The 3 Musketeers of Web Dev
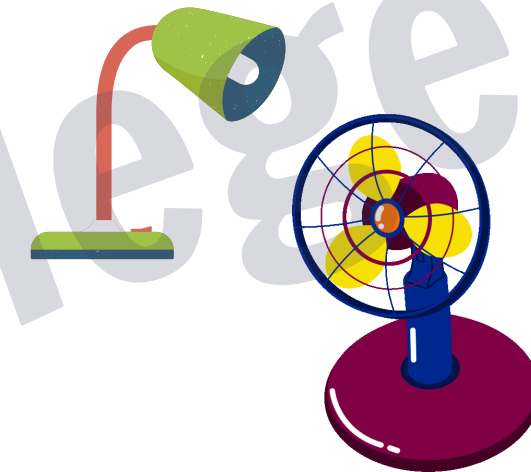
HTML
(structure)
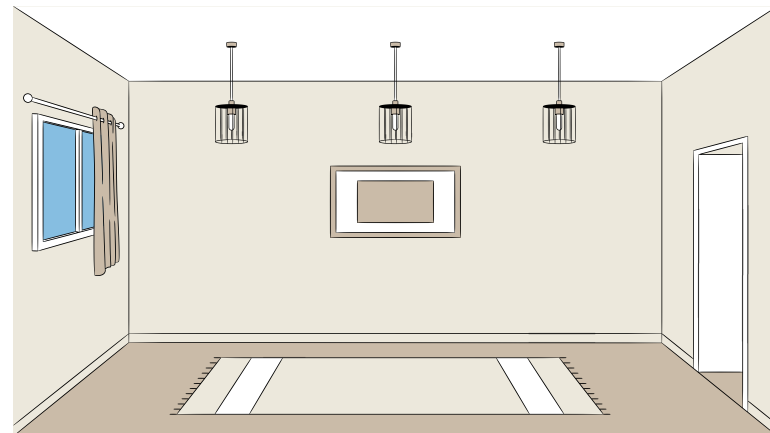
CSS
(style)

JS
(logic)

Starter Code

<style> tag connects HTML with CSS

<script> tag connects HTML with JS

```html
<html>
    <head>
        <title> Website Name </title>
    </head>
    <body>
        <!-- Content Tags -->
    </body>
</html>
```

Window Object

The window object represents an open window in a browser. It is browser's object (not JavaScript's) & is automatically created by browser.
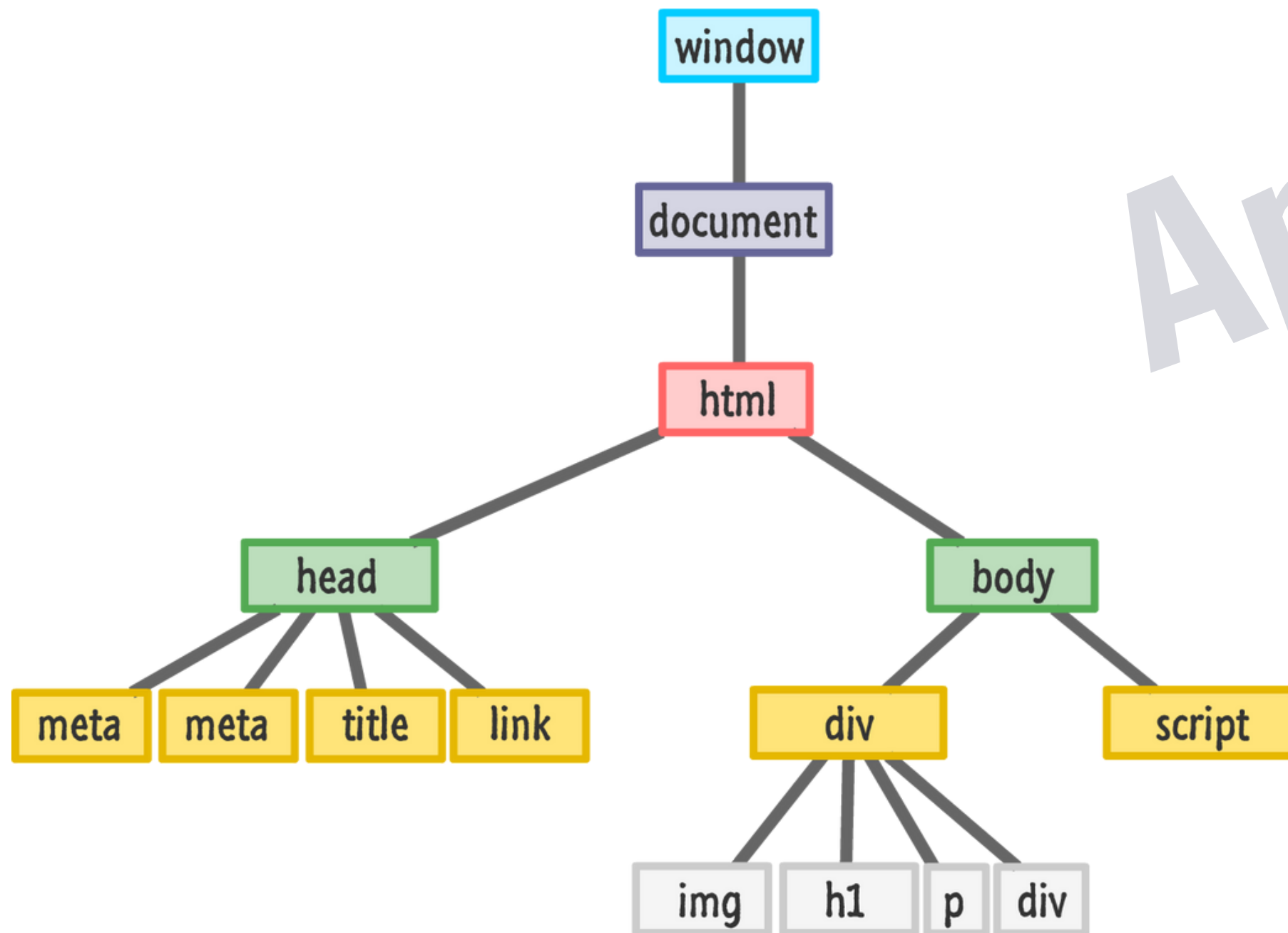
It is a global object with lots of properties & methods.

