DOM Document Object Model

- Find / get
- change,
- add, or
- delete HTML elements.

DOM

- Find / get
- change,
- add, or
- delete HTML elements.

- DOM Methods - getElementById()
- DOM Properties = innerHTML

DOM

- Find / get

Methods

- Document.getElementById(id) - Find element by Id
- Document.getElementsByTagName(name) - Find elements by tag name
- Document.getElementsByClassName(name) - Find elements by className

DOM

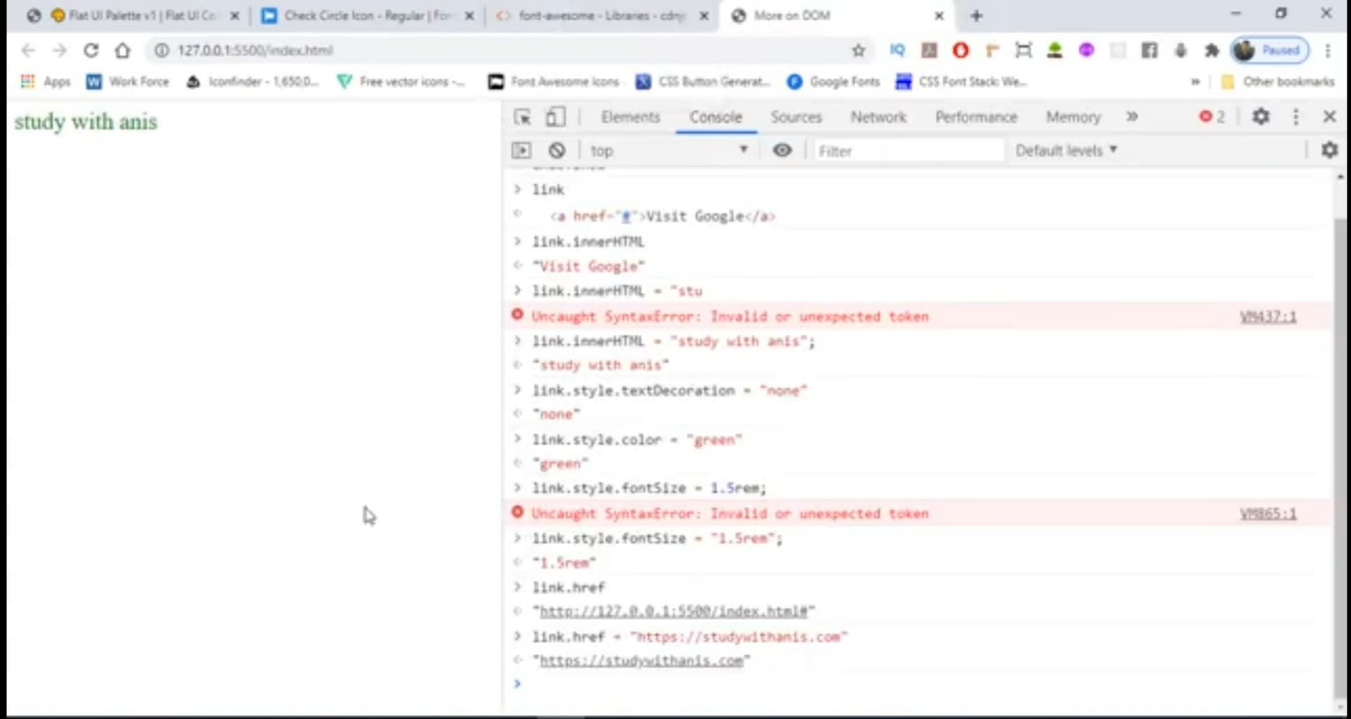
- Changing HTML Elements

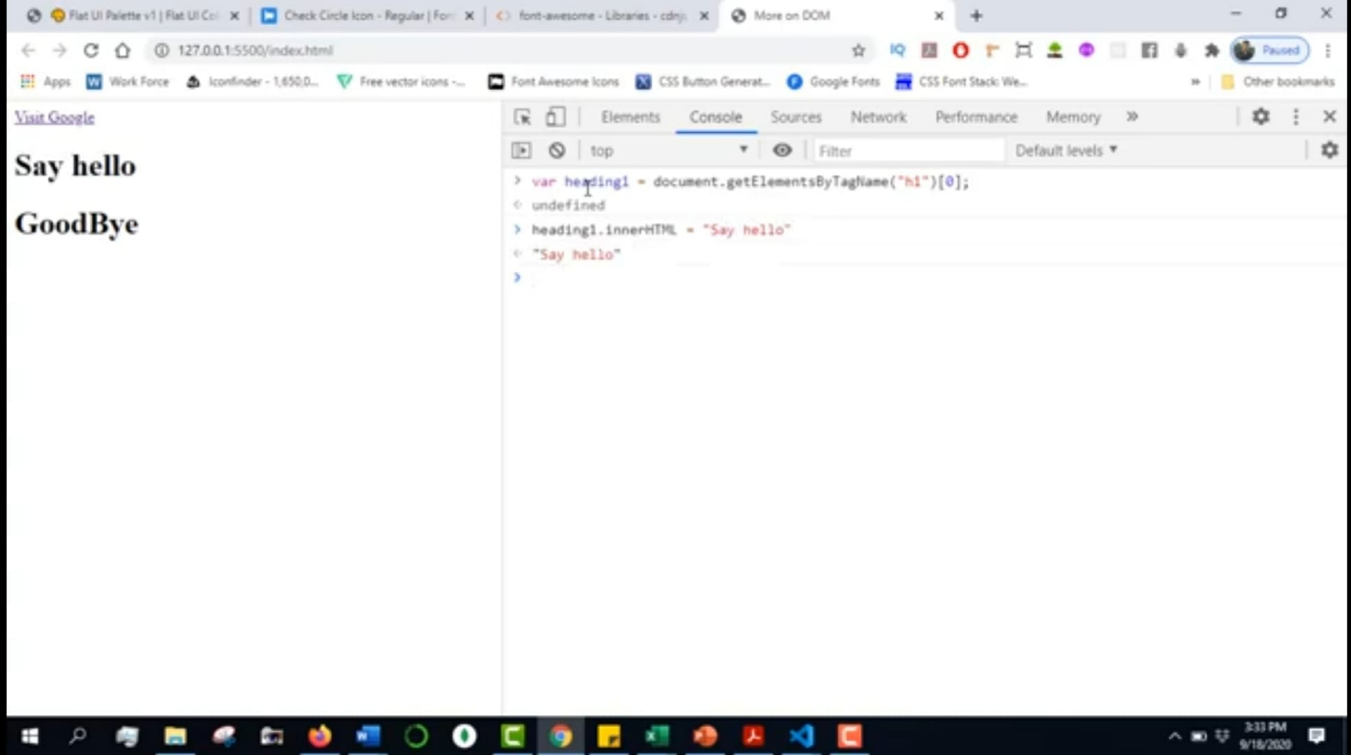
Property

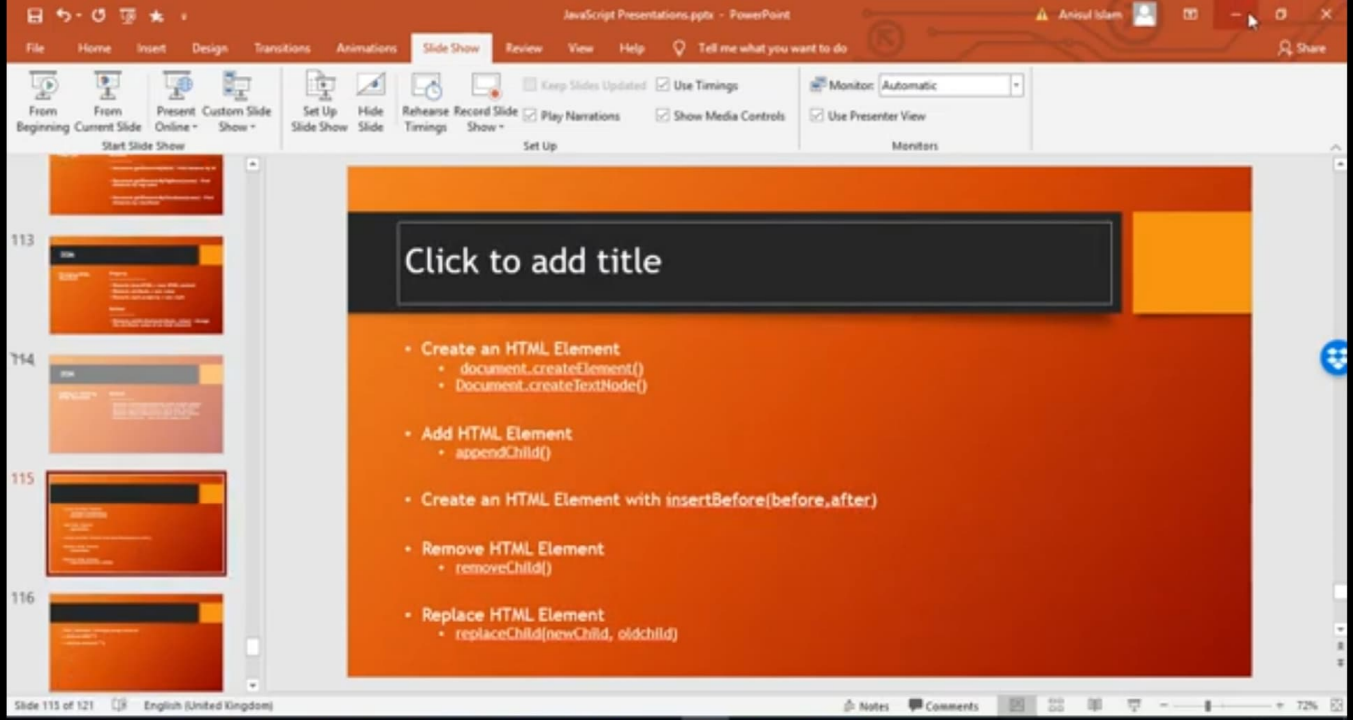
- Element.innerHTML = new HTML content
- Element.attribute = new value
- Element.style.property = new style

