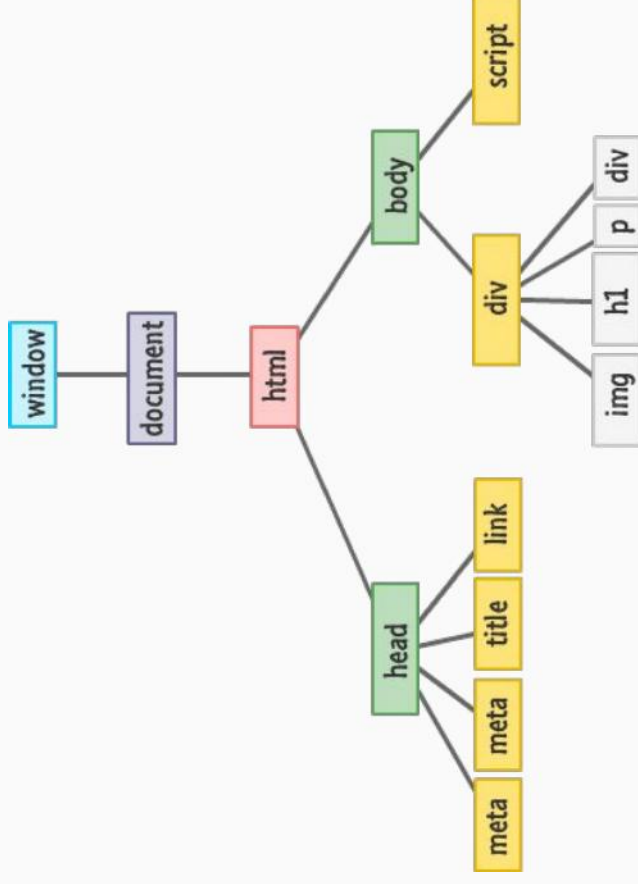


# DOM Manipulation

... using Javascript

# Document Object Model

- A programming interface for HTML and XML documents
- HTML elements are treated as a tree, with nodes, branches and leaves.
- Allows creating, editing and deleting HTML elements using javascript



# Retrieving and accessing an element

```
var mainWrapper = document.getElementById('elementId');

var elementsWithSameClass = document.getElementsByClassName('same-class');

var elementsWithSameTag = document.getElementsByTagName('same-tag');

for (var i = 0; i < elementsWithSameClass.length; i++) {
    var element = elementsWithSameClass[i];
}
```

# Modifying an element

```
var mainWrapper = document.getElementById('');

console.log(mainWrapper.innerHTML);
mainWrapper.innerHTML = 'Some value';

mainWrapper.getAttribute('attribute-name');
mainWrapper.setAttribute('attribute-name', 'value');
mainWrapper.setAttribute('class', 'new-class');

console.log(mainWrapper.style.backgroundColor);
mainWrapper.style.backgroundColor = '#49c';

mainWrapper.classList.contains('some-class');
mainWrapper.classList.add('some-class');
mainWrapper.classList.remove('some-class');
```

# Creating an element

```
var parent = document.getElementById('main');  
var element = document.createElement('div'); // Or any tag name  
  
element.innerHTML = 'Some value';  
element.style.color = '#424242';  
  
parent.appendChild(element); // Add to document  
parent.removeChild(element); // Remove from parent
```

# Accessing parent and child nodes

```
var element = document.getElementById('main');
```

```
var children = element.childNodes;
```

```
var parent = element.parentNode;
```

# Event Handling: Method 1

```
var element = document.getElementById('main');

element.onclick = function(e) {
    // do something
    console.log(e.target);
}

element.onkeydown = function(e) {
    // do something
    console.log(e.key, e.code);
}
```

# Event Handling: Method 2

```
var element = document.getElementById('main');

element.addEventListener('click', function(e) {
    // do something
    console.log(e.target);
});

element.addEventListener('keydown', function(e) {
    // do something
    console.log(e.key, e.code);
});
```



# Event Handling: Removing an event handler

```
var element = document.getElementById('main');

var clickHandler = function(e) {
    // do something
    console.log(e.target);
}

element.addEventListener('click', clickHandler);

element.removeEventListener('click', clickHandler);
```

# Common Events

- `click`
- `dblclick`
- `mouseup`
- `mousedown`
- `mousemove`
- `mouseover`
- `mouseout`
- `change`
- `keydown`
- `keyup`
- `keypress`
- `focus`
- `blur`

And that's it.