

Lab 10. JavaScript 03

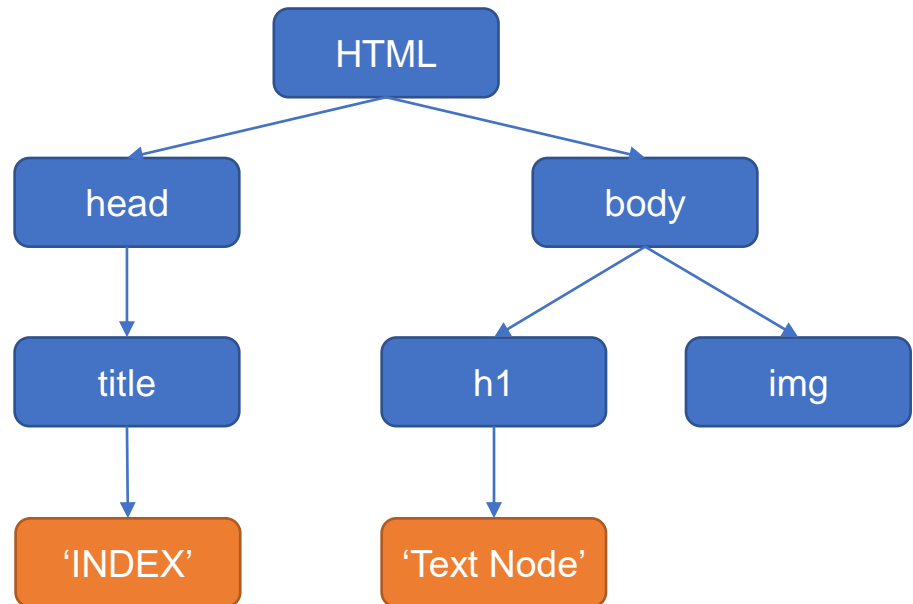
인터넷과웹기초



HTML DOM

- DOM
 - Document Object Model
 - 웹 문서를 메모리로 불러서 문서 객체 모델의 트리 구조로 변환함.
 - 이때, 각종 요소들은 element node / text node 로 변환됨.

```
<html>
<head>
  <title>INDEX</title>
</head>
<body>
  <h1>Text Node</h1>
  
</body>
</html>
```



