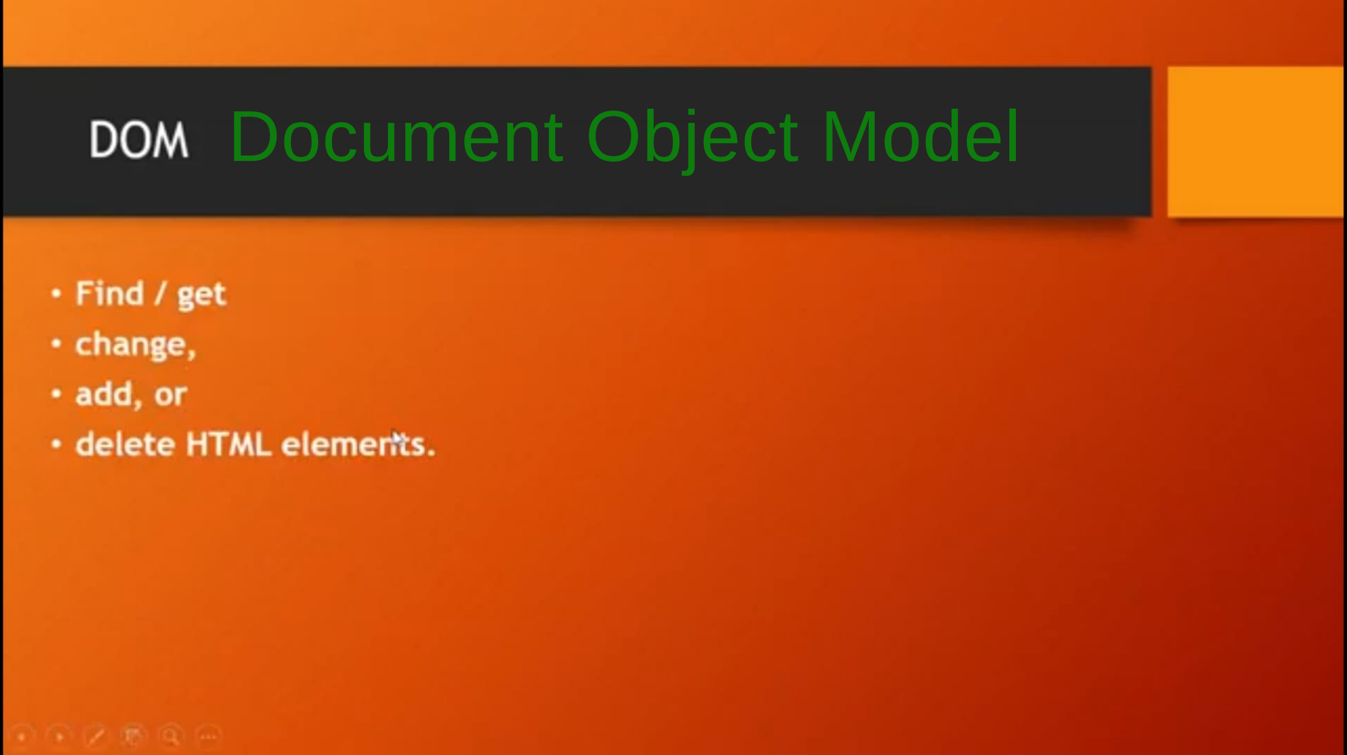
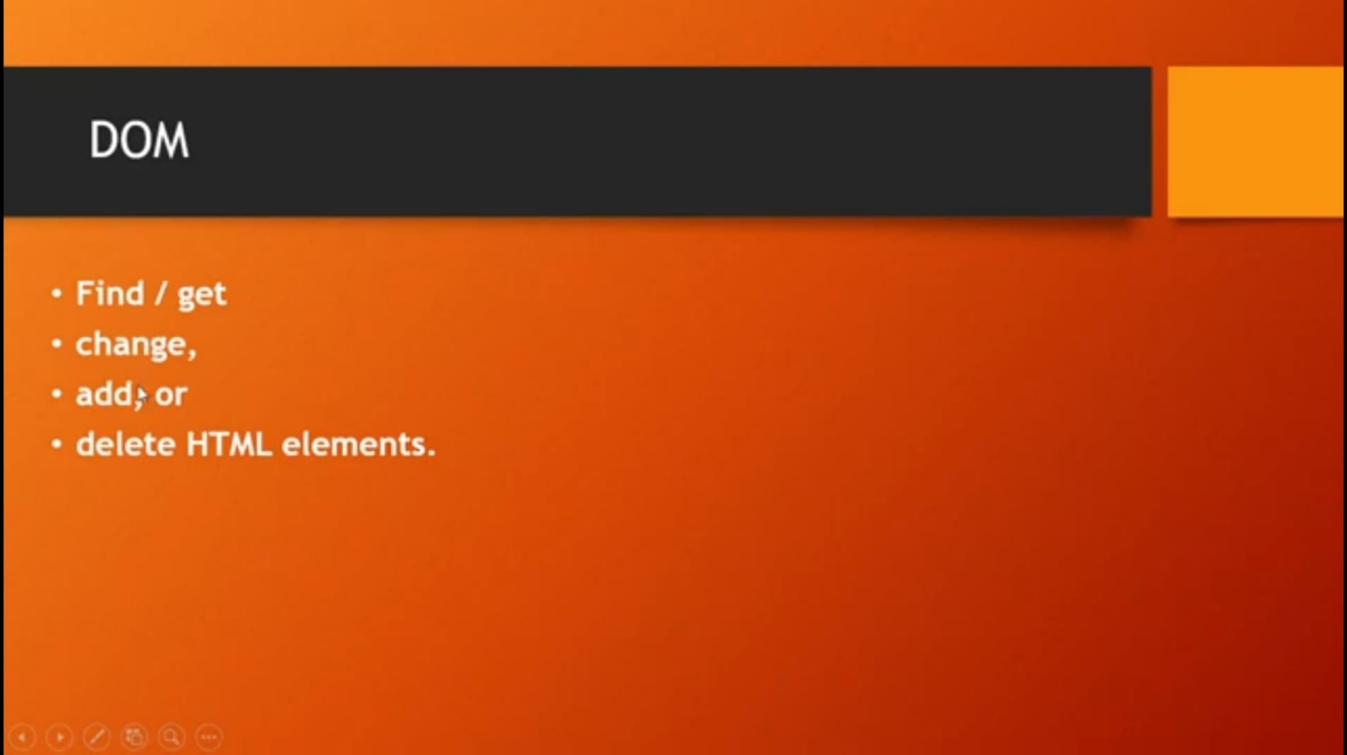


