

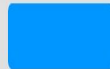
# OLGMAS900\_BCL2302\_Olga \_Maseng\_IWA19 IWA JavaScript Fundamentals (2023)

BOOK CONNECT APP

# What is expected of me as a Junior Software Engineer

I have been approached by a small startup called Book Connect , which runs a social media platform and I have been tasked to debug scripts so that the code is able to perform its function.

This is how the app currently looks like.



# What the user wants

The user wants a book preview list with the following

- Title
- Author
- Image
- summary options

They also want:

- date of publication
- filters for text phrases
- Authors
- Genres
- They want a dark and light mode option for comfortable use.

# Syntax errors

- ❏ HTML
- ❏ DATA.js
- ❏ SCRIPTS.js

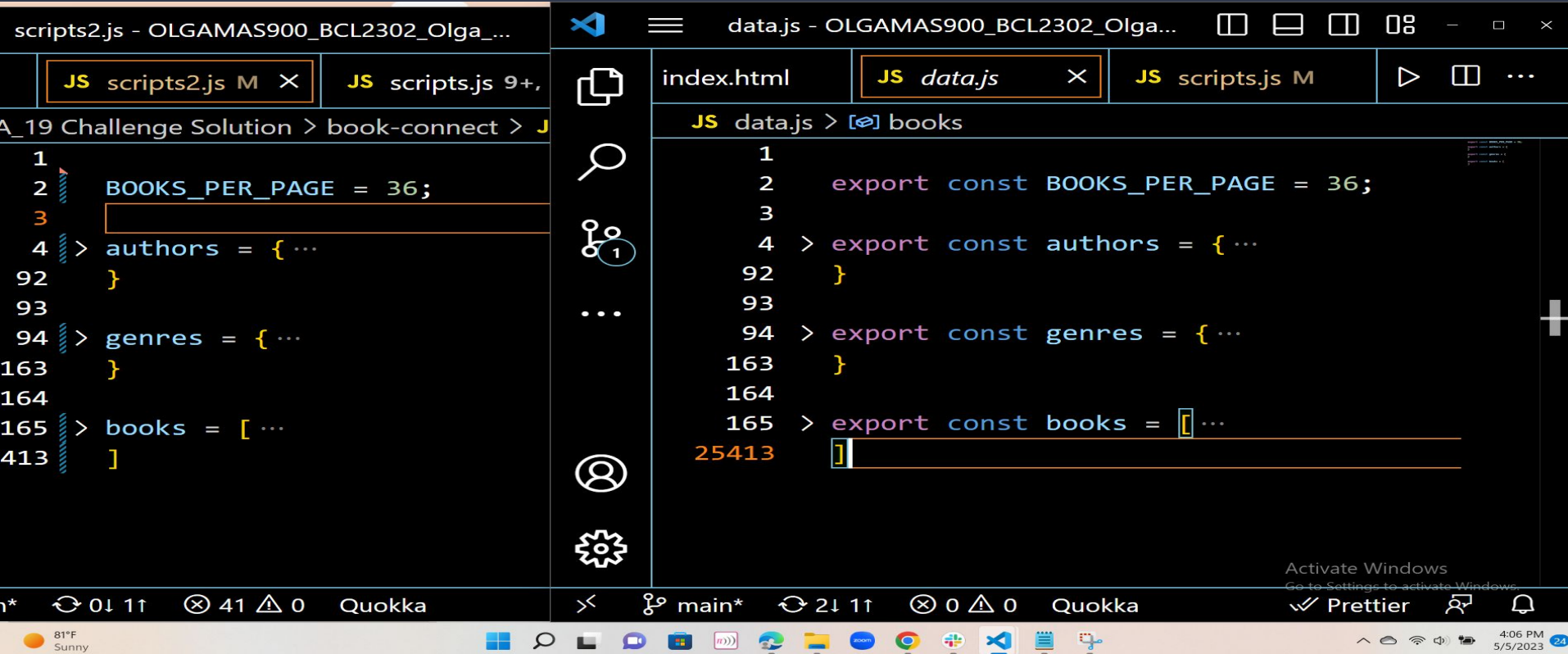
# HTML CHANGES

The image shows a side-by-side comparison of two HTML files in Visual Studio Code. The left editor shows 'scripts2.js' and the right editor shows 'index.html'. Both files are for a project named 'OLGAMAS900\_BCL2302\_Olga\_Maseng\_JWA19'. The 'index.html' file has been updated with several changes, which are highlighted in the right editor. A search bar at the top right of the right editor shows 'genre1' with 'No results'.