DOM: create

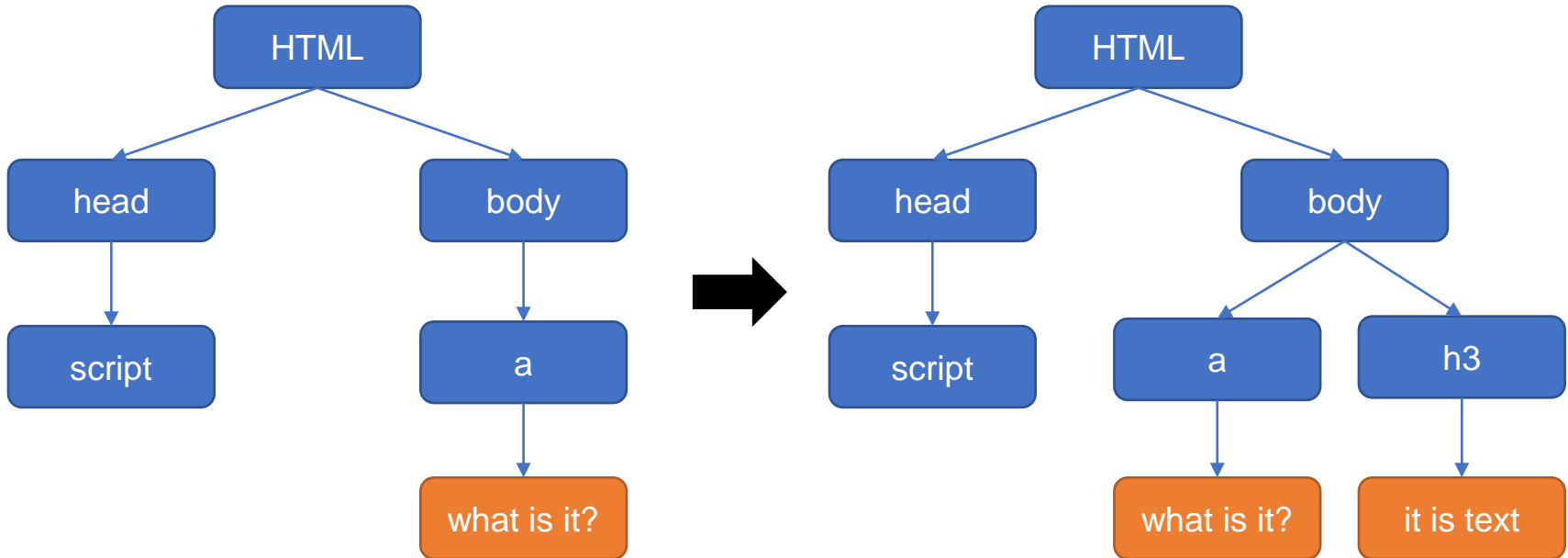
- create document object

Methods	Description
createElement()	create an element node
createTextNode()	create an text node
appendChild()	append the created node

```
create_dom.html
<html>
  <head>
    <script>
      function add() {
        var header=document.createElement('h3');
        var textNode=document.createTextNode('it is text');
        header.appendChild(textNode);
        document.body.appendChild(header);
      }
    </script>
  </head>
  <body>
    <a href="#" onclick="add()">what is it?</a>
  </body>
</html>
```

DOM: create

- changes in DOM tree



DOM: finding

- Selection Methods

- by ID

- `const element = document.getElementById("intro");`

- by Tag

- `const element = document.getElementsByTagName("p");`

- by Class

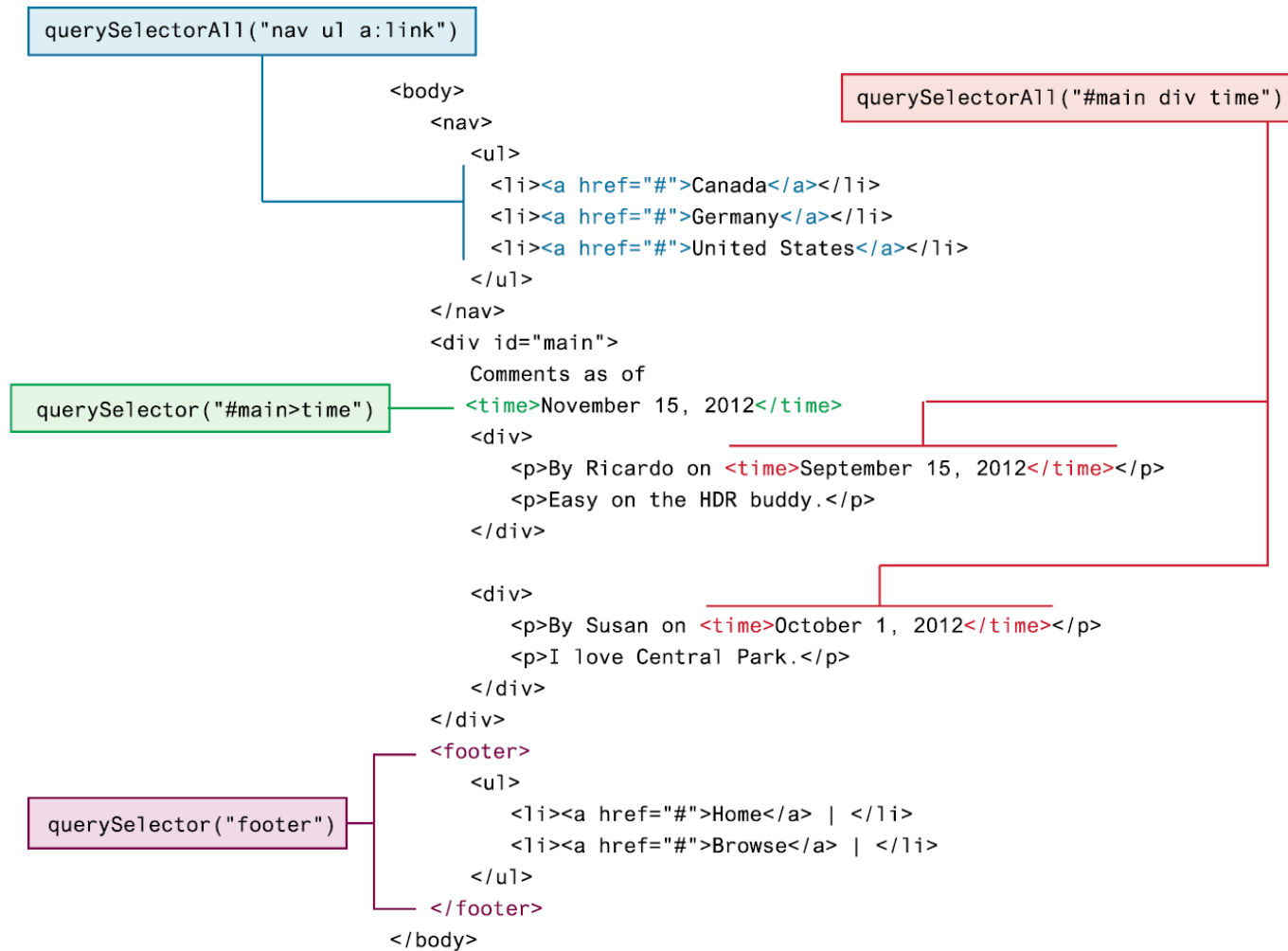
- `const x = document.getElementsByClassName("intro");`