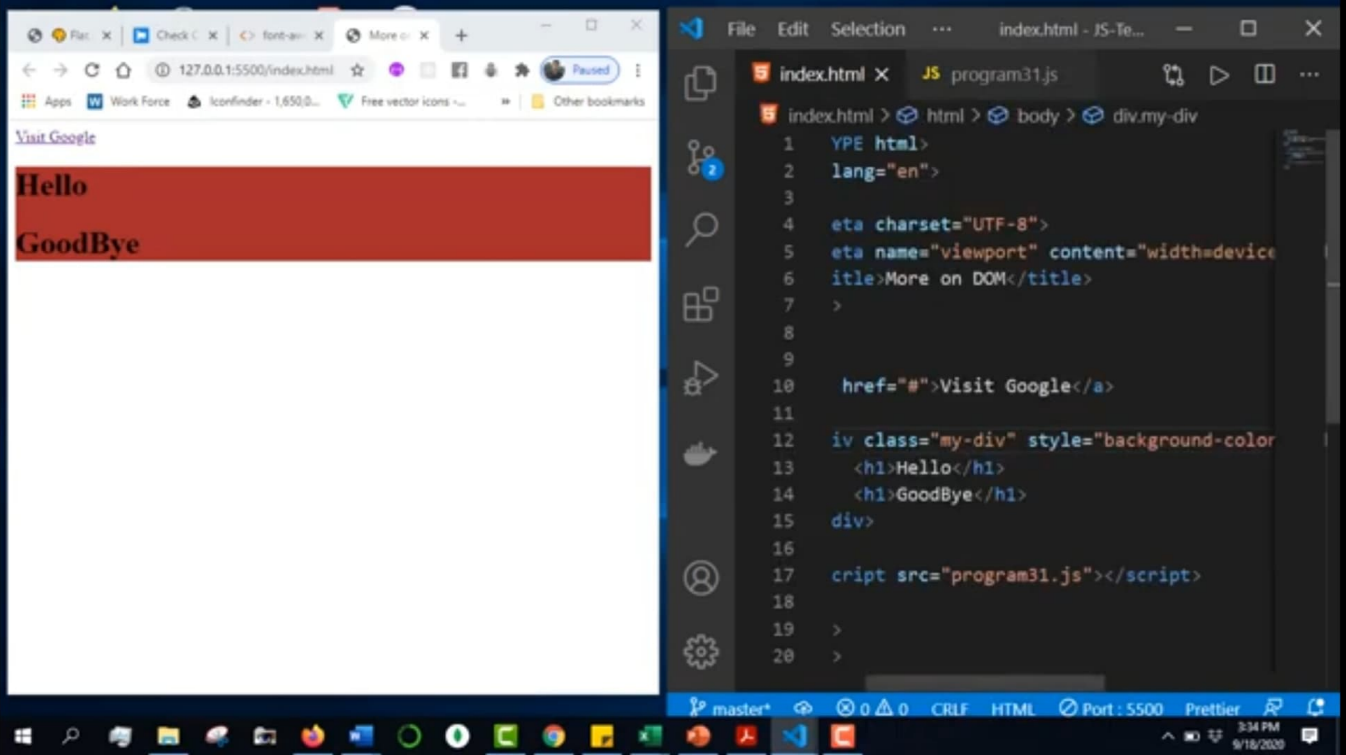
Method

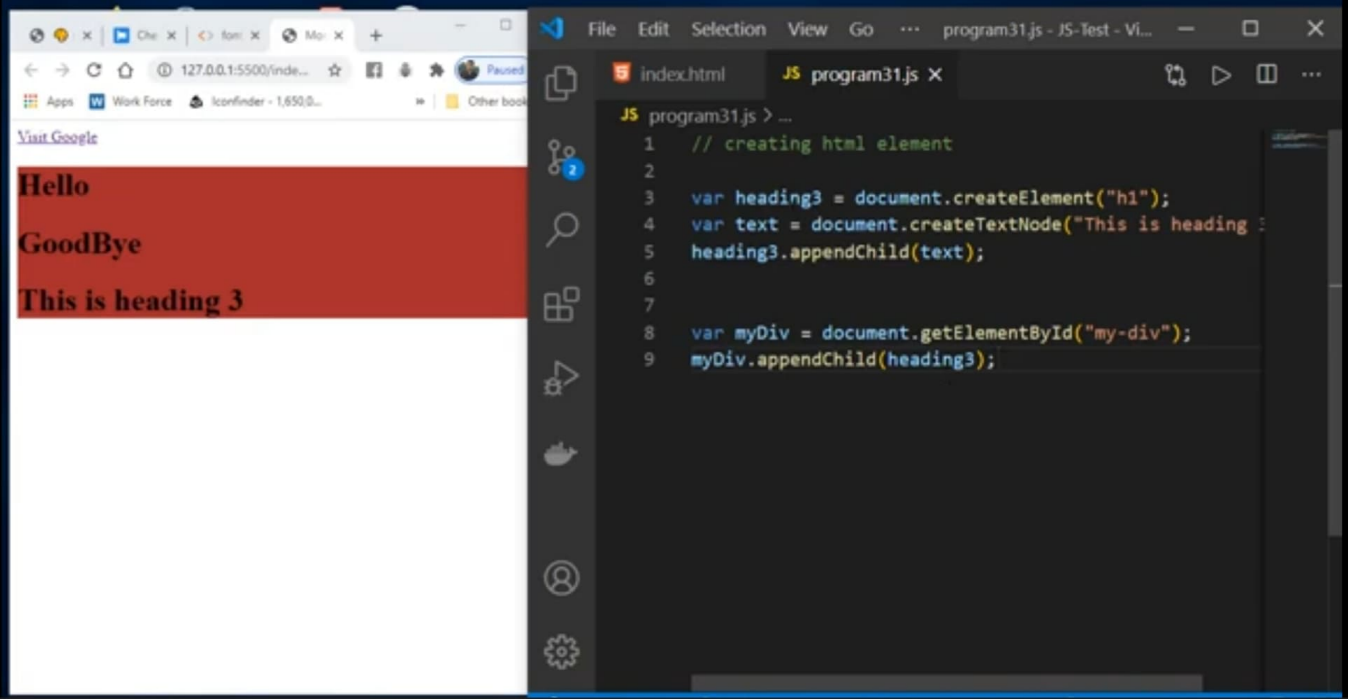
- Element.setAttribute(attribute, value) - change the attribute value of an html element


study with anis
Elements
Console
Sources
Network
Performance
Memory
top
Filter
Default levels
> link
Visit Google
> link.innerHTML
"Visit Google"
> link.innerHTML = "stu
Uncaught SyntaxError: Invalid or unexpected token
VM437:1
> link.innerHTML = "study with anis";
"study with anis"
> link.style.textDecoration = "none"
"none"
> link.style.color = "green"
"green"
> link.style.fontSize = 1.5rem;
Uncaught SyntaxError: Invalid or unexpected token
VM865:1
> link.style.fontSize = "1.5rem";
"1.5rem"
> link.href
"http://127.0.0.1:5500/index.html#"
> link.href = "https://studywithanis.com"
"https://studywithanis.com"