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="UTF-8">
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-scale=1.0">
7
8     <title>Book Connect</title>
9
10    <link rel="apple-touch-icon" sizes="180x180" href="/meta/apple-touch-icon.png">
11    <link rel="icon" type="image/png" sizes="32x32" href="/meta/favicon-32x32.png">
12    <link rel="icon" type="image/png" sizes="16x16" href="/meta/favicon-16x16.png">
13    <link rel="manifest" href="/meta/manifest.json">
14    <link rel="mask-icon" href="/meta/safari-pinned-tab.svg" color="#0096ff">
15    <link rel="shortcut icon" href="/meta/favicon.ico">
16    <meta name="msapplication-TileColor" content="#0a0a14">
17    <meta name="msapplication-config" content="/meta/browserconfig.xml">
18    <meta name="theme-color" content="#0a0a14">
19
20    <link rel="stylesheet" href="/styles.css" />
21    <link rel="preconnect" href="https://fonts.googleapis.com" />
22    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin />
23
24    <link
25      href="https://fonts.googleapis.com/css2?family=Roboto:wght@500;700&display=swap"
26      rel="stylesheet"
27    />
28
29    <script src="/scripts.js"></script>
30    <script src="/data.js"></script>
31  </head>
32  <body>
33
34    <header class="header">
35      <div class="header inner">
```

Search: genre1 No results

# DATA.JS CHANGES



The image shows a side-by-side comparison of a JavaScript file named `data.js` in Visual Studio Code. The left pane shows the original code, and the right pane shows the modified code with changes highlighted in orange. The changes include adding an `export const` keyword to the `BOOKS_PER_PAGE` and `books` assignments, and adding an `export const` keyword to the `genres` assignment. The `books` array is also modified to include a new element.

**Left Pane (Original Code):**

```
1
2 BOOKS_PER_PAGE = 36;
3
4 > authors = { ...
92 }
93
94 > genres = { ...
163 }
164
165 > books = [ ...
413 ]
```

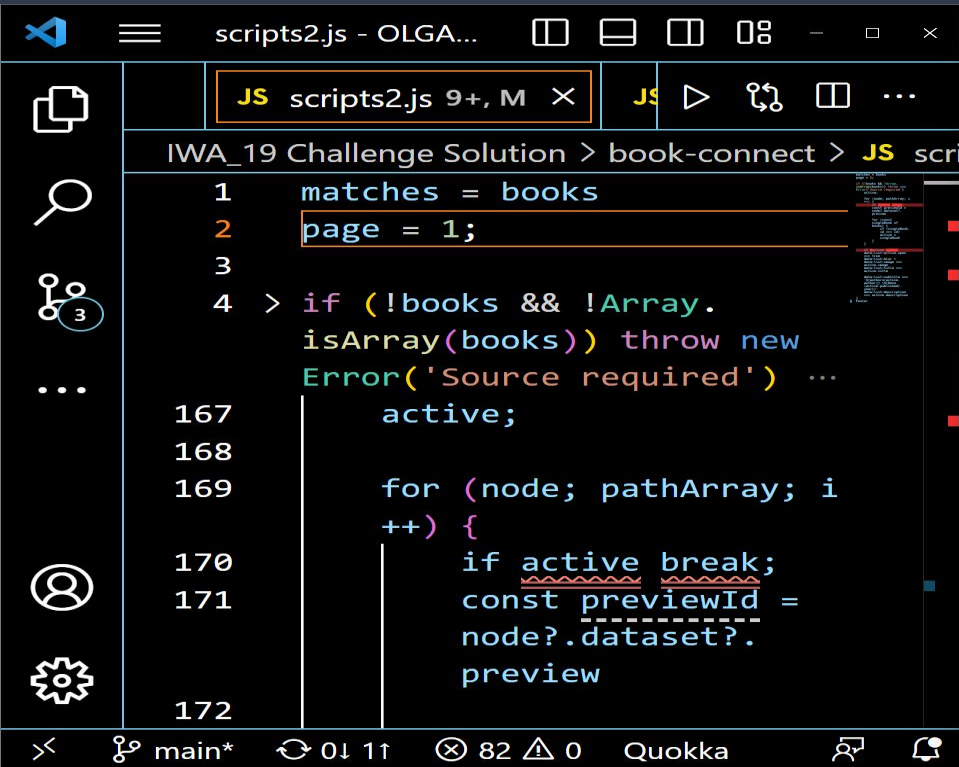
**Right Pane (Modified Code):**