- by Selector

- `const x = document.querySelectorAll("p.intro");`

DOM: finding

- Query Selector



DOM: remove / replace

- remove() method
 - `document.getElementById("p1").remove();`
- removeChild() method
 - `parent.removeChild(child);`
- replaceChild() method

DOM: nodes

- Essential node object properties
 - element inherits properties from its parent interface, Node, and by extension that interface's Event Target
 - EventTarget ← Node ← Element

Property	Description
attributes	collection of node attributes
childNodes	a NodeList of child nodes for this node
firstChild	First child node of this node
lastChild	Last child of this node
nextSibling	Next sibling node for this node
nodeName	Name of the node
nodeType	Type of the node
nodeValue	Value of the node
parentNode	Parent node for this node
previousSibling	Previous sibling node for this node

DOM: nodes

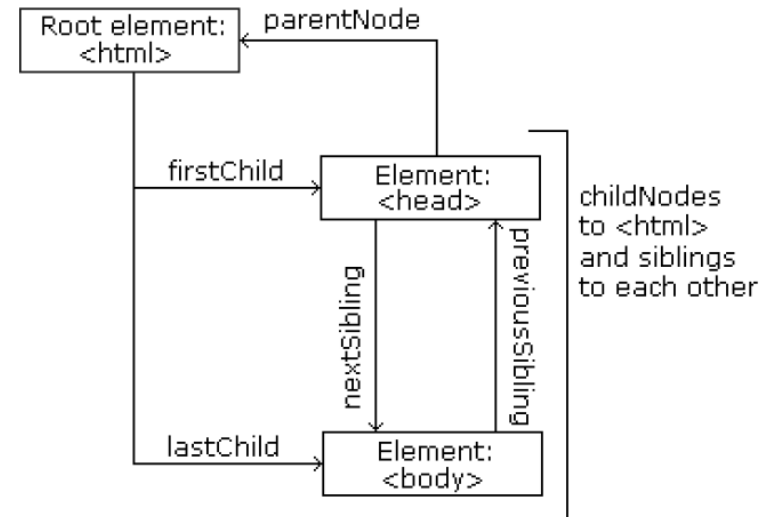
- DOM navigation
 - With the HTML DOM, you can navigate the node tree using node relationships.

```
<html>

  <head>
    <title>DOM Tutorial</title>
  </head>

  <body>
    <h1>DOM Lesson one</h1>
    <p>Hello world!</p>
  </body>

</html>
```



Events



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Events

- Event
 - HTML events are "things" that happen to HTML elements.
 - When JavaScript is used in HTML pages, JavaScript can "react" on these events.
 - also, HTML has the ability to let events trigger actions in a browser, like starting a JavaScript when a user clicks on an element.
 - `<element event="JavaScript">`
 - https://www.w3schools.com/tags/ref_eventattributes.asp
- examples
 - Assignment in last week

main.html

```
<section>
  <input id="id" type="text" placeholder="id" />
  <input id="password" type="password" placeholder="password" />
  <button id="login" onclick="getLogin()" disabled ><b>login</b></button>
</section>
```

Events

- EventListener
 - `element.addEventListener(event, function, useCapture);`
- DOM object events
 - event: Do not use the “on” prefix.
 - https://www.w3schools.com/jsref/dom_obj_event.asp

button.js

```
var id = document.getElementById("id");
var password = document.getElementById("password");
var login = document.getElementById("login");
password.addEventListener("keyup", checkButton);
id.addEventListener("keyup", checkButton);

function checkButton() {
  id.value.length > 0 && password.value.length > 0
    ? (login.disabled = false)
    : (login.disabled = true);
}
```