Flat UI Palette v1 | Flat UI Col
Check Circle Icon - Regular | Font
font-awesome - Libraries - cdnjs
More on DOM
127.0.0.1:5500/index.html
Paused
Apps
Work Force
Iconfinder - 1,650,0...
Free vector icons -...
Font Awesome Icons
CSS Button Generat...
Google Fonts
CSS Font Stack: We...
Other bookmarks
Visit Google
Say hello
GoodBye
Elements
Console
Sources
Network
Performance
Memory
top
Filter
Default levels
var heading1 = document.getElementsByTagName("h1")[0];
undefined
heading1.innerHTML = "Say hello"
"Say hello"
3:33 PM
9/18/2020

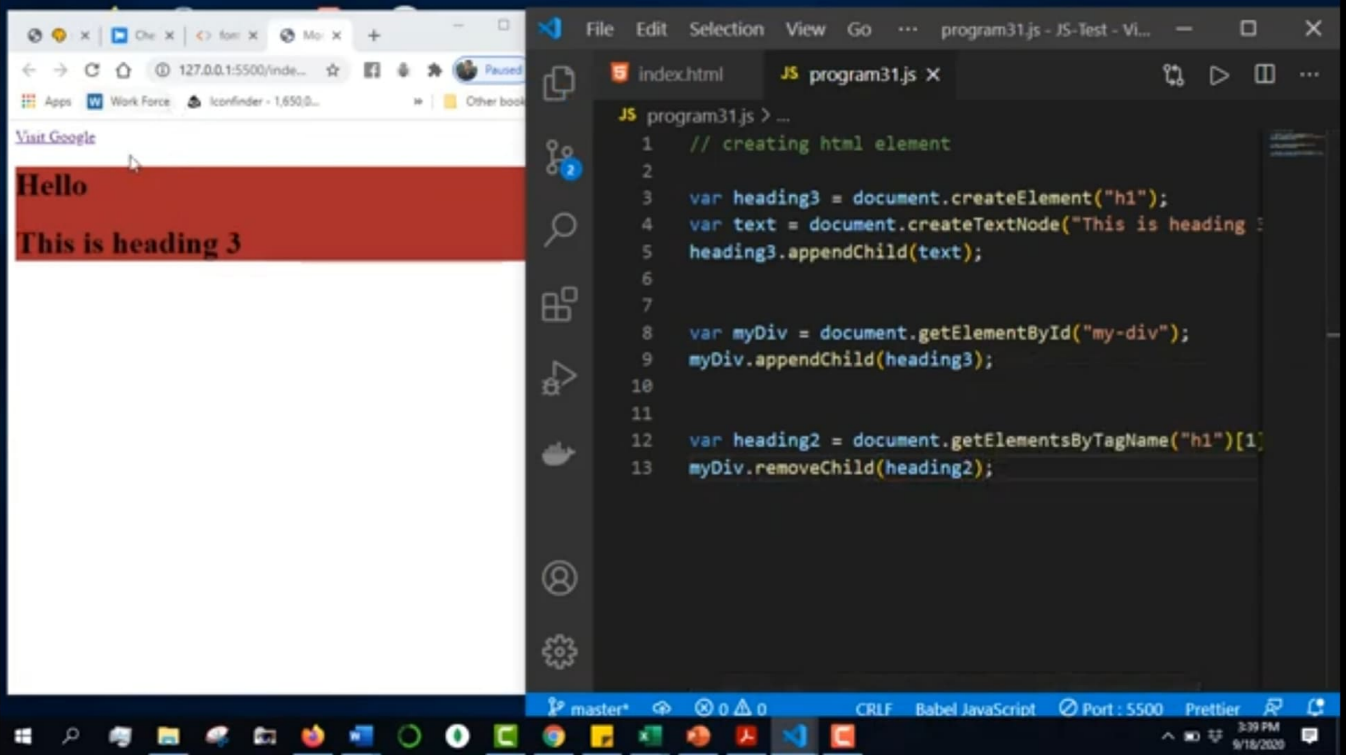

JavaScript Presentations.pptx - PowerPoint
Anisul Islam
File
Home
Insert
Design
Transitions
Animations
Slide Show
Review
View
Help
Tell me what you want to do
Share
From Beginning
From Current Slide
Present Online
Custom Slide Show
Start Slide Show
Set Up Slide Show
Hide Slide
Rehearse Timings
Record Slide Show
Keep Slides Updated
Play Narrations
Use Timings
Show Media Controls
Set Up
Monitor:
Automatic
Use Presenter View
Monitors
113
114
115
116
Click to add title
Create an HTML Element
document.createElement()
Document.createTextNode()
Add HTML Element
appendChild()
Create an HTML Element with insertBefore(before,after)
Remove HTML Element
removeChild()
Replace HTML Element
replaceChild(newChild, oldchild)
Slide 115 of 121
English (United Kingdom)
Notes
Comments
72%
3:33 PM
9/18/2020


127.0.0.1:5500/index.html
Paused
Apps
Work Force
Iconfinder - 1,650,0...
Free vector icons -...
Other bookmarks
Visit Google
Hello
GoodBye
File
Edit
Selection
index.html - JS-Te...
index.html
program31.js
index.html > html > body > div.my-div
YPE html>
lang="en">
eta charset="UTF-8">
eta name="viewport" content="width=device
itle>More on DOM</title>
>
href="#">Visit Google
iv class="my-div" style="background-color
<h1>Hello</h1>
<h1>GoodBye</h1>
div>
cript src="program31.js"></script>
>
>
master*
0 0
CRLF
HTML
Port : 5500
Prettier
3:34 PM
9/18/2020

