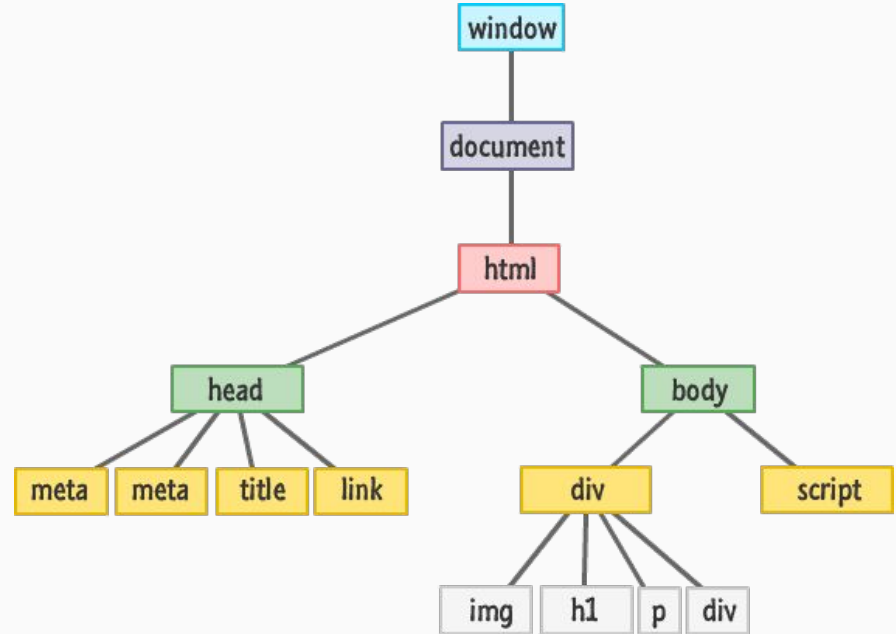


# DOM Manipulation

... 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('elementId');
```

```
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.