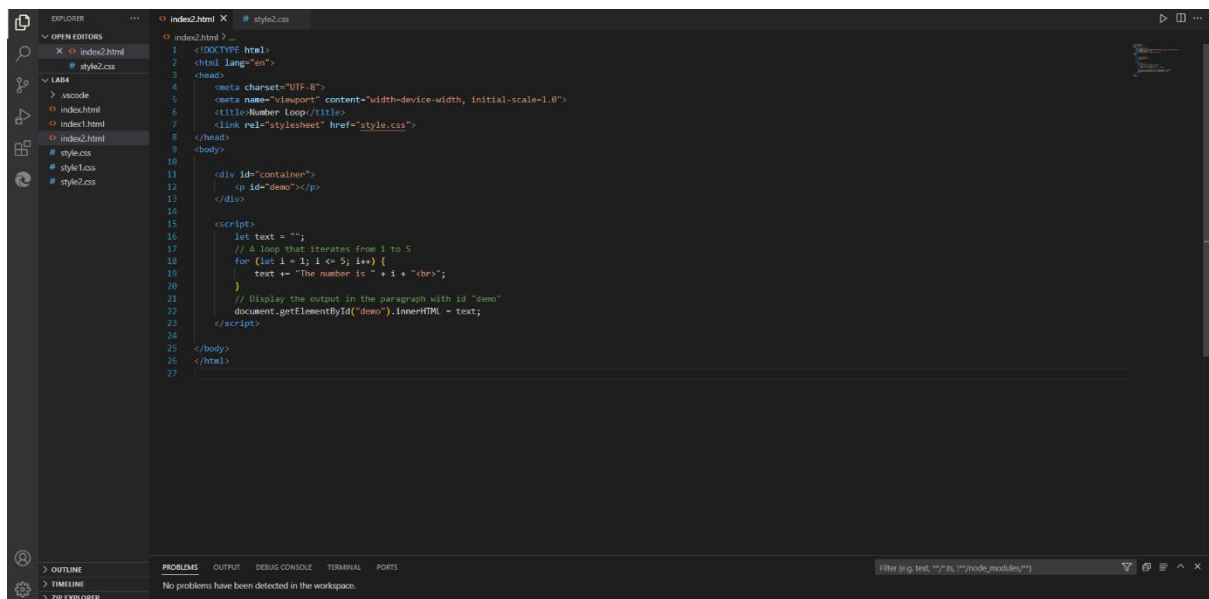


Figure 7: index2.html coding q3

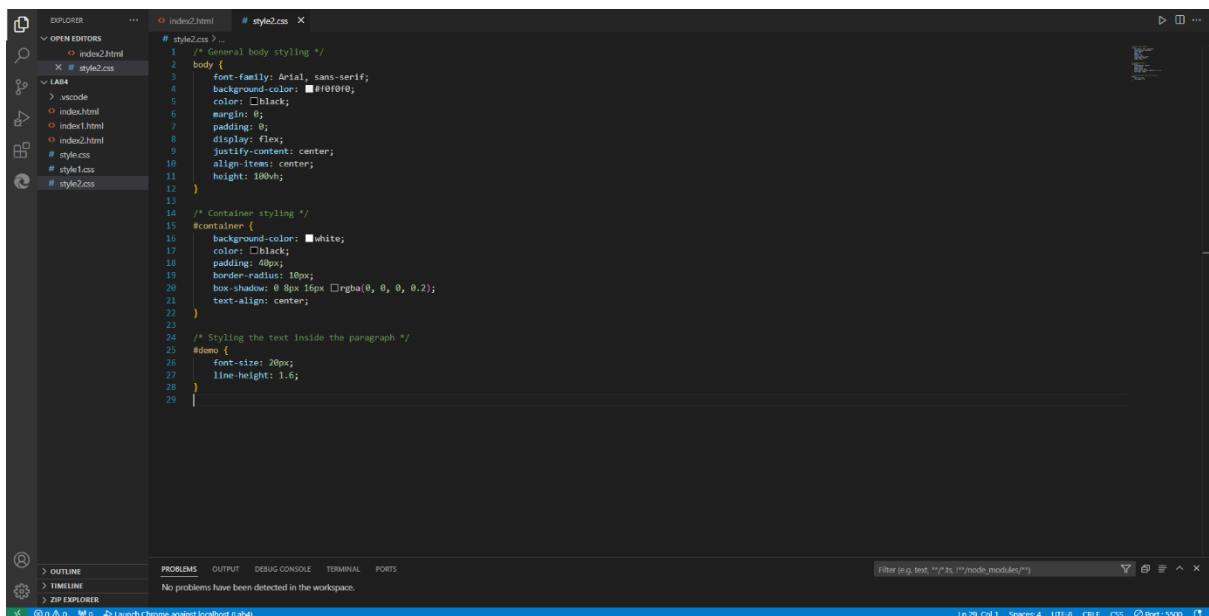
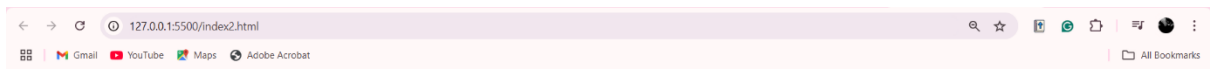