```
1
2 export const BOOKS_PER_PAGE = 36;
3
4 > export const authors = { ...
92 }
93
94 > export const genres = { ...
163 }
164
165 > export const books = [ ...
25413 ]
```

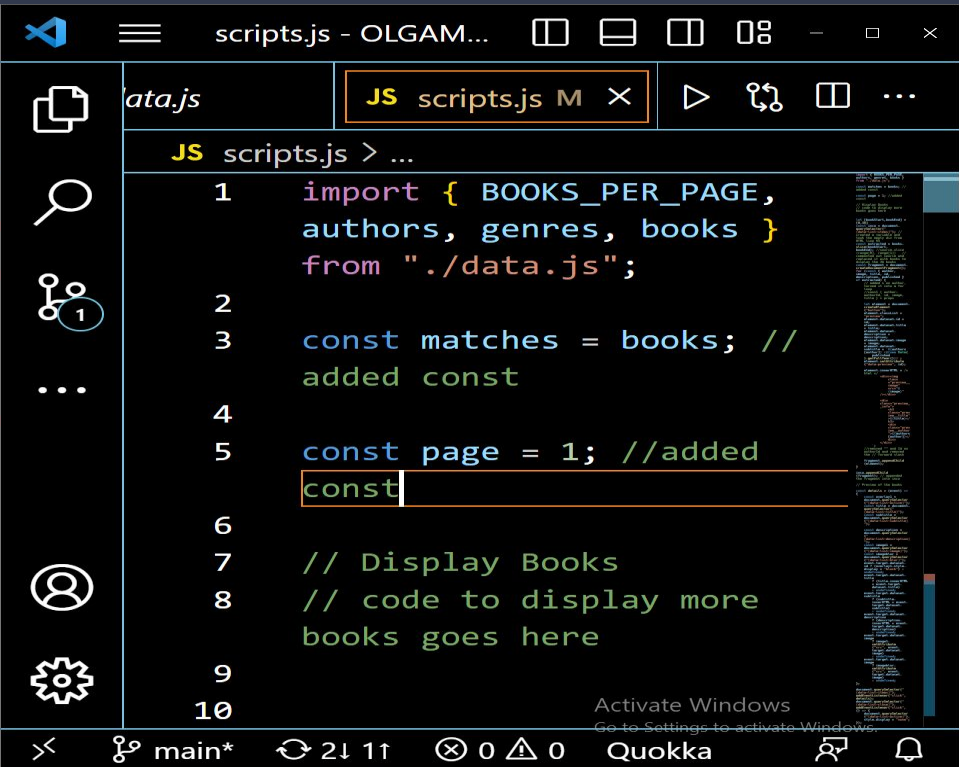
**VS Code Interface:**

- Top bar: `data.js - OLGAMAS900_BCL2302_Olga...`
- Tab bar: `index.html`, `JS data.js` (active), `JS scripts.js M`
- Left sidebar: Explorer, Search, Source Control, Run and Debug, Extensions
- Bottom status bar: `main*`, `Quokka`, `Prettier`, `4:06 PM 5/5/2023`

# SCRIPTS.js CHANGES



```
1 matches = books
2 page = 1;
3
4 > if (!books && !Array.
  isArray(books)) throw new
  Error('Source required') ...
167 active;
168
169 for (node; pathArray; i
  ++ ) {
170   if active break;
171   const previewId =
    node?.dataset?.
    preview
172
```



```
1 import { BOOKS_PER_PAGE,
  authors, genres, books }
  from "../data.js";
2
3 const matches = books; //
  added const
4
5 const page = 1; //added
  const
6
7 // Display Books
8 // code to display more
  books goes here
9
10
```



# SCRIPTS.js CHANGES cont....

```
scripts2.js - OLGAMAS900_BCL2302_Olga_Maseng_IWA...
JS scripts2.js 9+, M X JS scripts.js 9+, M index.html M
IWA_19 Challenge Solution > book-connect > JS scripts2.js > ...
6
7 day = {
8   dark: '10, 10, 20',
9   light: '255, 255, 255',
10 }
11
12 night = {
13   dark: '255, 255, 255',
14   light: '10, 10, 20',
15 }
16
17 fragment = document.createDocumentFragment()
18 const extracted = books.slice(0, 36)
19
20 for ({ author, image, title, id }; extracted; i++) {
21   const preview = createPreview({
22     author,
23     id,
24     image,
25     title
26   })
27   fragment.appendChild(preview)
28 }
29
30 data-list-items.appendChild(fragment)
31
32 genres = document.createDocumentFragment()
33 element = document.createElement('option')
34 element.value = 'any'
35
```

```
scripts.js - OLGAMAS900_BCL2302_Olga_Maseng_IWA...
index.html JS data.js JS scripts.js M X
JS scripts.js > ...
80
81 //Dark mode and light mode
82
83 const day = {
84   //added const
85   dark: "10, 10, 20",
86   light: "255, 255, 255",
87 };
88
89 const night = {
90   dark: "255, 255, 255",
91   light: "10, 10, 20",
92 };
93
94 const settingOverlay = document.querySelector("[data-header-settings]");
95 settingOverlay.addEventListener("click", (event) => {
96   document.querySelector("[data-settings-overlay]").
97     style.display = "block";
98 });
99
100 const theme = document.querySelector("[data-settings-theme]");
101 const saveButton = document.querySelector(
102   "body > dialog:nth-child(5) > div > div > button.
103     overlay__button.overlay__button_primary"
104 );
105 saveButton.addEventListener("click", (event) => {
106   event.preventDefault();
107   if (theme.value === "day") {
108     // ...
109   }
110 }
```



# SCRIPTS.js CHANGES cont....