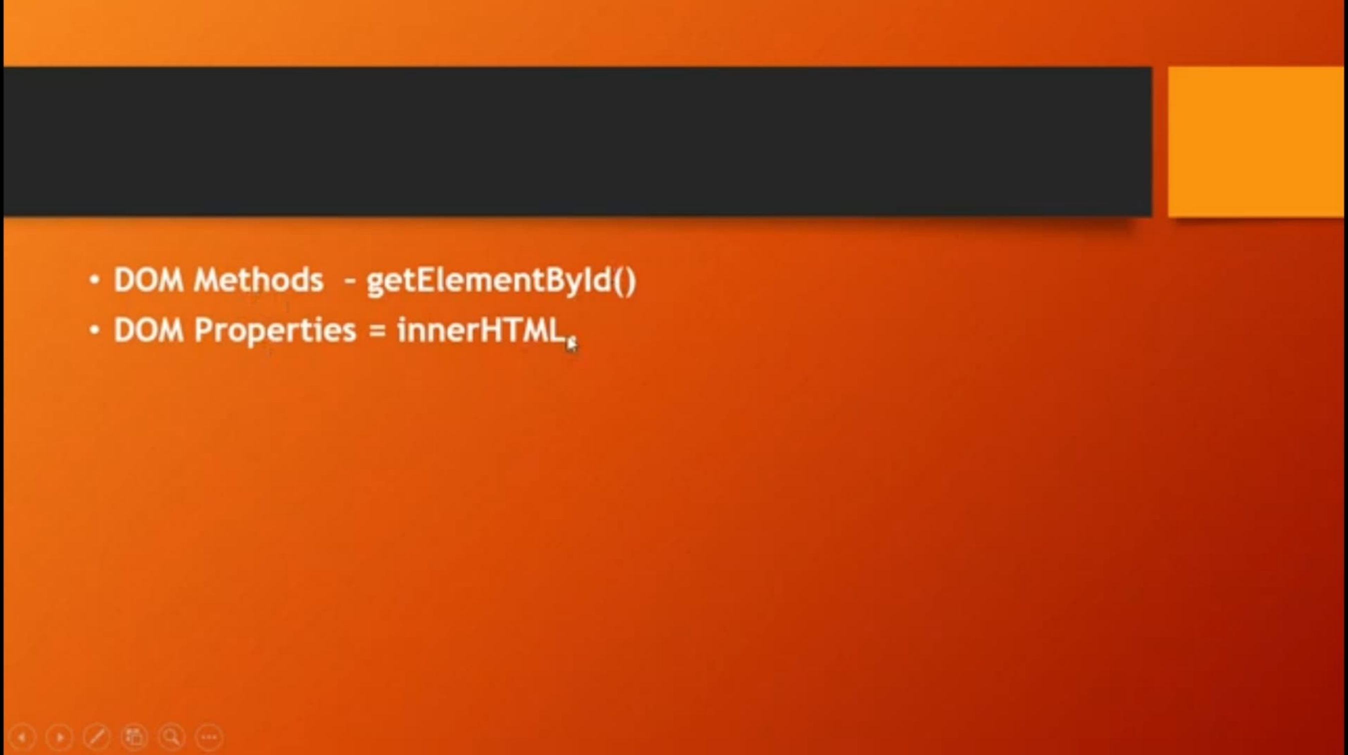
DOM Document Object Model

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

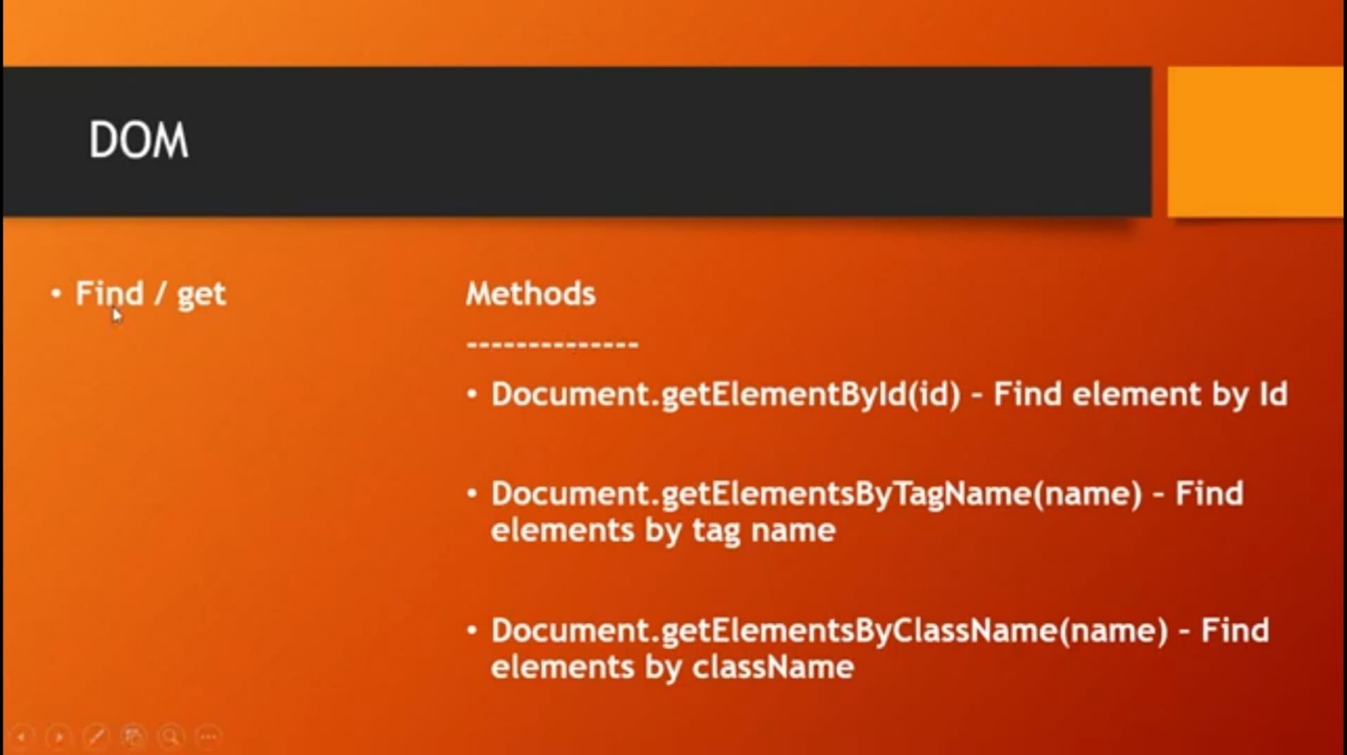


DOM

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



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

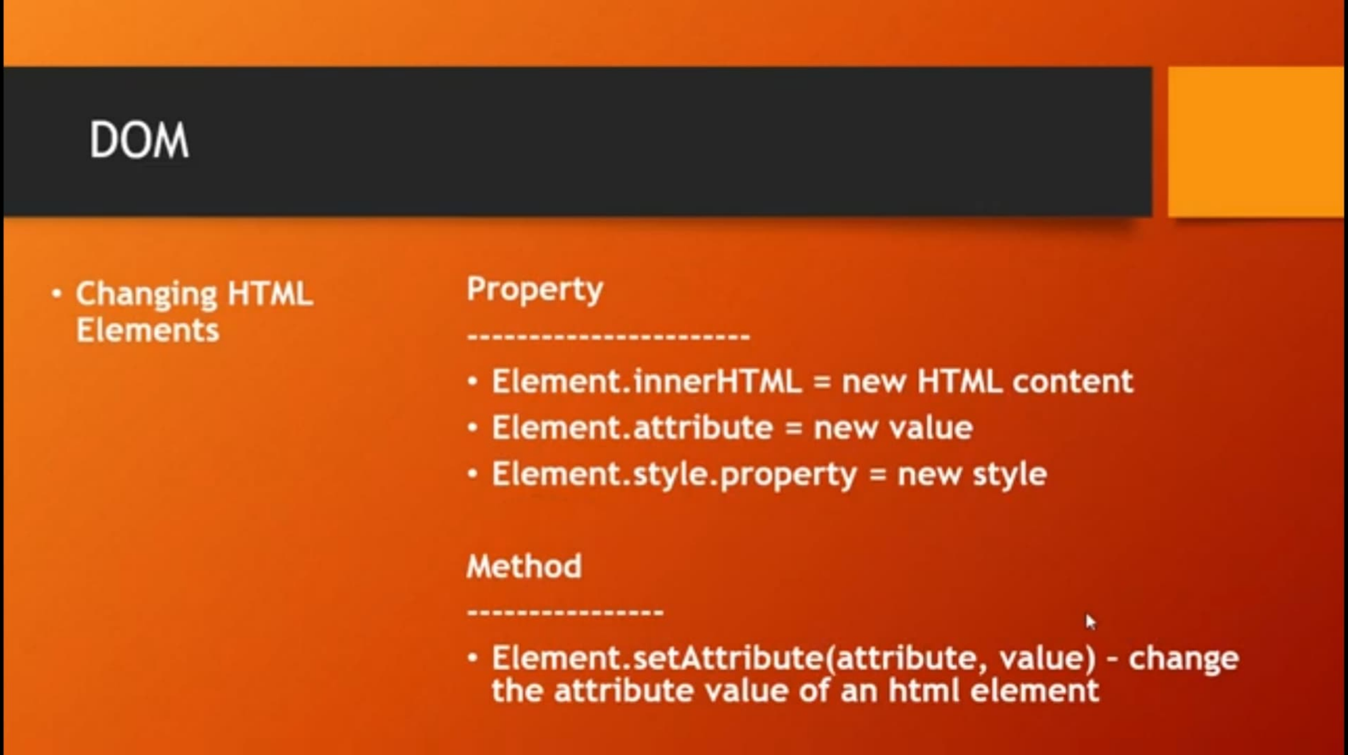


DOM

- 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

