JavaScript For Web

Week 3, Lecture 4 - JavaScript in Web Development: Document Object Model Continued

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Today's Overview

- Demo: Web Dev Notes
- Tutorial: Asssignment 2, Exercise 3

DEMO: A Dynamic Web Dev Notes

From our previous lecture, we have a HTML/JavaScript demo app which display a lists of notes related to Web development. When we want to add a new note, we manually add new html element `<li>` to `index.html`

```
<!DOCTYPE html>
<html lang="en">
...
<body>
  ...
  <div class = "web-dev-notes">
    <h2>Web Dev Notes</h2>
    <ul>
      <li>Keep the browser inspector opened all the time!</li>
      <li>Take small steps</li>
      <li>Plan first before writing the code</li>
      ...
      <li>Avoid repeat yourself</li>
    </ul>
  </div>

  <script src="demo.js"></script>
</body>
</html>
```

Let's re-implement this app to a dynamic note list using JavaScript:

- we will store all notes in a string array in `js` file.
- we will generate html tags and display notes content using DOM.
- we will add/remove/modify notes contents by modifying the array in `js` file.

A Dynamic Web Dev Notes App: Initialize `index.html`

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>JavaScript For Web Demo</title>
</head>
<body>
  <div class="web-dev-notes-container"></div>
  <script src="index.js"></script>
</body>
</html>
```

- Create a `div` block for the entire component of web dev notes with a class name `web-dev-notes-containers`.
- We can have more components, for example, JavaScript notes later.

A Dynamic Web Dev Notes App: Initialize `index.js`

```
const WEB_DEV_NOTES_TITLE = "Web Dev Notes"

const WEB_DEV_NOTES = [
  "Keep the browser inspector opened all the time!",
  "Take small steps.",
  "Plan first before writing the code.",
  "Avoid repeat yourself.",
  "HTML: content & layout; CSS: style; JavaScript: interactive elements "
]
```

- Create a string variable `WEB_DEV_NOTES_TITLE` which stores the text content of web dev notes title.
- Create an array variable `WEB_DEV_NOTES` which stores all notes related to web development.

A Dynamic Web Dev Notes App: Step 1

- Get the web dev notes container using `querySelector()`
- Create a `h2` element for web dev notes title, add the text content, class name, and append to the container.

```
// index.js

// get the reference of web dev notes container
let container = document.querySelector('.web-dev-notes-container')

// create a h2 element for web dev notes title
let title = document.createElement('h2')

// add a new class for title element
title.classList.add('web-dev-notes-title')

// add text content to title element
title.textContent = WEB_DEV_NOTES_TITLE

// append the title to web dev notes container
container.append(title)
```

A Dynamic Web Dev Notes App: Step 2

- Adding notes to the container
- When we work with a list of item, it is ok to try display a single item first.

```
// index.js

// create a web dev notes list to display
let noteList = document.createElement('ul')
noteList.classList.add('web-dev-notes-list')

// create an item for the first note and append to noteList
let note = document.createElement('li')
note.textContent = WEB_DEV_NOTES[0]
noteList.append(note)

// append noteList to container
container.append(noteList)
```

A Dynamic Web Dev Notes App: Step 3

- Adding notes to the container
- Change the code and add a loop for all notes

```
// index.js

// create a web dev notes list to display
let noteList = document.createElement('ul')
noteList.classList.add('web-dev-notes-list')

// create note items iteratively and append to noteList
for(let i = 0; i < WEB_DEV_NOTES.length; i++) {
  let note = document.createElement('li')
  note.textContent = WEB_DEV_NOTES[i]
  noteList.append(note)
}

// append noteList to container
container.append(noteList)
```

A Dynamic Web Dev Notes App: Step 4

- Highlight the first note and make it as bold text

```
// create a web dev notes list to display
let noteList = document.createElement('ul')
noteList.classList.add('web-dev-notes-list')

// Highlight the first note
let note = document.createElement('li')
let boldText = document.createElement('b')
boldText.textContent = WEB_DEV_NOTES[0]
note.append(boldText)
noteList.append(note)

// create note items iteratively and append to noteList
for(let i = 1; i < WEB_DEV_NOTES.length; i++) {
  let note = document.createElement('li')
  note.textContent = WEB_DEV_NOTES[i]
  noteList.append(note)
}

// append noteList to container
container.append(noteList)
```

What's next

- Write everything into one or multiple function(s).
- We can run function(s) and reuse some blocks of code when we want to add different types of notes(e.g., JavaScript Notes, or more)

Thank you