What is DOM?

When a web page is loaded, the browser creates a Document Object Model (DOM) of the page

DOM does Dynamic Changes/Manipulations on HTML.

DOM Manipulation

Selecting with id

document.getElementById("myId")   for every element ID is unique. So it returns only 1 Object

Selecting with class

document.getElementsByClassName("myClass")

Selecting with tag

document.getElementsByTagName("p")

DOM Manipulation

Query Selector

document.querySelector("#myId / .myClass / tag")

//returns first element

Use # for ID and .(dot) for class as
.myClass and #myId

document.querySelectorAll("#myId / .myClass / tag")

//returns a NodeList

HTML or Document

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <link rel="stylesheet" href="/JavaScript/first.css">
</head>

<body>
    <h1>DOM: Document Object Model</h1>

    <div class="myClass">
        Hello from Div
        <p>Hello from P1</p>
        <p style="visibility: hidden;">Hello from P2</p>
        <p>Hello from P3</p>
        <p>Hello from P4</p>
    </div>
    <div class="myBox">Box 1</div>
    <div class="myBox">Box 2</div>
    <div class="myBox">Box 3</div>
    <p></p>
    <p>This is P1</p>
    <p>This is P2</p>
    <div id="id1">This is id1</div>
    <div id="id2">This is id2</div>
    <div id="id3">This is id3</div>
    <div id="id4">This is id4</div>
    <script src="first.js"></script>
</body>
</html>
```

CSS

```css
#id1 {
    background-color: yellow;
}

.myBox {
    background-color:
    pink;
}
```

JavaScript
Do one by one by commenting others. otherwise it will create issues.