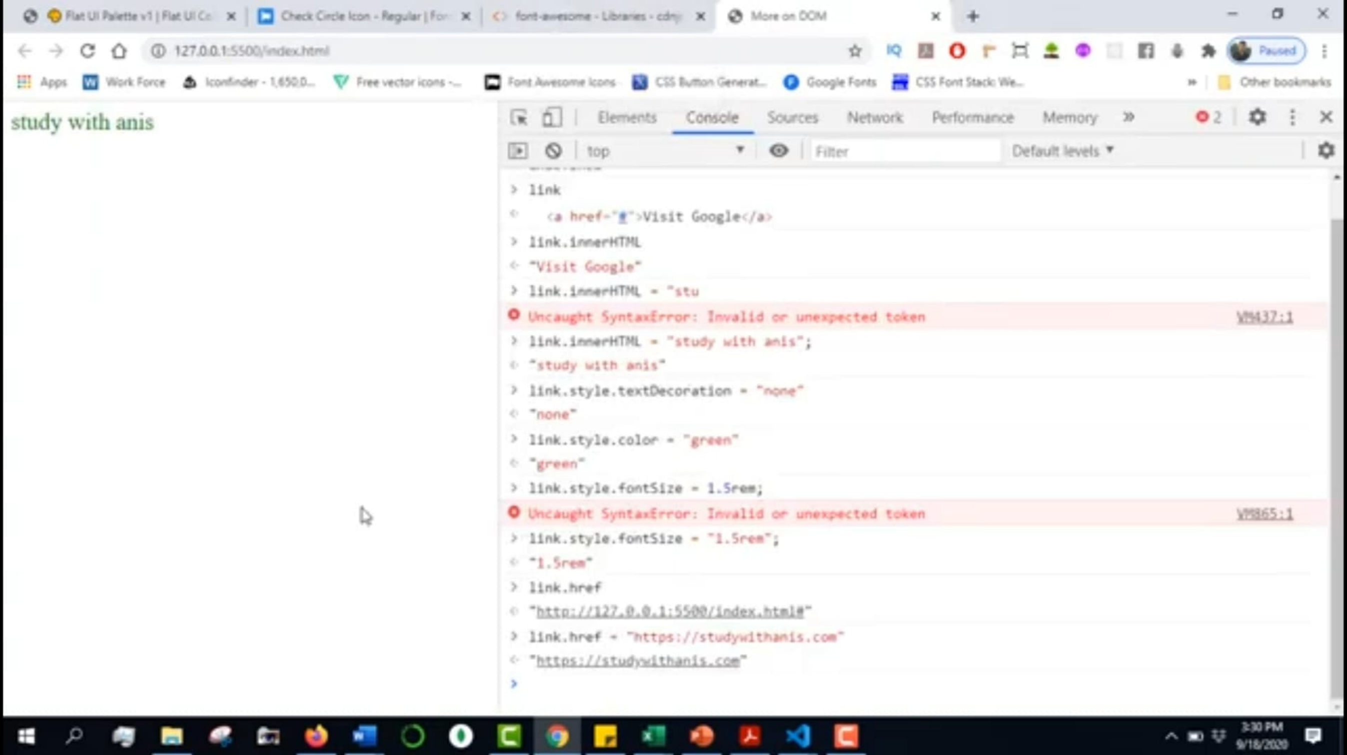
- Changing HTML Elements

Property

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

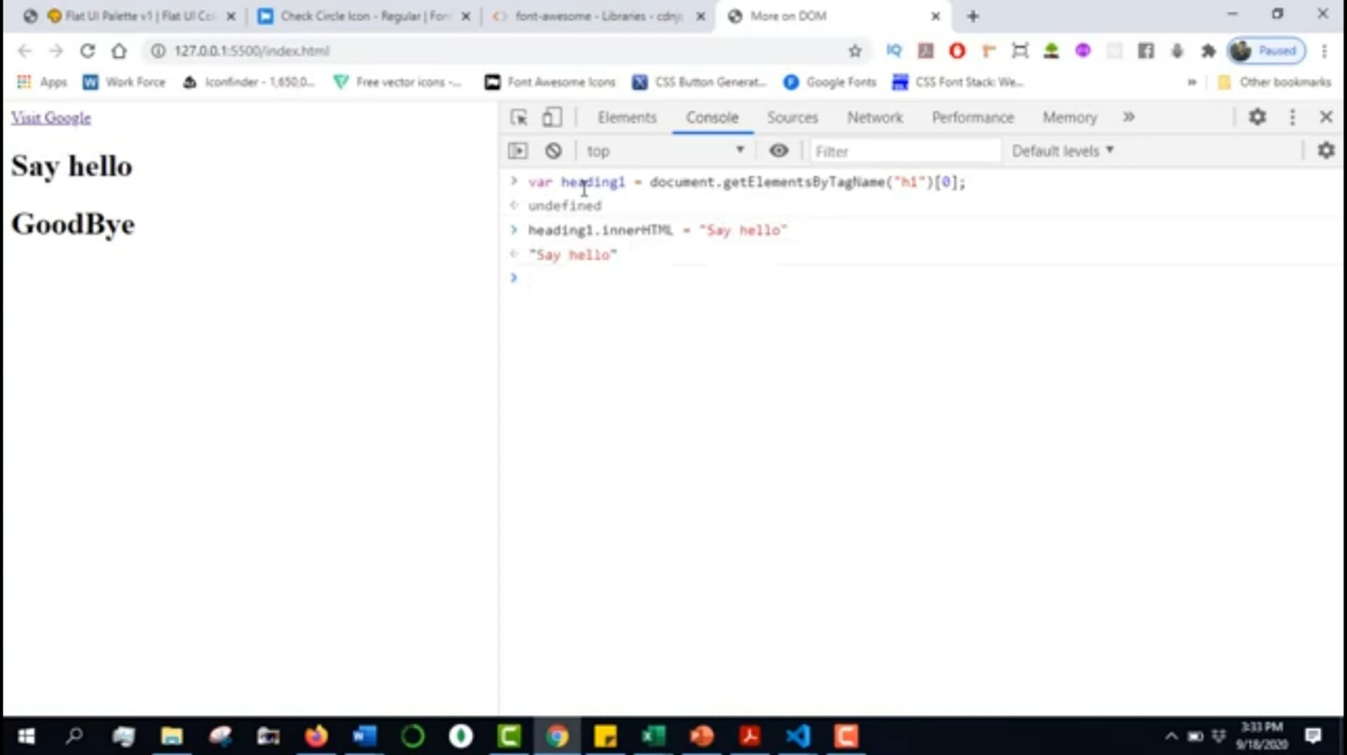
Method

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



study with anis

```
> link
<· <a href="#">Visit Google</a>
> 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"
>
```