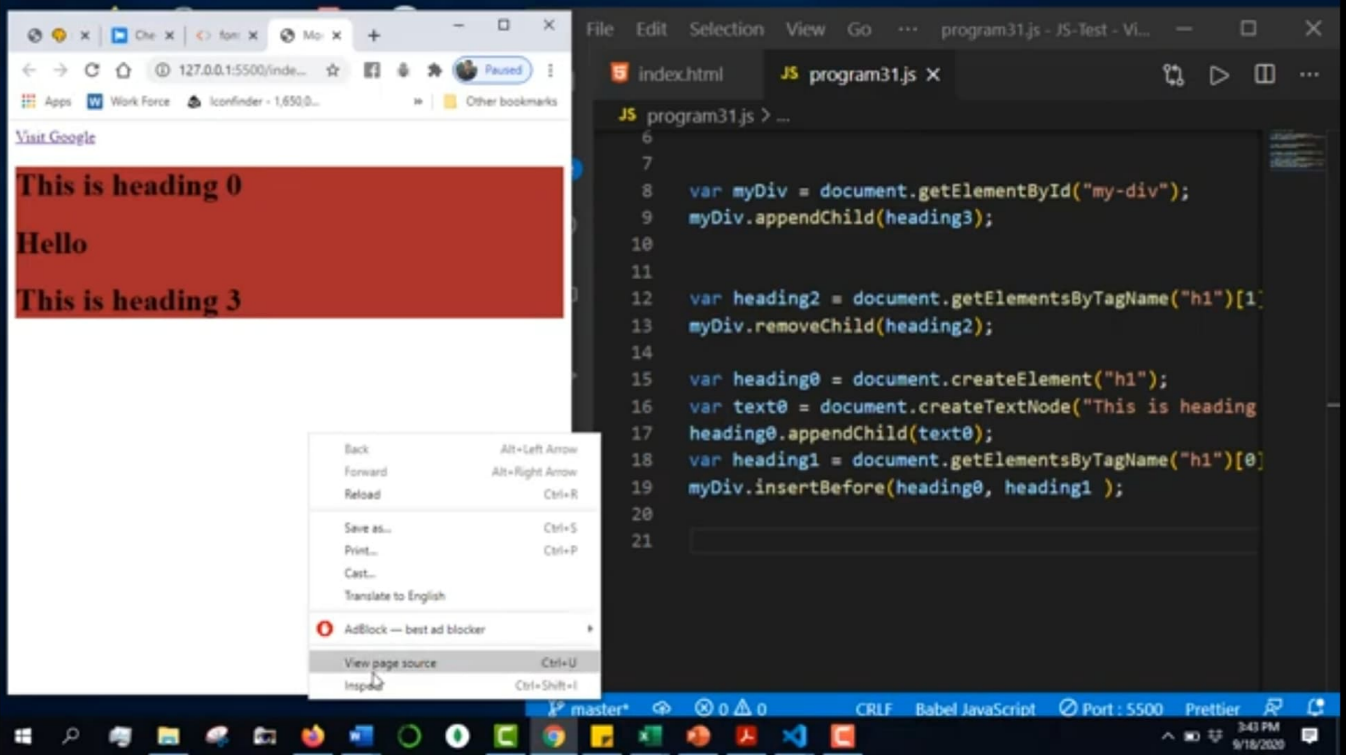


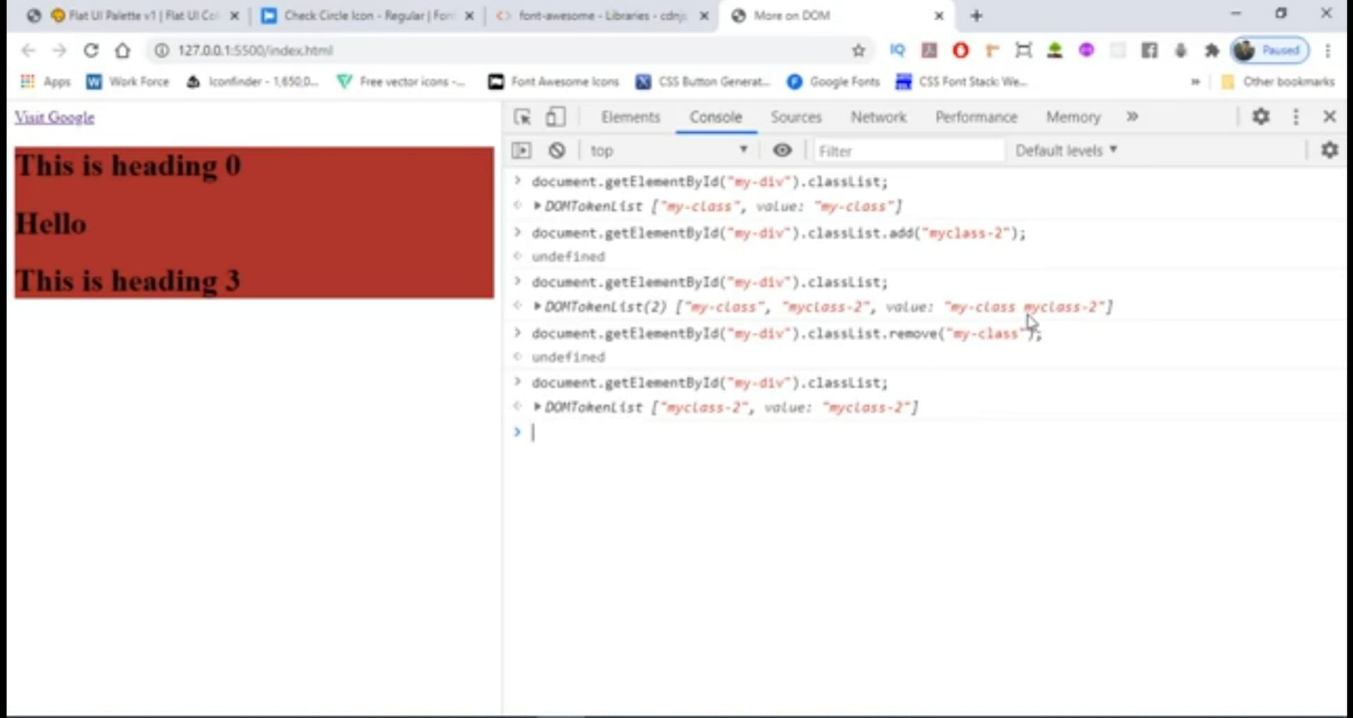
No connection

Remove Element


Visit Google
Hello
This is heading 3
File Edit Selection View Go ··· program31.js - JS-Test - Vi...
index.html
program31.js
program31.js > ...
// creating html element
var heading3 = document.createElement("h1");
var text = document.createTextNode("This is heading
heading3.appendChild(text);
var myDiv = document.getElementById("my-div");
myDiv.appendChild(heading3);
var heading2 = document.getElementsByTagName("h1")[1]
myDiv.removeChild(heading2);
master*
CRLF
Babel JavaScript
Port : 5500
Prettier