Figure 8: style2.css coding q3



The number is 1
The number is 2
The number is 3
The number is 4
The number is 5

Figure 8: webpage q3

Lab 4 b

1. Consider the following collection of books:

	Book 1	Book 2
title	The Great Gatsby	To Kill a Mockingbird
author	F. Scott Fitzgerald	Harper Lee
publicationYear	1925	1960
genres	Fiction, Classics	Fiction, Coming-of-Age

Create a JSON representation (.json file) of this collection.

```

1 {
2   "Books": [
3     {
4       "title": "The Great Gatsby",
5       "author": "F. Scott Fitzgerald",
6       "publicationYear": 1925,
7       "genres": ["Fiction", "Classics"]
8     },
9     {
10      "title": "To Kill a Mockingbird",
11      "author": "Harper Lee",
12      "publicationYear": 1960,
13      "genres": ["Fiction", "Coming-of-Age"]
14    }
15  ]
16 }
17

```

Figure 9: books.json coding

2. Based on the JSON you have written in Question (1), write an HTML file to display the following details.

- (a) The title of the first book.
- (b) The author of the second book.
- (c) The genres of all books.

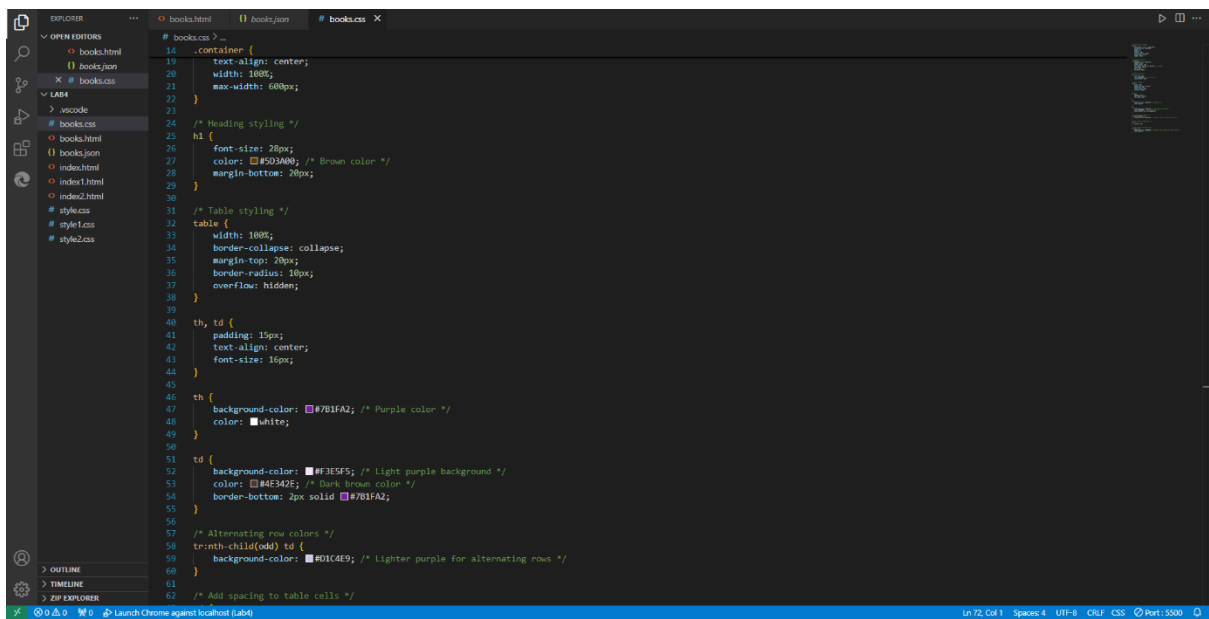
You can display the details through Inspect – Console on your browser.

```

1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Book Collection</title>
7   <link rel="stylesheet" href="books.css">
8 </head>
9 <body>
10
11   <div class="container">
12     <h1>Book Collection</h1>
13     <!-- Table structure to display the book details -->
14     <table>
15       <thead>
16         <tr>
17           <th></th>
18           <th>Book 1/th>
19           <th>Book 2/th>
20         </tr>
21       </thead>
22       <tbody>
23         <tr>
24           <td>Title</td>
25           <td id="book1Title"></td>
26           <td id="book2Title"></td>
27         </tr>
28         <tr>
29           <td>Author</td>