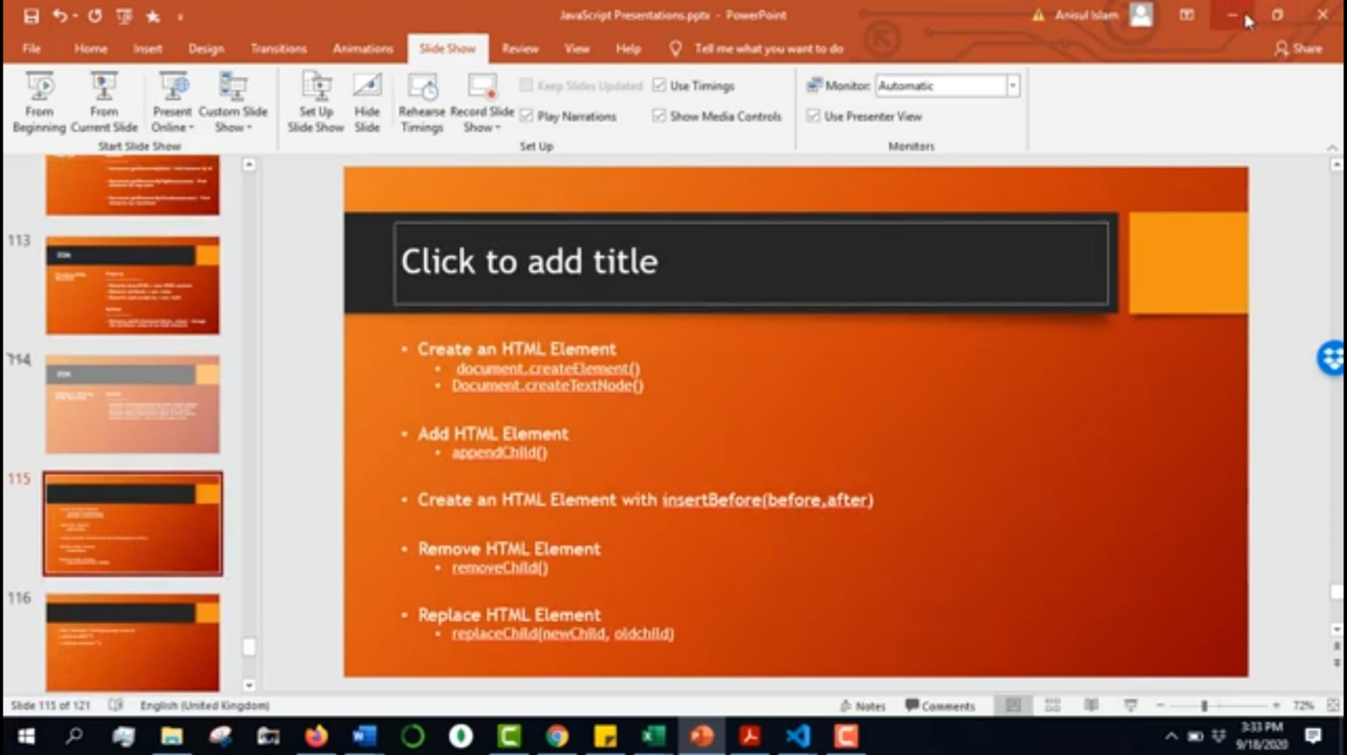


Visit Google

Say hello

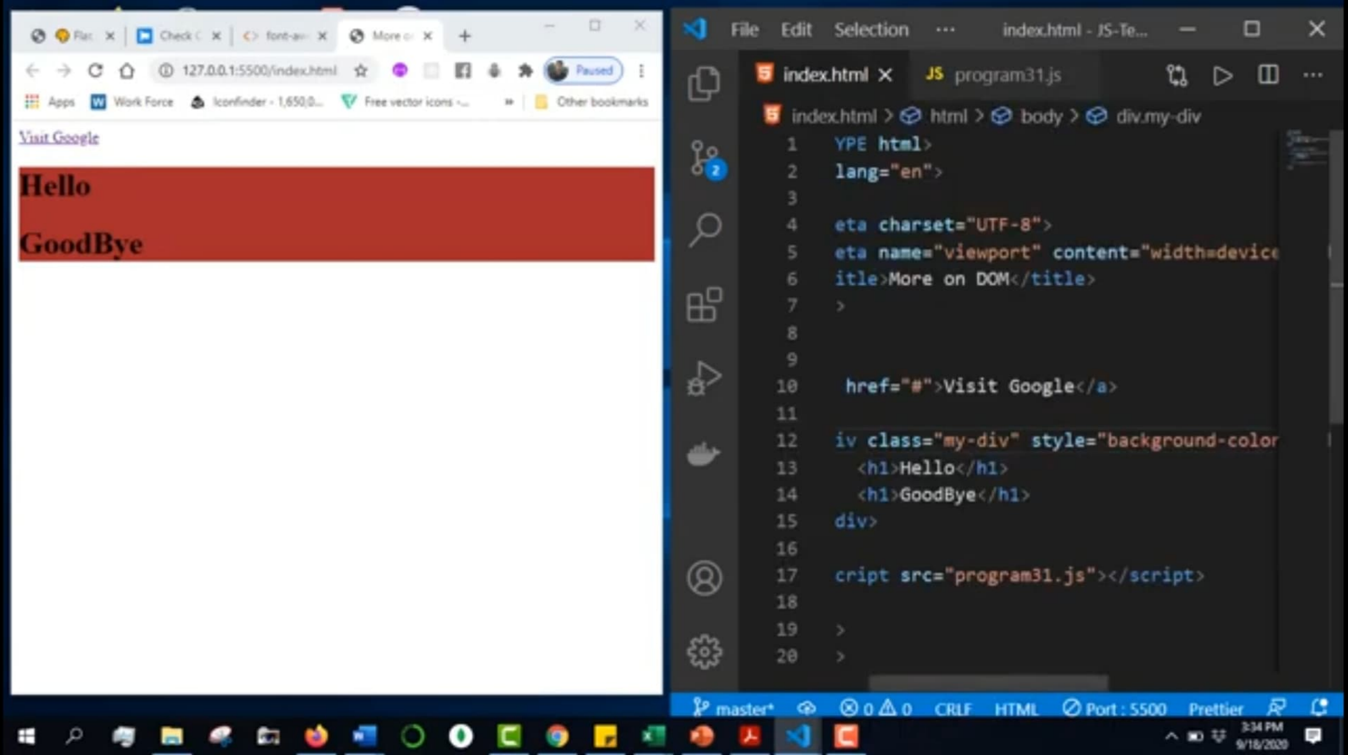
GoodBye

```
> var heading1 = document.getElementsByTagName("h1")[0];
< undefined
> heading1.innerHTML = "Say hello"
< "Say hello"
>
```



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)