Add a child element
at upper section


Visit Google
This is heading 0
Hello
This is heading 3
Back Alt+Left Arrow
Forward Alt+Right Arrow
Reload Ctrl+R
Save as... Ctrl+S
Print... Ctrl+P
Cast...
Translate to English
AdBlock — best ad blocker
View page source Ctrl+U
Inspect Ctrl+Shift+I
File Edit Selection View Go
program31.js - JS-Test - Vi...
index.html
program31.js
var myDiv = document.getElementById("my-div");
myDiv.appendChild(heading3);
var heading2 = document.getElementsByTagName("h1")[1]
myDiv.removeChild(heading2);
var heading0 = document.createElement("h1");
var text0 = document.createTextNode("This is heading
heading0.appendChild(text0);
var heading1 = document.getElementsByTagName("h1")[0]
myDiv.insertBefore(heading0, heading1);
master*
CRLF
Babel JavaScript
Port : 5500
Prettier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CSS Button Generat...
Google Fonts
CSS Font Stack: We...
Other bookmarks
Visit Google
This is heading 0
Hello
This is heading 3
Elements
Console
Sources
Network
Performance
Memory
top
Filter
Default levels
document.getElementById("my-div").classList;
DOMTokenList ["my-class", value: "my-class"]
document.getElementById("my-div").classList.add("myclass-2");
undefined
document.getElementById("my-div").classList;
DOMTokenList(2) ["my-class", "myclass-2", value: "my-class myclass-2"]
document.getElementById("my-div").classList.remove("my-class");
undefined
document.getElementById("my-div").classList;
DOMTokenList ["myclass-2", value: "myclass-2"]
3:44 PM
9/18/2020

Traversing & manipulating

- Manipulating - creating, inserting, removing elements
- Traversing - selecting an element from other elements

DOM Tree

How to select DOM elements

selecting DOM Elements

1. getElementById,
2. getElementsByClassName,
3. getElementsByTagName,
4. querySelector(),
5. querySelectorAll(),

DOM Tree

3 direction for traversing

1. Downwards
   1. querySelector() / querySelectorAll()
   2. children
2. Upwards
   1. parentElement
3. Sideways
   1. nextElementSibling, previousElementSibling
   2. parentElement + children + index

DOM Tree

1. Downwards - querySelector / querySelectorAll

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>Document</title>
    </head>
    <body>
        <ol class="students-list">
            <li class="student-a">student A</li>
            <li class="student-b">student B</li>
            <li class="student-c">student C</li>
        </ol>

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

```
const studentsList = document.querySelector(".students-list");
const studentA = document.querySelector(".student-a");
```

```
const studentsList = document.querySelector(".students-list");
const studentA = studentsList.querySelector(".student-a");
```

1. Downwards - childrens

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>Document</title>
    </head>
    <body>
        <ol class="students-list">
            <li class="student-a">student A</li>
            <li class="student-b">student B</li>
            <li class="student-c">student C</li>
        </ol>

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

```
const studentsList = document.querySelector(".students-list");
// studentsList.children
const studentA = studentsList.children[0];
```

2. Upwards - parentElement

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>Document</title>
    </head>
    <body>
        <ol class="students-list">
            <li class="student-a">student A</li>
            <li class="student-b">student B</li>
            <li class="student-c">student C</li>
        </ol>

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

```
const studentA = document.querySelector("li");
const studentsList = studentA.parentElement;
```

3. sideways - nextElementSibling, previousElementSibling

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>Document</title>
    </head>
    <body>
        <ol class="students-list">
            <li class="student-a">student A</li>
            <li class="student-b">student B</li>
            <li class="student-c">student C</li>
        </ol>

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

```
const studentA = document.querySelector("li");
const studentB = studentA.nextElementSibling;
const studentC = studentB.nextElementSibling;
```

```
const studentC = document.querySelectorAll("li")[2];
const studentB = studentC.previousElementSibling;
```

3. sideways - parentElement + children + index

```html
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>Document</title>
    </head>
    <body>
        <ol class="students-list">
            <li class="student-a">student A</li>
            <li class="student-b">student B</li>
            <li class="student-c">student C</li>
        </ol>

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

```js
const studentA = document.querySelector("li");
const studentsList = studentA.parentElement;
const studentC = studentsList.children[2];
```