30           <td id="book1Author"></td>
31           <td id="book2Author"></td>
32         </tr>
33         <tr>
34           <td>Publication Year</td>
35           <td id="book1Year"></td>
36           <td id="book2Year"></td>
37         </tr>
38         <tr>
39           <td>Genres</td>
40           <td id="book1Genres"></td>
41           <td id="book2Genres"></td>
42         </tr>
43       </tbody>
44     </table>
45   </div>

```

Figure 10: books.html coding



The image shows a Visual Studio Code editor window with the 'books.css' file open. The code defines styles for a container, heading, table, and table cells. The container is centered and has a width of 100%. The heading is centered and has a font size of 20px. The table is centered and has a width of 100%. The table cells have padding and are styled with different background colors for alternating rows.

```
14 .container {
15   text-align: center;
16   width: 100%;
17   max-width: 600px;
18 }
19
20 /* Heading styling */
21 h1 {
22   font-size: 20px;
23   color: #80390B; /* Brown color */
24   margin-bottom: 20px;
25 }
26
27 /* Table styling */
28 table {
29   width: 100%;
30   border-collapse: collapse;
31   margin-top: 20px;
32   border-radius: 10px;
33   overflow: hidden;
34 }
35
36 th, td {
37   padding: 15px;
38   text-align: center;
39   font-size: 16px;
40 }
41
42 th {
43   background-color: #7B1FA2; /* Purple color */
44   color: white;
45 }
46
47 td {
48   background-color: #F3E5F5; /* Light purple background */
49   color: #4E342E; /* Dark brown color */
50   border-bottom: 1px solid #7B1FA2;
51 }
52
53 /* Alternating row colors */
54 tr:nth-child(odd) td {
55   background-color: #D1C4E9; /* Lighter purple for alternating rows */
56 }
57
58 /* Add spacing to table cells */
```