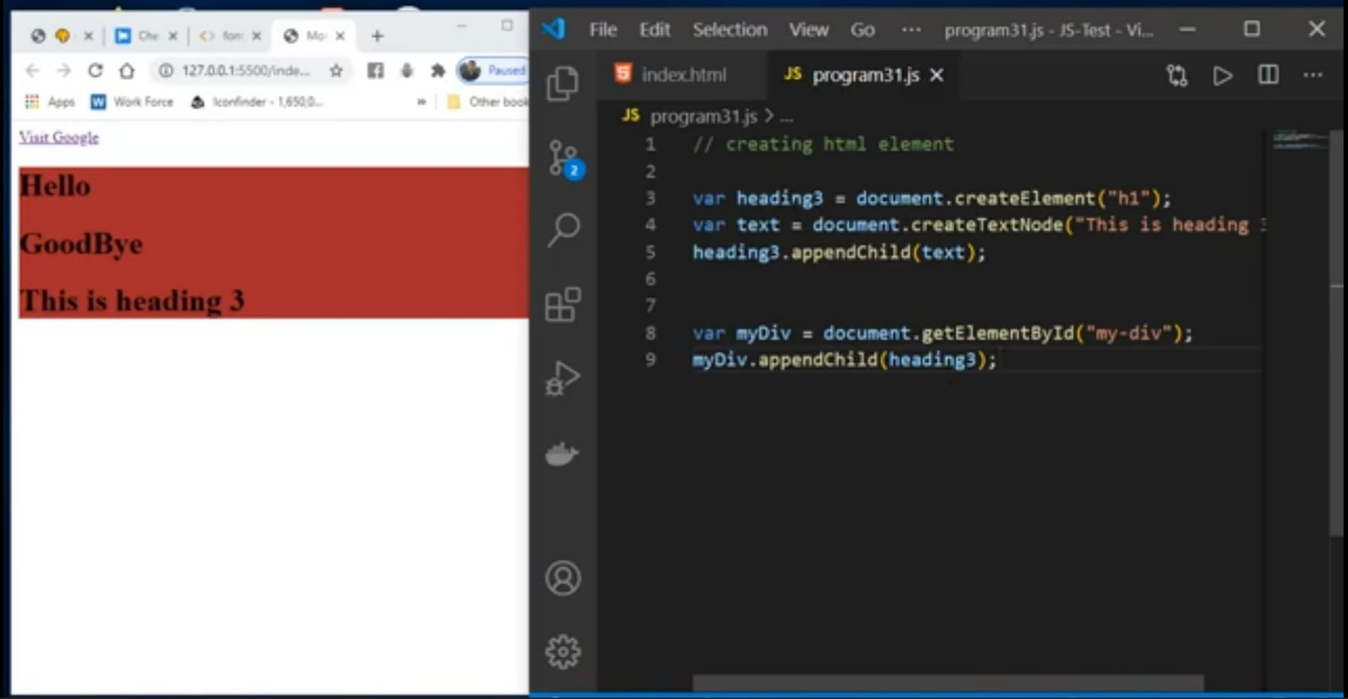


Visit Google

Hello

GoodBye

```
YPE html>
lang="en">

eta charset="UTF-8">
eta name="viewport" content="width=device
itle>More on DOM</title>
>


 href="#">Visit Google</a>

iv class="my-div" style="background-color
  <h1>Hello</h1>
  <h1>GoodBye</h1>
div>

cript src="program31.js"></script>

>
>
```



Visit Google

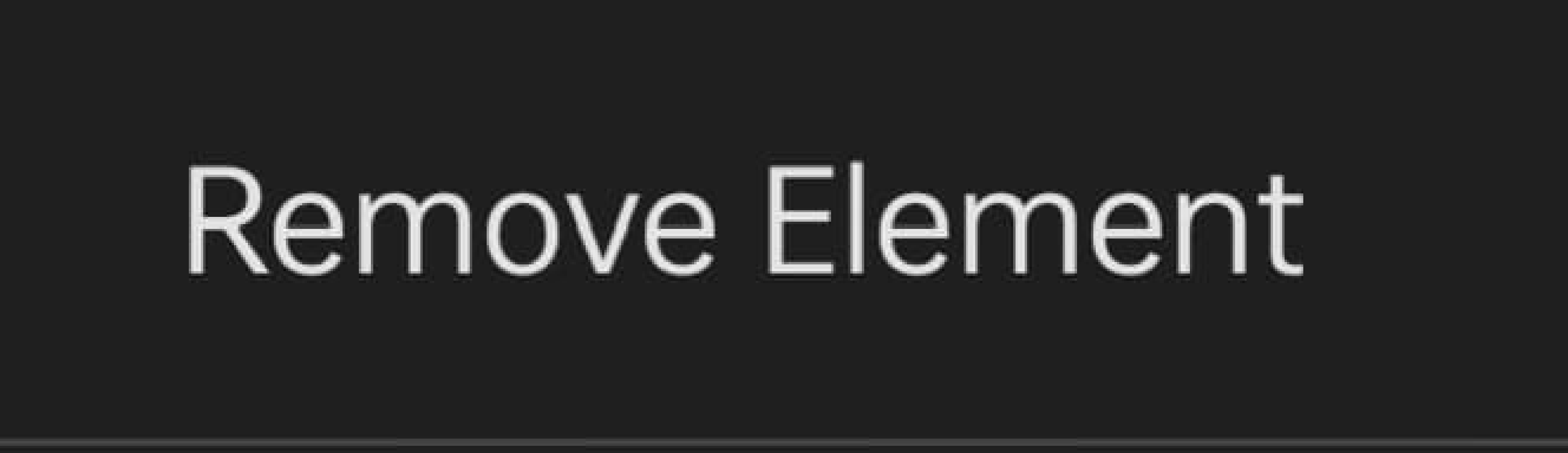
Hello

GoodBye

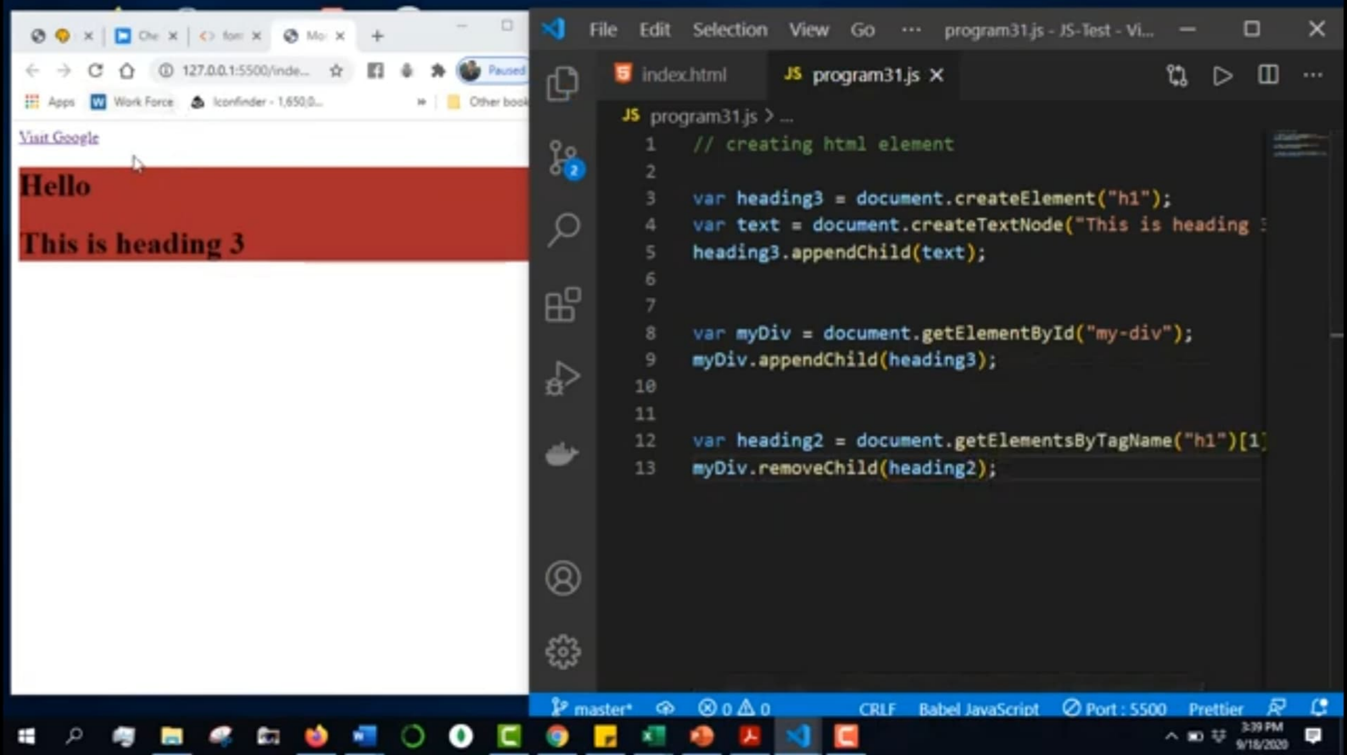
This is heading 3

```
// 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);
```