```
scripts2.js - OLGAMAS900_BCL2302_Olga_Maseng_IWA...
JS scripts2.js 9+, M X JS scripts.js 9+, M index.html M
IWA_19 Challenge Solution > book-connect > JS scripts2.js > ...

76
77 data-search-cancel.click() { data-search-overlay.open ===
false }
78 data-settings-cancel.click() { querySelect
(data-settings-overlay).open === false }
79 data-settings-form.submit() { actions.settings.submit }
80 data-list-close.click() { data-list-active.open === false }
81
82 data-list-button.click() {
83   document.querySelector([data-list-items]).appendChild
(createPreviewsFragment(matches, page x
BOOKS_PER_PAGE, {page + 1} x BOOKS_PER_PAGE))
84   actions.list.updateRemaining()
85   page = page + 1
86 }
87
88 data-header-search.click() {
89   data-search-overlay.open === true ;
90   data-search-title.focus();
91 }
92
93 data-search-form.click(filters) {
94   preventDefault()
95   const formData = new FormData(event.target)
96   const filters = Object.fromEntries(formData)
97   result = []
98
99   for (book; booksList; i++) {
100     titleMatch = filters.title.trim() == '' && book.
title.toLowerCase().includes(filters.title.
```

```
scripts.js - OLGAMAS900_BCL2302_Olga_Maseng_IWA...
index.html JS data.js JS scripts.js M X
JS scripts.js > ...