```javascript
console.log(document);
console.dir(document.getElementsByTagName("p"));
let firstEll = document.querySelector(".myBox");
let allEll = document.querySelectorAll(".myBox");
console.log(firstEll);
console.log(allEll);
console.log(firstEll.tagName);
let inText = document.querySelector("div");
console.log(document.querySelector("div").innerText);
console.log(document.querySelector("div").innerHTML);
console.log(document.querySelector("div").textContent);
console.dir(document.body.children[0]);
console.dir(document.body.firstElementChild);
console.dir(document.body.lastElementChild);
```
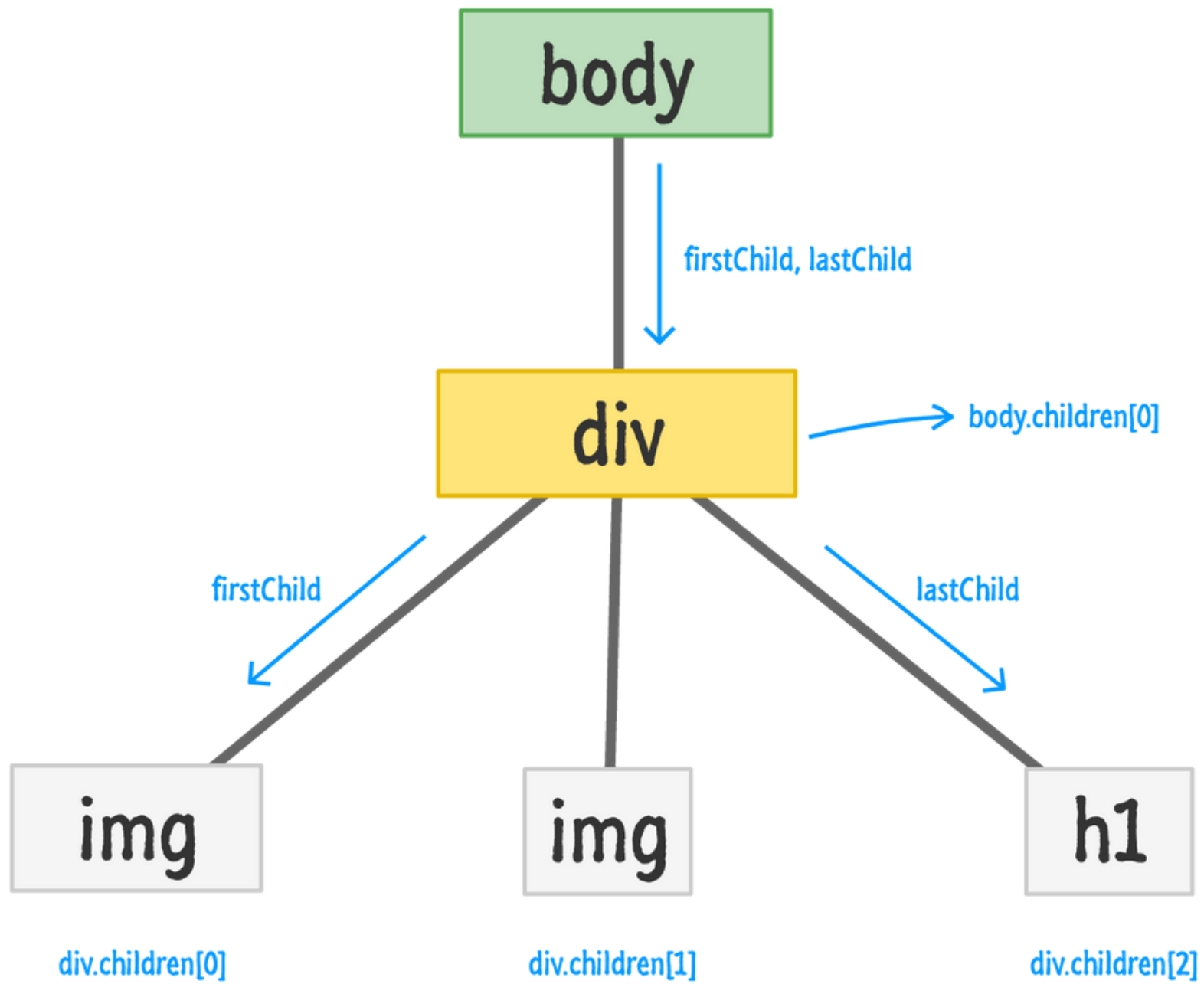
DOM Manipulation

Properties

- **tagName : returns tag for element nodes**

- **innerText : returns the text content of the element and all its children**
  Returns pure textual content of the element and its children.

- **innerHTML : returns the plain text or HTML contents in the element**
  Returns text of the element and its children with their HTML tag.

- **textContent : returns textual content even for hidden elements**
  suppose if <div style="visibility: hidden"> This is Hidden </div>
  Though textContent will return the content of div tag.

Homework

Let's Practice

Qs. Create a H2 heading element with text - "Hello JavaScript". Append "from Apna College students" to this text using JS.

Qs. Create 3 divs with common class name - "box". Access them & add some unique text to each of them.

DOM Manipulation

Attributes

- **getAttribute(attr)** *//*to get the attribute value

- **setAttribute(attr, value)** *//*to set the attribute value

Style

- **node.style**

DOM Manipulation

Insert Elements   let el = document.createElement("div")

- node.append(el) //adds at the end of node (inside)

- node.prepend(el) //adds at the start of node (inside)

- node.before(el) //adds before the node (outside)

- node.after(el) //adds after the node (outside)

Delete Element

- node.remove( ) //removes the node

Let's Practice

Qs. Create a new button element. Give it a text "click me", background color of red & text color of white.

Insert the button as the first element inside the body tag.

Qs. Create a <p> tag in html, give it a class & some styling.

Now create a new class in CSS and try to append this class to the <p> element.

Did you notice, how you overwrite the class name when you add a new one?
Solve this problem using classList.