No connection



Remove Element

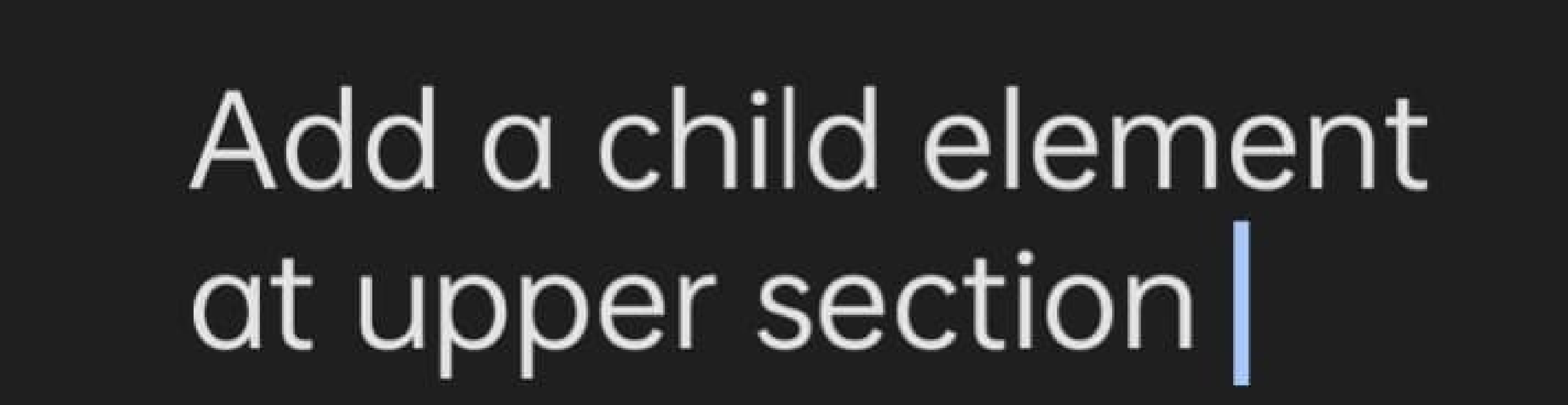


Visit Google

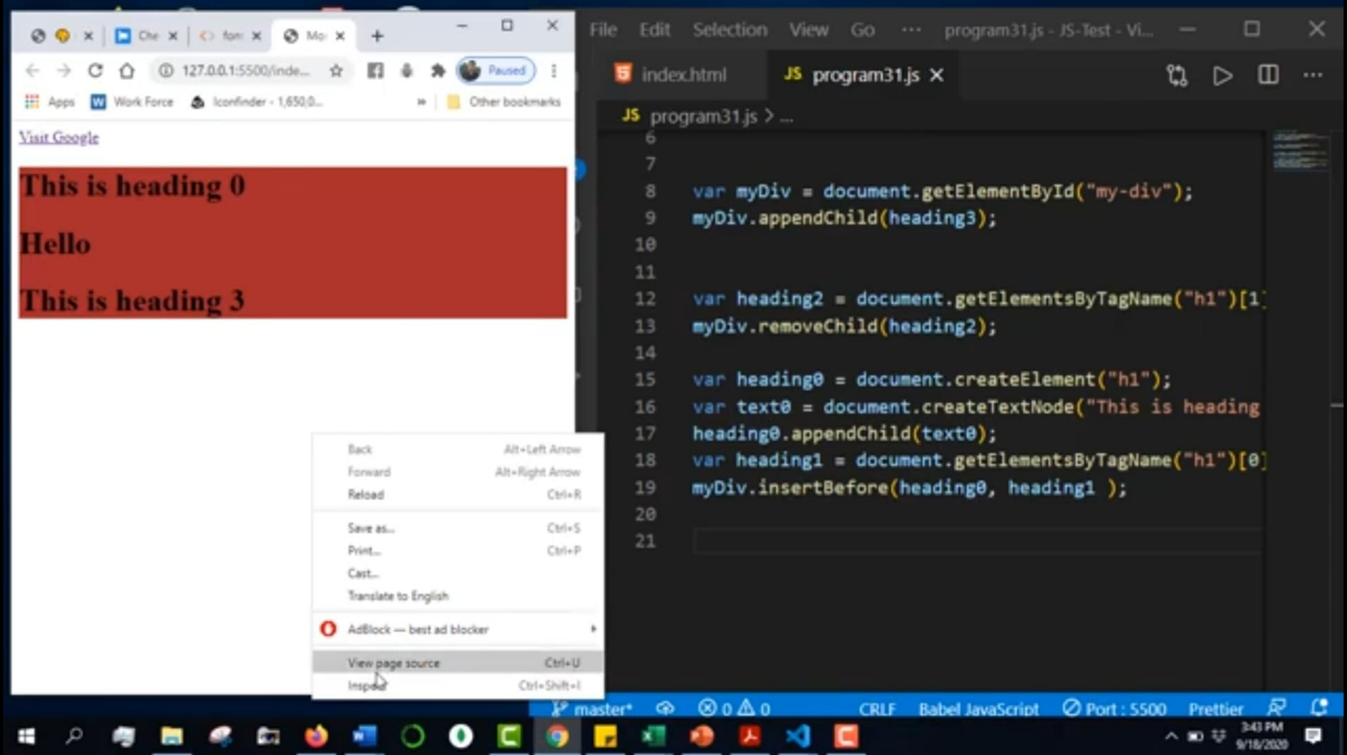
Hello

This is heading 3

```
// 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);
```



Add a child element at upper section



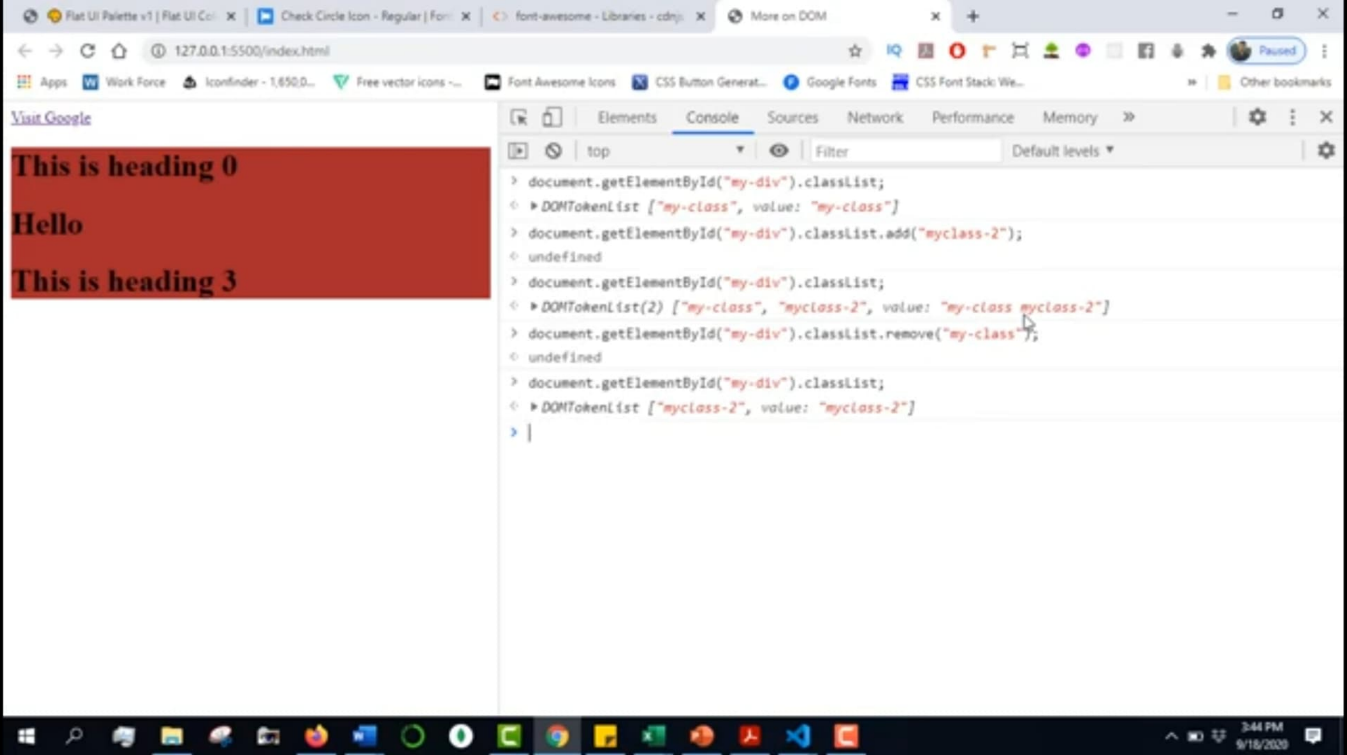
Visit Google

This is heading 0

Hello

This is heading 3

```
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 );
```