123
124 // cancel button on theme
125
126 const dataSettingsCancel = document.querySelector("
[data-settings-cancel]");
127 dataSettingsCancel.addEventListener("click", (event) => {
128   document.querySelector("[data-settings-overlay]").
style.display = "none";
129 });
130
131 // Show More Button
132
133 const moreBooks = document.querySelector("
[data-list-button]"); // created a variable and called
data-list-button from the DOM
134 const showMore = page * BOOKS_PER_PAGE; /* Show more */ //
moved it to the line below and removed the = before.
removed books and replaced with matches so that it can get
total number of books
135
136 moreBooks.disabled = !(matches.length - showMore > 0); //
replaced data-list-button with the variable I just
created, replaced [page * BOOKS_PER_PAGE] with showMore on
this code block
137
138 moreBooks.innerHTML = /* html */ `
139   <span>Show more</span>
140   <span class="list_remaining">${matches.length -
showMore > 0 ? matches.length - showMore : 0}</span>
141   </span>
142 `
```

# SCRIPTS.js CHANGES cont....

The image displays two side-by-side screenshots of a code editor, likely Visual Studio Code, showing JavaScript code changes in two files: `scripts2.js` and `scripts.js`.

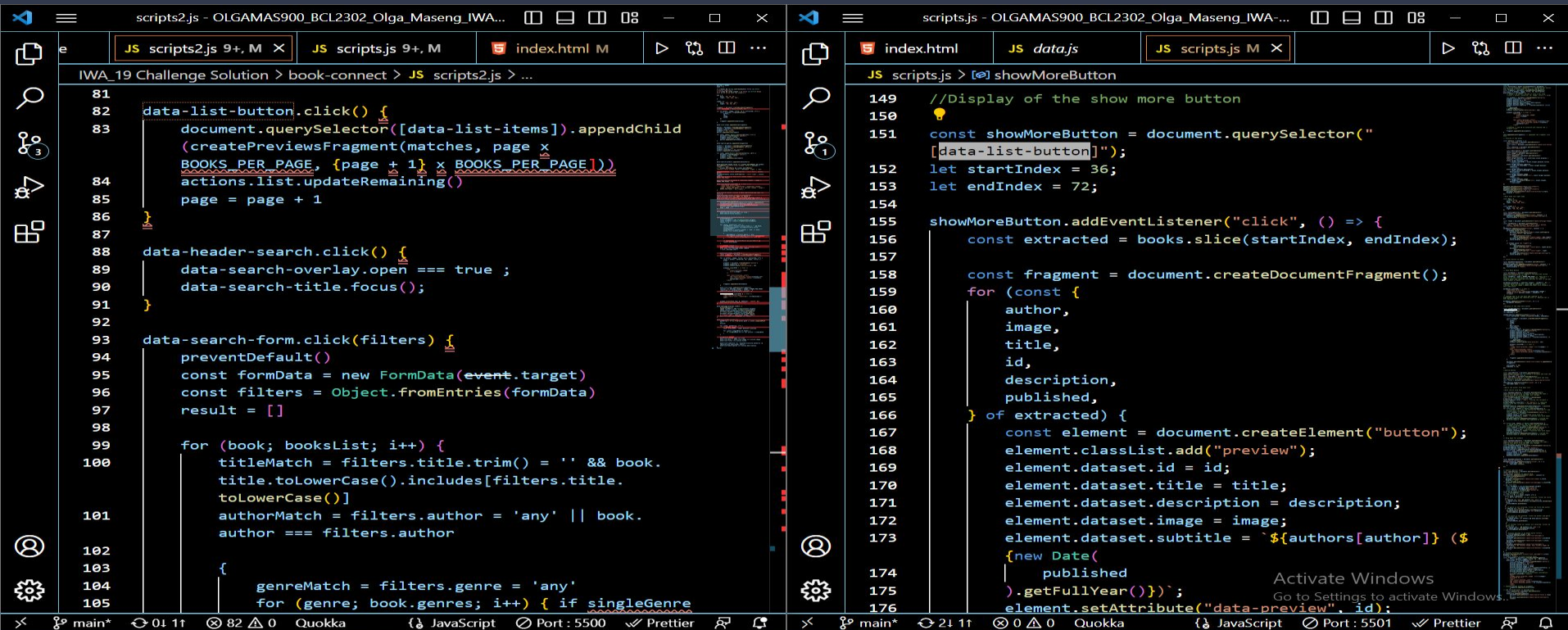
**Left Screenshot (scripts2.js):**

- File Explorer: `scripts2.js 9+, M`, `JS scripts.js 9+, M`, `index.html M`.
- Code Editor: `IWA_19 Challenge Solution > book-connect > JS scripts2.js > ...`
- Code Snippets:
  - Line 81: `data-list-button.click() {`
  - Line 82: `document.querySelector([data-list-items]).appendChild`
  - Line 83: `(createPreviewsFragment(matches, page x`
  - Line 84: `BOOKS_PER_PAGE, {page + 1} x BOOKS_PER_PAGE));`
  - Line 85: `actions.list.updateRemaining()`
  - Line 86: `page = page + 1`
  - Line 87: `}`
  - Line 88: `data-header-search.click() {`
  - Line 89: `data-search-overlay.open === true ;`
  - Line 90: `data-search-title.focus();`
  - Line 91: `}`
  - Line 92: `data-search-form.click(filters) {`
  - Line 93: `preventDefault()`
  - Line 94: `const formData = new FormData(event.target)`
  - Line 95: `const filters = Object.fromEntries(formData)`
  - Line 96: `result = []`
  - Line 97: `for (book; booksList; i++) {`
  - Line 98: `titleMatch = filters.title.trim() = '' && book.`
  - Line 99: `title.toLowerCase().includes(filters.title.`
  - Line 100: `toLowerCase())`
  - Line 101: `authorMatch = filters.author = 'any' || book.`
  - Line 102: `author === filters.author`
  - Line 103: `{`
  - Line 104: `genreMatch = filters.genre = 'any'`
  - Line 105: `for (genre; book.genres; i++) { if singleGenre`

**Right Screenshot (scripts.js):**

- File Explorer: `index.html`, `JS data.js`, `JS scripts.js M`.
- Code Editor: `JS scripts.js > [dataSettingsCancel]`
- Code Snippets:
  - Line 130: `// Show More Button`
  - Line 131: `const moreBooks = document.querySelector("`
  - Line 132: `[data-list-button]); // created a variable and called`
  - Line 133: `data-list-button from the DOM`
  - Line 134: `const showMore = page * BOOKS_PER_PAGE; /* Show more */ //`
  - Line 135: `moved it to the line below and removed the = before.`
  - Line 136: `removed books and replaced with matches so that it can get`
  - Line 137: `total number of books`
  - Line 138: `moreBooks.disabled = !(matches.length - showMore > 0); //`
  - Line 139: `replaced data-list-button with the variable I just`
  - Line 140: `created, replaced [page * BOOKS_PER_PAGE] with showMore on`
  - Line 141: `this code block`
  - Line 142: `moreBooks.innerHTML = /* html */``
  - Line 143: `<span>Show more</span>`
  - Line 144: `<span class="list_remaining">${matches.length -`
