Web Components Study Notes Getting Started with Polymer by Arshak Khachatrian

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Chapter 1

Web Components

Web Components is a new set of standards that we can use to create complex UI widgets and application pieces. One platform for creating Web Components is Polymer, developed by Google.

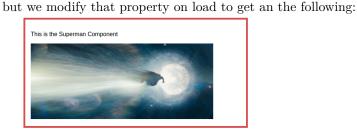
A Web Component contains elements that contain templates, styles, and logic, all encapsulated in that component. They have four specifications which are:

- Templates
- Shadow Dom
- Custom Elements
- HTML Imports

1.1 Templates

Templates are fragments of HTML for which the content is not loaded, until you get its content using Javascript without using AJAX, such content can be saved inside the <template> and retrieved later.

```
document.body.innerHTML = require("./superman.html") + document.body.innerHTML;
// Retrieve the markup
var supermanTemplate = document.querySelector('.superman');
var supermanContent = supermanTemplate.content;
// Add the img picture
var supermanPicture = document.createElement('img');
supermanPicture.classList.add('animated_superman');
supermanPicture.src = require ("../../assets/img/superman.png");
supermanPicture.width = 500;
supermanContent.querySelector('.boomshakalaka').appendChild(supermanPicture);
// Import it to the document, don't forget the 2nd argument
var result = document.importNode(supermanContent, true);
document.body.appendChild(result);
  Of course a component wouldn't be complete with some styling attached to
it:
.boomshakalaka {
  border: 5px solid rgba(200, 0, 0, 0.7);
  padding: 15px;
  margin: 15px;
}
.boomshakalaka .title {
  font-family: sans-serif;
```



1.2 Ways of adding templates

To pull this we are using webpack. The original image I'm using is 1361x561,

There are essentially four ways of adding templates

1.2.1 Hidden elements

Copy/Pasting it the hardcore way.

CONS: The browser loads unnecessary markup, and when pasted it wont load the images, video, audio.

1.2.2 Ajax all the things

CONS: Unnecessary noise. Pulling it by Ajax is downright a bad implementation. Somebody could inject bad code using Cross Site Script.

1.2.3 Use a local script template

CONS: Unnecessary noise when working

with strings. 1.2.4 Compiled templates

A Template engine handles it and you work with the string.

CONS: Unnecessary noise when working with strings.

1.3 Shadow DOM

The audio, video, a, input are de best examples to describe the functionality provided by the Shaodw DOM. Those elements are web components, and we don't see the internal implementation of these tags.

Chapter 2

The Second Chapter

of words should match the language.

2.1 Second Section

- 1. First item in a list
- 2. Second item in a list
- 3. Third item in a list

- 4. Fourth item in a list
- 5. Fifth item in a list

2.1.1 Second SubSection

- First item in a list
- Second item in a list
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- Fourth item in a list
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First item in a listSecond item in a listThird item in a list

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2 sub sub section

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$$\bar{x} = \frac{1}{n} \sum_{i=1}^{i=n} x_i = \frac{x_1 + x_2 + \dots + x_n}{n}$$

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$$\int_0^\infty e^{-\alpha x^2} dx = \frac{1}{2} \sqrt{\int_{-\infty}^\infty e^{-\alpha x^2}} dx \int_{-\infty}^\infty e^{-\alpha y^2} dy = \frac{1}{2} \sqrt{\frac{\pi}{\alpha}}$$

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$$x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{-p \pm \sqrt{p^2 - 4q}}{2}$$

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Chapter 3

The Third Chapter

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$$a\sqrt[n]{b} = \sqrt[n]{a^nb}$$

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The Fifth Chapter

5.1 Fifth Section

The Sixth Chapter

6.1 Sixth Section

The Seventh Chapter

7.1 Seventh Section

The Eigth Chapter

8.1 Eigth Section

The Ninth Chapter

9.1 Ninth Section

The Tenth Chapter

10.1 Tenth Section

The Eleventh Chapter

11.1 Eleventh Section

The Twelfth Chapter

12.1 Twelfth Section

The Thirteenth Chapter

13.1 Thirteenth Section

The Fourteenth Chapter

14.1 Fourteenth Section

The Fifthtenth Chapter

15.1 Fifthtenth Section