Visit Google

This is heading 0

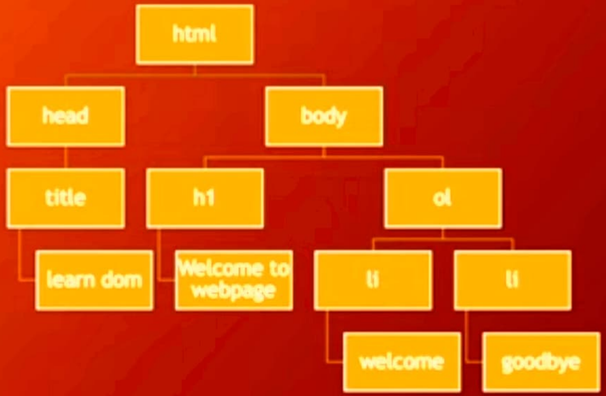
Hello

This is heading 3

```
> 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"]
>
```

Traversing & manipulating

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



html
head
body
title
h1
ol
learn dom
Welcome to webpage
li
li
welcome
goodbye

DOM Tree

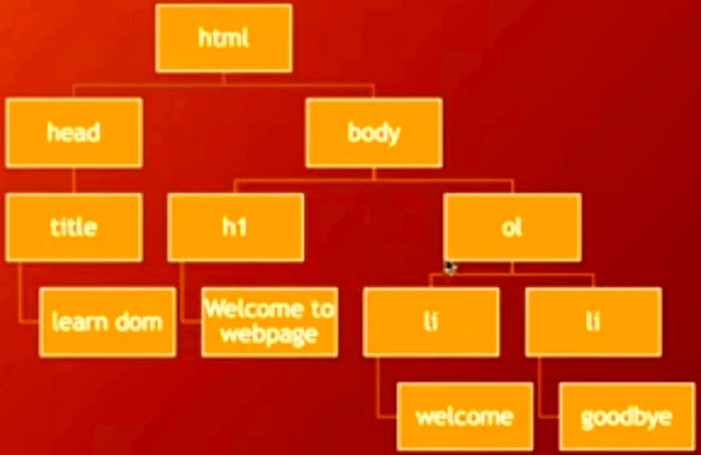
[redacted]

How to select DOM elements

selecting DOM Elements

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

[redacted]