  - Line 145: `showMore > 0 ? matches.length - showMore : 0`
  - Line 146: `</span>`
  - Line 147: ``;`
  - Line 148: `// removed the () on the main and removed [] on`
  - Line 149: `page*BOOKS_PER_PAGE and replaced with (). Removed the []`
  - Line 150: `and replaced with ```
  - Line 151: `moreBooks.addEventListener("click", () => {`
  - Line 152: `moreBooks.focus();`
  - Line 153: `});`

# SCRIPTS.js CHANGES cont....



The image displays two side-by-side screenshots of a code editor, likely Visual Studio Code, showing JavaScript code changes in two files: `scripts2.js` and `scripts.js`.

**Left Screenshot (scripts2.js):**

- Line 81: `data-list-button.click()`
- Line 82: `{`
- Line 83: `document.querySelector([data-list-items]).appendChild`
- Line 84: `(createPreviewsFragment(matches, page x`
- Line 85: `BOOKS PER PAGE, {page + 1} x BOOKS PER PAGE))`
- Line 86: `actions.list.updateRemaining()`
- Line 87: `page = page + 1`
- Line 88: `}`
- Line 89: `data-header-search.click()`
- Line 90: `{`
- Line 91: `data-search-overlay.open === true ;`
- Line 92: `data-search-title.focus();`
- Line 93: `}`
- Line 94: `data-search-form.click(filters)`
- Line 95: `{`
- Line 96: `preventDefault()`
- Line 97: `const formData = new FormData(event.target)`
- Line 98: `const filters = Object.fromEntries(formData)`
- Line 99: `result = []`
- Line 100: `for (book; booksList; i++) {`
- Line 101: `titleMatch = filters.title.trim() == '' && book.`
- Line 102: `title.toLowerCase().includes(filters.title.`
- Line 103: `toLowerCase())`
- Line 104: `authorMatch = filters.author == 'any' || book.`
- Line 105: `author == filters.author`
- Line 106: `{`
- Line 107: `genreMatch = filters.genre == 'any'`
- Line 108: `for (genre; book.genres; i++) { if singleGenre`
- Line 109: `genreMatch == genre`
- Line 110: `const element = document.createElement("button");`
- Line 111: `element.classList.add("preview");`
- Line 112: `element.dataset.id = id;`
- Line 113: `element.dataset.title = title;`
- Line 114: `element.dataset.description = description;`
- Line 115: `element.dataset.image = image;`
- Line 116: `element.dataset.subtitle = `${authors[author]} ($`
- Line 117: `{new Date(`
- Line 118: `| published`
- Line 119: `).getFullYear()}`;`
- Line 120: `element.setAttribute("data-preview", id);`
- Line 121: `element.appendChild(fragment);`
- Line 122: `data-list-items.appendChild(element);`
- Line 123: `}`
- Line 124: `}`

**Right Screenshot (scripts.js):**

- Line 149: `//Display of the show more button`
- Line 150: `const showMoreButton = document.querySelector("data-list-button");`
- Line 151: `let startIndex = 36;`
- Line 152: `let endIndex = 72;`
- Line 153: `showMoreButton.addEventListener("click", () => {`
- Line 154: `const extracted = books.slice(startIndex, endIndex);`
- Line 155: `const fragment = document.createDocumentFragment();`
- Line 156: `for (const {`
- Line 157: `author,`
- Line 158: `image,`
- Line 159: `title,`
- Line 160: `id,`
- Line 161: `description,`
- Line 162: `published,`
- Line 163: `} of extracted) {`
- Line 164: `const element = document.createElement("button");`
- Line 165: `element.classList.add("preview");`
- Line 166: `element.dataset.id = id;`
- Line 167: `element.dataset.title = title;`
- Line 168: `element.dataset.description = description;`
- Line 169: `element.dataset.image = image;`
- Line 170: `element.dataset.subtitle = `${authors[author]} ($`
- Line 171: `{new Date(`
- Line 172: `| published`
- Line 173: `).getFullYear()}`;`
- Line 174: `element.setAttribute("data-preview", id);`
- Line 175: `element.appendChild(fragment);`
- Line 176: `data-list-items.appendChild(element);`



# SCRIPTS.js CHANGES cont....