Figure 11: books.css coding

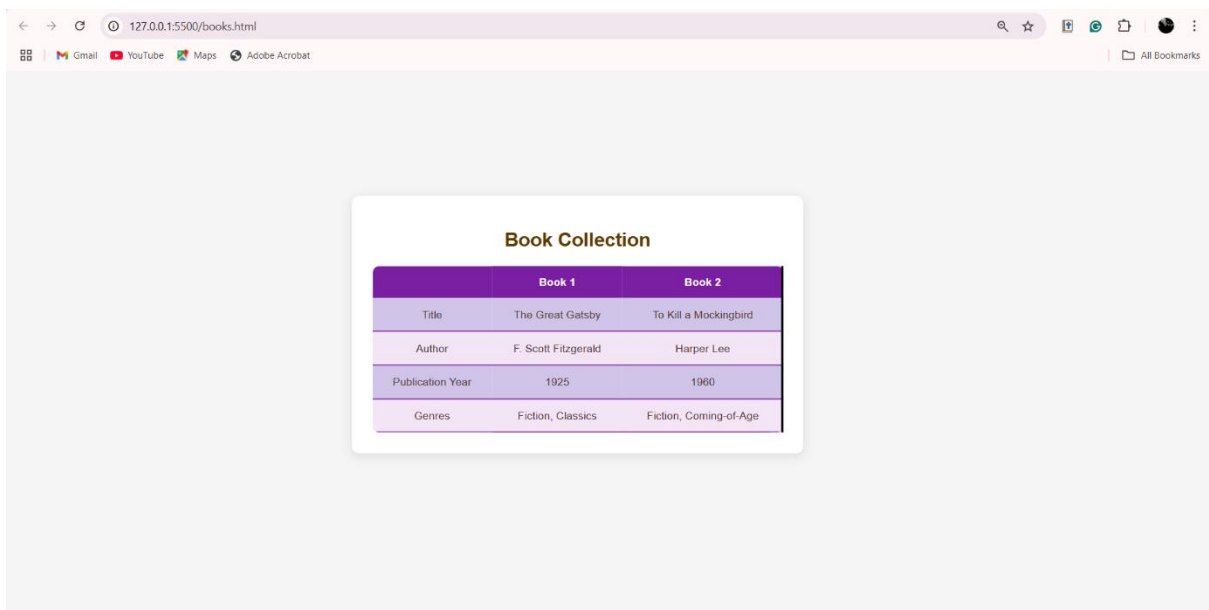


Figure 12: books collection webpage

3. Rewrite the HTML code below with the jQuery statements that are equivalent to the JavaScript DOM statements in a, b, and c.

```
<!DOCTYPE html>
<html>
<head>
    <title>jQuery DOM Operations</title>
    <script
        src="https://ajax.googleapis.com/ajax/libs/jquery/3.7.1/j
        query.min.js"></script>
    <style>        .myStyle
{            background-color:
coral;        padding: 16px;
    }
    </style>
</head>
<body>
    <div id="myElement">Original Text</div>

    <div id="myDIV">
        <p>I am a myDIV.</p>
    </div>

    <button id="myButton">Click me</button>
    <script>
        // a
        // var element = document.getElementById("myElement");
        // element.textContent = "Modified Text";

        //jQuery equivalent of a - write your answer here

        // b
        // var paragraph = document.querySelector("#myDIV");
        // paragraph.classList.add("myStyle");

        //jQuery equivalent of b - write your answer here

        // c
        // var button =
document.getElementById("myButton"); //
button.addEventListener("click", function() { //
alert("Button clicked!");
    // });

        //jQuery equivalent of c - write your answer here

    </script>
</body>
</html>
```

Answers:

```

<!DOCTYPE html>
<html>
<head>
    <title>jQuery DOM Operations</title>
    <script
        src="https://ajax.googleapis.com/ajax/libs/jquery/3.7.1/j
        query.min.js"></script>
    <style>
        .myStyle
    {
        background-color:
coral;          padding: 16px;
    }
    </style>
</head>
<body>
    <div id="myElement">Original Text</div>

    <div id="myDIV">
        <p>I am a myDIV.</p>
    </div>

    <button id="myButton">Click me</button>
    <script>
        // a
        // var element = document.getElementById("myElement");
        // element.textContent = "Modified Text";
        $("#myElement").text("Modified Text");

        // b
        // var paragraph = document.querySelector("#myDIV");
        // paragraph.classList.add("myStyle");
        $("#myDIV").addClass("myStyle");

        // c
        // var button =
document.getElementById("myButton"); //
button.addEventListener("click", function() { //
alert("Button clicked!"); //
    // });

        $("#myButton").on("click", function() {
alert("Button clicked!");
        });

    </script>
</body>
</html>

```