FACULTY OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

BIC 21203

WEB DEVELOPMENT

SEMESTER 2

SESSION 2024/2025

LAB 5A

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Content Summary :

In this lab, I used jQuery to dynamically retrieve and display content on a webpage when working with JSON data. I created a JSON file (Books.json) with a small list of books, and then used jQuery in an HTML file (Books.html) to retrieve and display some information, such as the title of the first book, the second book's author, and the genres that each book belongs to.

```
htdocs > Books > <> Books.html > @ html
 1    <!DOCTYPE html>
 2    <html>
 3    <head>
 4        <title>Book Collection</title>
 5        <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.7.1/jquery.min.js"></script>
 6    </head>
 7    <body>
 8        <script>
 9            $(document).ready(function() {
10                $.getJSON("Books.json", function(data) {
11                    console.log("Title of the first book: " + data.books[0].title);
12                    console.log("Author of the second book: " + data.books[1].author);
13                    console.log("Genres of all books:");
14                    $.each(data.books, function(index, book) {
15                        console.log(book.title + ": " + book.genres.join(", "));
16                    });
17                }).fail(function() {
18                    console.log("Error loading JSON file");
19                });
20            });
21        </script>
22    </body>
23    </html>
```

```json
{
  "books": [
    {
      "title": "The Great Gatsby",
      "author": "F. Scott Fitzgerald",
      "publicationYear": 1925,
      "genres": ["Fiction", "Classics"]
    },
    {
      "title": "To Kill a Mockingbird",
      "author": "Harper Lee",
      "publicationYear": 1960,
      "genres": ["Fiction", "Coming-of-Age"]
    }
  ]
}
```

```html
1   <!DOCTYPE html>
2   <html>
3   <head>
4       <title>Book Collection</title>
5       <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.7.1/jquery.min.js"></script>
6       <style>
7           body {
8               font-family: Arial, sans-serif;
9           }
10          .book-info {
11              margin: 10px 0;
12              padding: 10px;
13              background-color: #f0f8ff;
14              border: 1px solid #ccc;
15              border-radius: 8px;
16          }
17      </style>
18  </head>
19  <body>
20
21      <h1>Book Information</h1>
22
23      <div id="book1" class="book-info"></div>
24      <div id="book2" class="book-info"></div>
25      <div id="allGenres" class="book-info"></div>
26
27      <script>
28          $(document).ready(function () {
29              $.getJSON("Books.json", function (data) {
30                  // Extract values first
31                  let titleFirstBook = data.books[0].title;
32                  let authorSecondBook = data.books[1].author;
33
34                  let genresList = "<strong>Genres of all books:</strong><ul>";
35                  $.each(data.books, function (index, book) {
36                      genresList += "<li><em>" + book.title + "</em>: " + book.genres.join(", ") + "</li>";
37                  });
38                  genresList += "</ul>";
39
40                  // Separate DOM manipulation
41                  $("#book1").html("<strong>Title of the first book:</strong> " + titleFirstBook);
42                  $("#book2").html("<strong>Author of the second book:</strong> " + authorSecondBook);
43                  $("#allGenres").html(genresList);
44              }).fail(function () {
45                  $("#book1, #book2, #allGenres").text("Error loading JSON data.");
46              });
47          });
48      </script>
49
50  </body>
51  </html>
52
```

```
PC plat undefined

Title of the first book: The Great Gatsby                          Books.html:11

Author of the second book: Harper Lee                              Books.html:12

Genres of all books:                                               Books.html:13

The Great Gatsby: Fiction, Classics                                Books.html:15

To Kill a Mockingbird: Fiction, Coming-of-Age                      Books.html:15
```

Book Information

Title of the first book: The Great Gatsby

Author of the second book: Harper Lee

Genres of all books:

- *The Great Gatsby*: Fiction, Classics
- *To Kill a Mockingbird*: Fiction, Coming-of-Age

Reflective Journal :

This lab activity helped me understand how to connect and use JSON data with a web page using jQuery, which is a crucial skill in web development. At first, I found it a bit challenging to structure the JSON properly and use the right syntax in jQuery. However, as I experimented and referenced examples, it became much clearer.

Rewriting regular JavaScript DOM operations into jQuery helped me appreciate how much simpler and more readable jQuery can be, especially when selecting elements and responding to events. I also learned the importance of separating logic (like data handling) from presentation (DOM updates), which makes the code easier to maintain.

Appendix:

1. https://github.com/NaqibFarhan/lab5