```
scripts2.js - OLGAMAS900_BCL2302_Olga_Maseng_IWA...
JS scripts2.js 9+, M X JS scripts.js 9+, M index.html M
IWA_19 Challenge Solution > book-connect > JS scripts2.js > ...

88 data-header-search.click() {
89   data-search-overlay.open === true ;
90   data-search-title.focus();
91 }
92
93 data-search-form.click(filters) {
94   preventDefault()
95   const formData = new FormData(event.target)
96   const filters = Object.fromEntries(formData)
97   result = []
98
99   for (book; booksList; i++) {
100     titleMatch = filters.title.trim() === '' && book.
      title.toLowerCase().includes(filters.title.
      toLowerCase())
101     authorMatch = filters.author === 'any' || book.
      author === filters.author
102
103     {
104       genreMatch = filters.genre === 'any'
105       for (genre; book.genres; i++) { if singleGenre
        = filters.genre { genreMatch === true }}}
106
107     if titleMatch && authorMatch && genreMatch =>
      result.push(book)
108
109   }
110
111   if display.length < 1
112     data-list-message.class.add('list message show')
```

```
scripts.js - OLGAMAS900_BCL2302_Olga_Maseng_IWA...
index.html JS data.js JS scripts.js M X
JS scripts.js > ...

197 //Search Button
198
199 const searchButton = document.querySelector("
[data-header-search]"); // created a variable and took the
empty div from HTML line 65
200 const searchBar = document.querySelector("
[data-search-overlay]"); // created a variable and took
the empty div from HTML line 113
201
202 searchButton.addEventListener("click", () => {
203   searchBar.open = true;
204 });
205
206 //genre and author drop down list
207
208 //data search drop down
209
210 const dataSearchGenres = document.querySelector("
[data-search-genres]"); //named my variable the name i
used to call genre from the DOM, and changed
createDocument to querySelector
211 const allGenresOption = document.createElement
("option"); //renamed variable name
212 allGenresOption.value = "any"; //called the variable I
created above
213 allGenresOption.innerText = "All Genres"; // replaced
element with the variable I created above and added .
innerText
214 dataSearchGenres.appendChild(allGenresOption); //appended
the two variable I created or renamed above
```

# SCRIPTS.js CHANGES cont....

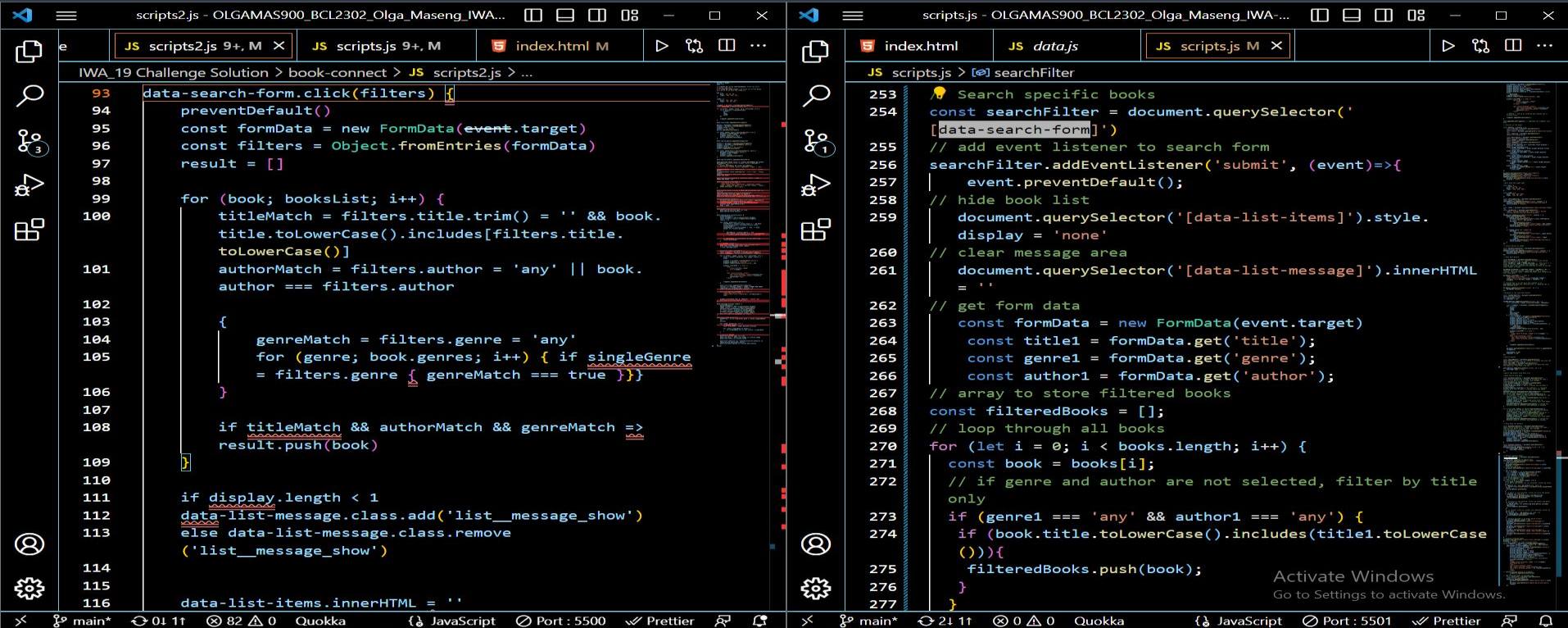
```
scripts2.js - OLGAMAS900_BCL2302_Olga_Maseng_IWA...
JS scripts2.js 9+, M X JS scripts.js 9+, M index.html M
IWA_19 Challenge Solution > book-connect > JS scripts2.js > ...

60
61 data-search-authors.appendChild(authors)
62
63 data-settings-theme.value === window.matchMedia && window.
matchMedia('(prefers-color-scheme: dark)').matches ?
'night' : 'day'
64 v = window.matchMedia && window.matchMedia('
(prefers-color-scheme: dark)').matches ? 'night' | 'day'
65
66 documentElement.style.setProperty('--color-dark', css[v].
dark);
67 documentElement.style.setProperty('--color-light', css[v].
light);
68 data-list-button = "Show more (books.length -
BOOKS_PER_PAGE)"
69
70 data-list-button.disabled = !(matches.length - [page *
BOOKS_PER_PAGE] > 0)
71
72 data-list-button.innerHTML = /* html */ [
73   '<span>Show more</span>',
74   '<span class="list_remaining"> (${matches.length -
[page * BOOKS_PER_PAGE] > 0 ? matches.length - [page *
BOOKS_PER_PAGE] : 0})</span>',
75 ]
76
77 data-search-cancel.click() { data-search-overlay.open ===
false }
78 data-settings-cancel.click() { querySelect
(data-settings-overlay).open === false }
```