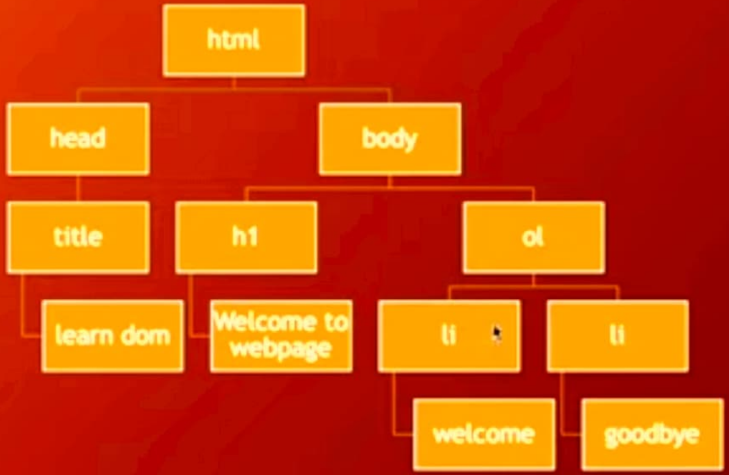


html
head
body
title
h1
ol
learn dom
Welcome to webpage
li
li
welcome
goodbye

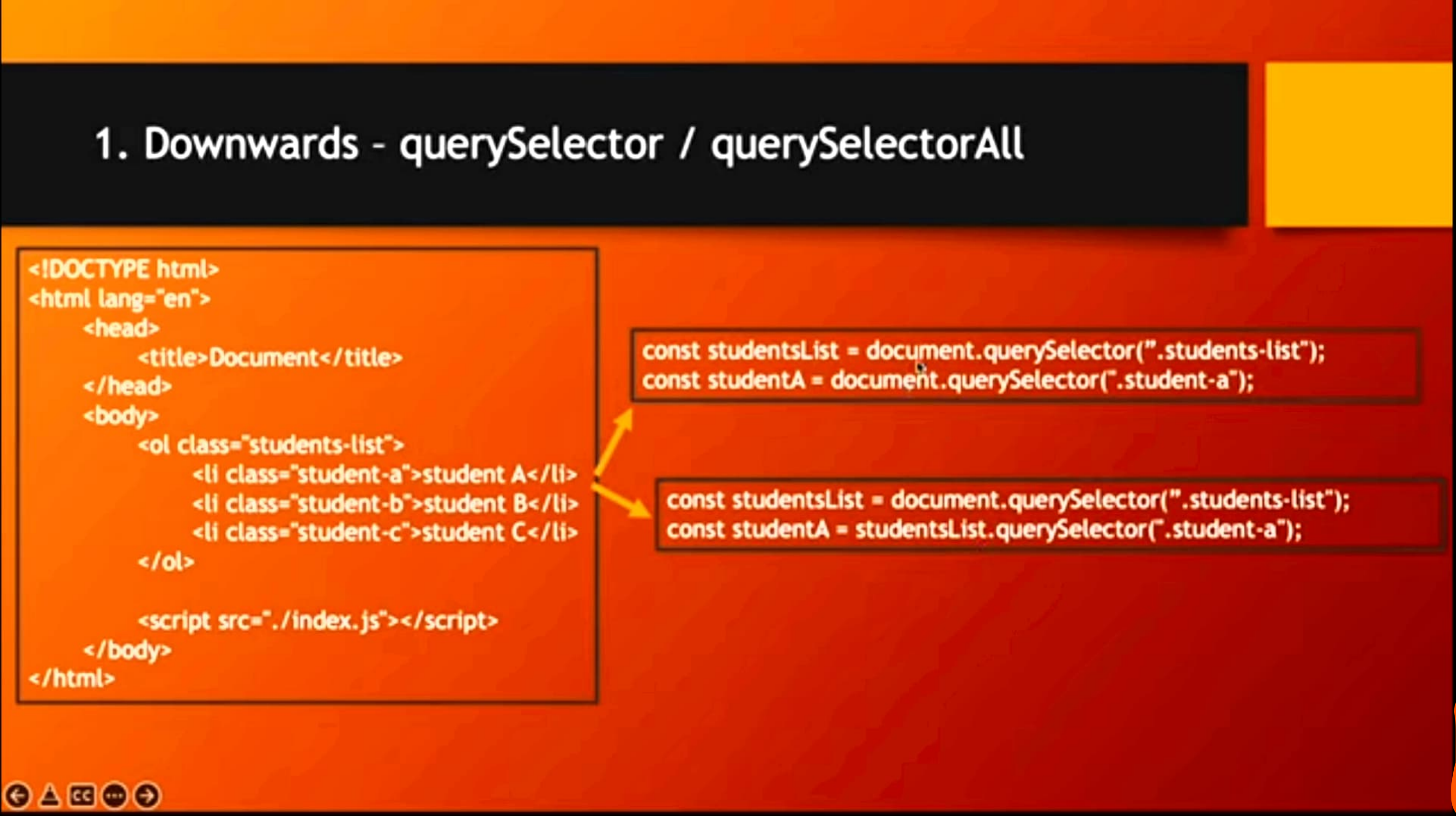
DOM Tree

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

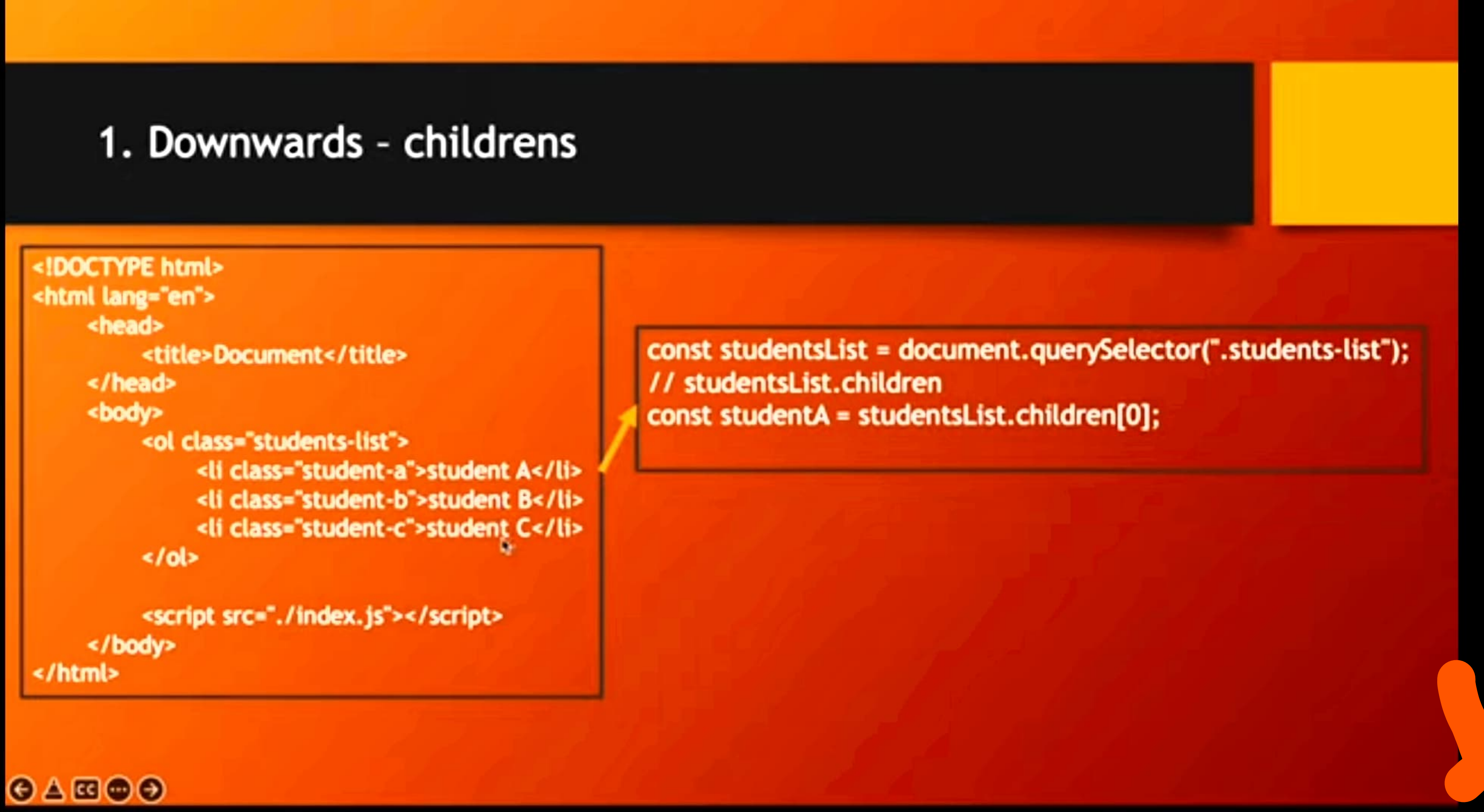


1. Downwards – querySelector / querySelectorAll

```
<!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

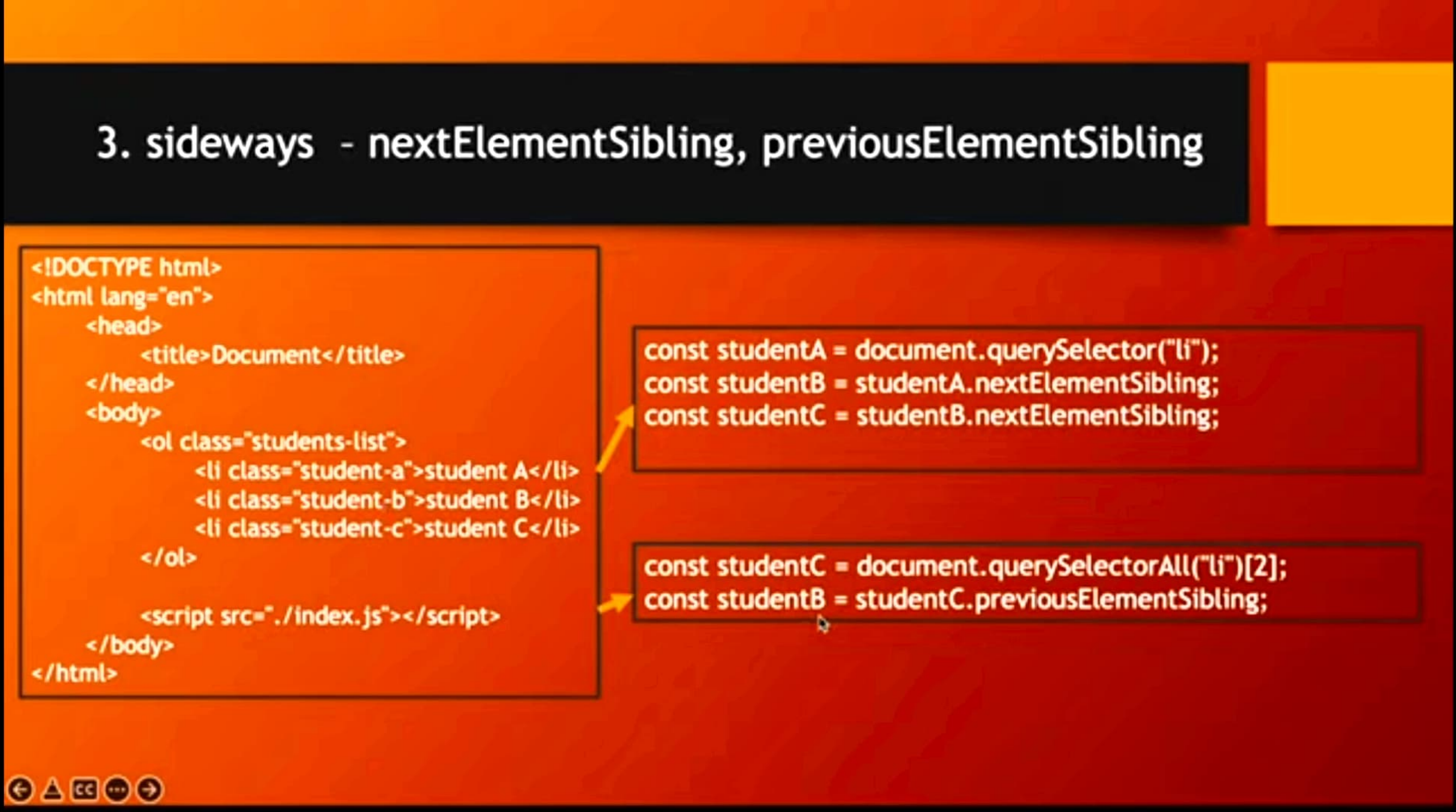
```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>Document</title>
    </head>
    <body>
        <ol class="students-list">
            <li class="student-a">student A</li>
            <li class="student-b">student B</li>
            <li class="student-c">student C</li>
        </ol>

        <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

```
<!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;
const studentC = studentsList.children[2];
```