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# JAVASCRIPT DOM



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# DOM

## DOCUMENT OBJECT MODEL

# DOM(DOCUMENT OBJECT MODEL)

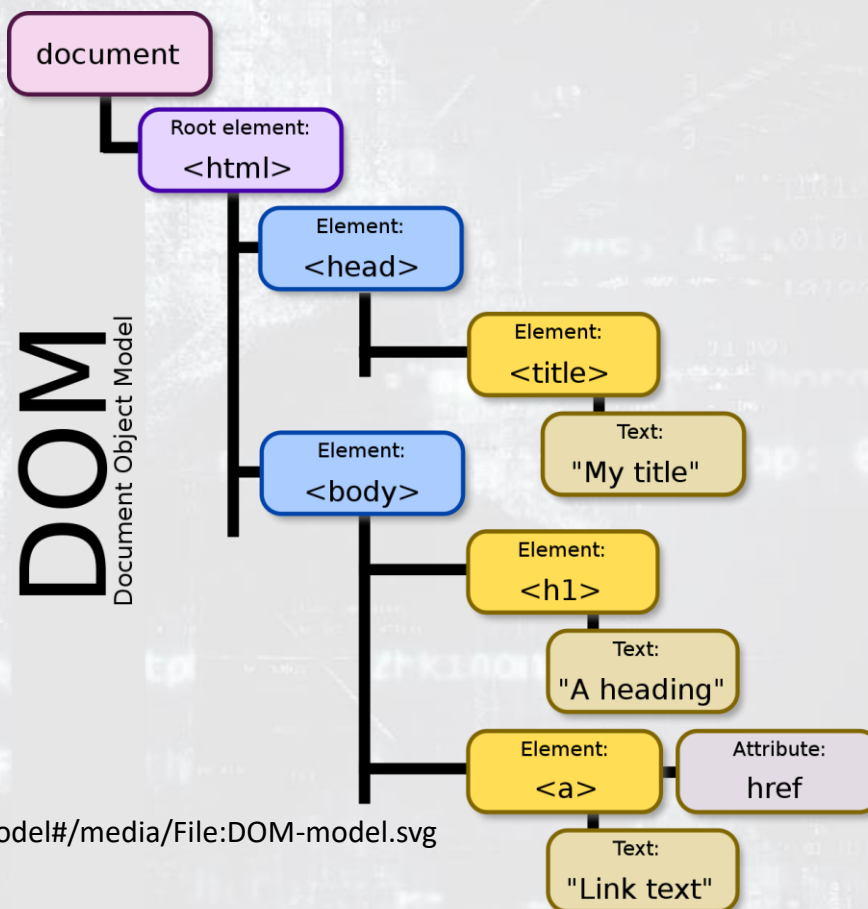
- The highest level of our web page is the document object.
- Inside of our document object we have head and body
- Inside of the head we have meta, title and in body h1
- Elements are called nodes in browser terminology



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# THE DOM



[https://en.wikipedia.org/wiki/Document\\_Object\\_Model#/media/File:DOM-model.svg](https://en.wikipedia.org/wiki/Document_Object_Model#/media/File:DOM-model.svg)

# DOM(DOCUMENT OBJECT MODEL)

- What is an object?
- An object in programming is like any object in real life.
- A phone is an object and can do things and has properties
- The document object is the same it can do things and has properties





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# DOM(DOCUMENT OBJECT MODEL)

- You have already been using a different object in JavaScript called the console
- `Console.log()` is a call to the console object that we ask to log the information in our program.

# DOM(DOCUMENT OBJECT MODEL)

- A few things that the we are going to ask the Document Object to do:

1. Get elements
2. Change parts of the elements
3. Add events to the elements



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# DOM

## GETTING THE ELEMENT



# GETTING THE ELEMENT

- Just like in CSS when we want to select an element, we must use a selector
- The way we do this is by calling the `document.function("element")`
- I say function because there are a dew different functions we can use to select the element.



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# JS SELECTORS

Document.

- 1 `getElementsByName("name")`
- 2 `getElementsByTagName("tag")`
- 3 `getElementsByClassName("class")`
- 4 `getElementById ("id")` // you can use this for only one id per-element
- 5 `querySelector("#ID")` // this is like our selector in css
- 6 `querySelectorAll("cssSelector")` // this will allow you to select all the



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# JS SELECTORS

These are the three we are going to use

```
document.getElementById("element")  
document.querySelector("element")  
document.querySelectorAll("element")
```



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# JS SELECTORS

```
document.getElementById("element")
```

- getElementById Can only select one id you CAN NOT select more than one element with this selector
- You just pass the id name as a string like I wrote here





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# JS SELECTORS

```
document.querySelector(".main-image");  
document.querySelector("#main-image");  
document.querySelector("h2 ");
```

- Query selector works like CSS
- If you want to select a class write “.class-name”, if you want an id you write “#id-name”, if you want a tag you write the tag name “h2”
- You can only select one element with this selector. In this case only one h2 will be selected even if you have 100.





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# JS SELECTORS

```
document.querySelectorAll(".main-image");  
document.querySelectorAll("h2");
```

- Query selector ALL works like query selector but returns an array of elements
- If I have 15 h2 elements, then all 15 can be selected



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# JS SELECTORS

- All the functions “return values” which means we can put them into variables.

```
const main_image = document.querySelectorAll(".main-image");  
const all_h2 = document.querySelectorAll("h2");
```



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# DOM

## CREATING ELEMENTS



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# CREATING ELEMENTS

You may want to add new elements to a web page we can do that with two tools

1. `document.createElement()` creates a new element in the DOM
2. `.appendChild()` lets us add the element to a parent You can do the body or as you can see below I have added it to a div

```
let new_h2 = document.createElement("h2")
new_h2.innerHTML = "hello creation"
document.querySelector("div").appendChild(new_h2)
```



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# DOM MANIPULATE STYLE





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# JS STYLE

Element.style is a way we can manipulate our CSS with JavaScript:

```
let new_h2 = document.createElement("h2")
new_h2.innerHTML = "hello creation"
new_h2.style.backgroundColor = "black"
new_h2.style.color = "white"
new_h2.style.fontSize = "40px"
new_h2.style.transform = "scale(2)"
document.querySelector("div").appendChild(new_h2)
```



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