```
scripts.js - OLGAMAS900_BCL2302_Olga_Maseng_IWA...
index.html JS data.js JS scripts.js M X
JS scripts.js > [dataSearchAuthors]

231 // Drop down for authors
232
233 const dataSearchAuthors = document.querySelector("
[data-search-authors]"); //named my variable the name i
used to call genre from the DOM, and changed
createDocument to querySelector
234 const allAuthorsOption = document.createElement("option");
235 allAuthorsOption.value = "any";
236 allAuthorsOption.innerText = "All Authors";
237 dataSearchAuthors.appendChild(allAuthorsOption);
238 for (const [id, names] of Object.entries(authors)) {
239   const element = document.createElement("option");
240   element.value = id;
241   element.innerText = names;
242   dataSearchAuthors.appendChild(element);
243 }
244
245 const dataSearchCancel = document.querySelector("
[data-search-cancel]");
246 dataSearchCancel.addEventListener("click", () => {
247   if ((searchBar.open = true)) {
248     searchBar.close();
249   }
250 });
251
252
253 // Search specific books
254 const searchFilter = document.querySelector('
[data-search-form]')
255 // add event listener to search form
```

# SCRIPTS.js CHANGES cont....



The image displays two side-by-side code editor windows, likely Visual Studio Code, showing JavaScript code for a book search application. The left window is titled 'scripts2.js - OLGAMAS900\_BCL2302\_Olga\_Maseng\_IWA...' and the right window is titled 'scripts.js - OLGAMAS900\_BCL2302\_Olga\_Maseng\_IWA...'. Both windows show a search filter function.

**Left Window (scripts2.js):**

```
93 data-search-form.click(filters) {
94   preventDefault()
95   const formData = new FormData(event.target)
96   const filters = Object.fromEntries(formData)
97   result = []
98
99   for (book; booksList; i++) {
100     titleMatch = filters.title.trim() === '' && book.
      title.toLowerCase().includes(filters.title.
      toLowerCase())
101     authorMatch = filters.author === 'any' || book.
      author === filters.author
102
103     {
104       genreMatch = filters.genre === 'any'
105       for (genre; book.genres; i++) { if singleGenre
        = filters.genre { genreMatch === true }}}
106
107     if titleMatch && authorMatch && genreMatch =>
      result.push(book)
108
109   }
110
111   if display.length < 1
112     data-list-message.class.add('list_message_show')
113   else data-list-message.class.remove
    ('list_message_show')
114
115   data-list-items.innerHTML = ''
116
```

**Right Window (scripts.js):**

```
253 // Search specific books
254 const searchFilter = document.querySelector('
[data-search-form]')
255 // add event listener to search form
256 searchFilter.addEventListener('submit', (event)=>{
257   event.preventDefault();
258   // hide book list
259   document.querySelector('[data-list-items]').style.
    display = 'none'
260   // clear message area
261   document.querySelector('[data-list-message]').innerHTML
    = ''
262   // get form data
263   const formData = new FormData(event.target)
264   const title1 = formData.get('title');
265   const genre1 = formData.get('genre');
266   const author1 = formData.get('author');
267   // array to store filtered books
268   const filteredBooks = [];
269   // loop through all books
270   for (let i = 0; i < books.length; i++) {
271     const book = books[i];
272     // if genre and author are not selected, filter by title
    only
273     if (genre1 === 'any' && author1 === 'any') {
274       if (book.title.toLowerCase().includes(title1.toLowerCase
        ())) {
275         filteredBooks.push(book);
276       }
277
```

Both windows show a status bar at the bottom with information like 'main\*', 'Port: 5500', and 'Prettier'. The right window also shows an 'Activate Windows' watermark.



# Displaying the App & Dev Tools

The screenshot shows a web browser window with the URL `127.0.0.1:5501/index.html?title=Harry+Potter&genre=any&author=any`. The page displays a list of books under the heading "Book Connect". The books listed are:

- Henry IV, Part 2 By William Shakespeare
- The Works of Henry David Thoreau By Henry David Thoreau
- King Henry IV, Part 1 By William Shakespeare
- Henry V By William Shakespeare

The Chrome DevTools interface is open, showing the "Elements" panel. The selected element is `<div class="header_inner">`. The "Styles" panel on the right shows the default styles for the `div` element, including `display: flex`, `align-items: center`, `justify-content: center`, `width: 100%`, `max-width: 70rem`, `padding: 0 1rem`, and `margin: 0 auto`.

The Windows taskbar at the bottom shows the date and time as 4:34 PM on 5/5/2023, along with various system icons and the weather (81°F Sunny).



THANK YOU