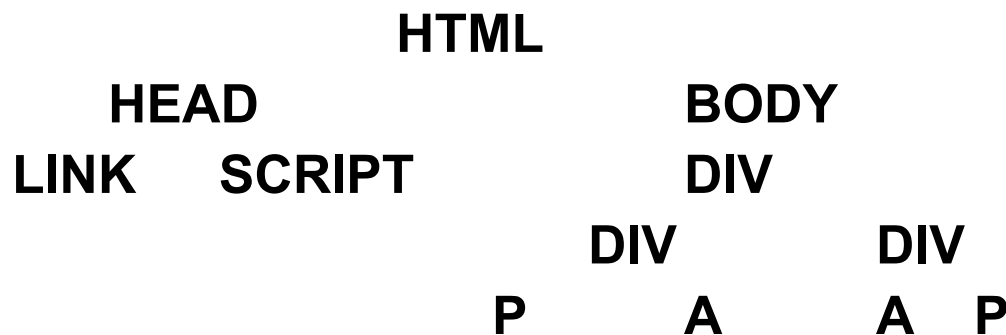


```
    return acc;  
  }, 0)
```

## DOM- Document Object Model

### HTML - Hyper text markup language



HTML is converted into a tree-like structure- This tree-like structure is known as DOM.

Browser- Internally in the browser V8 Engine

**Document** - the whole html and function and methods needed to manipulate this document as well.

**DOM - Document object model.**

**Using JS how can I manipulate the document,  
What are the methods that we have**

## And different type of event listeners.

Div, P, a tag these are your elements.

Class, id, style - attributes

Hello world - text

```
<div class="xyz"> Hello world</div>
```

**Dom Manipulation-** Changing the text of an element, changing the attributes of an element adding an element all of this is known as dom manipulation.

ANy form of change to the DOM is know as dom manipulation.

You should not do a lot of dom manipulation?

CSSOM- CSS + DOM

Rendered onto the screen

UTF-8- is format in which you ascii char are stored.

**Render body**

**Render div**

**Render P**

**Render a**

**Render div**

**Render h1**

**Remove a**

**Rerendering would happen because of the dom manipulation and you need to be careful while doing dom manipulation because of this reason**

# Get an element in javascript.

- 1) document.getElementById
- 2) document.getElementsByClassName
- 3) document.querySelector
- 4) document.querySelectorAll
- 5) document.getElementsByTagName

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>
  <style>
    .bold {
      font-size: 34px;
      font-weight: bold;
    }
  </style>
</head>
<body>
  <div>
    <h1>This is heading 2</h1>
  </div>
  <div>
    <h1>This is heading 1</h1>
    <p class="bold" id="p1">This is Paragraph</p>
  </div>
</body>
```

```
<script>
    console.log(document.getElementById("p1"));
</script>
</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>
    <style>
        .bold {
            font-size: 34px;
            font-weight: bold;
        }
    </style>
</head>
<body>
    <div>
        <h1>This is heading 2</h1>
    </div>
    <div>
        <h1>This is heading 1</h1>
        <p class="bold" id="p1">This is Paragraph</p>
        <p class="bold" id="p2">This is Paragraph</p>
        <p class="bold" id="p3">This is Paragraph</p>
    </div>
</body>
<script>
    console.log(document.getElementById("p1"));
    console.log(document.querySelector("#p1"));
    console.log(document.querySelector(".bold"));
    console.log(document.querySelectorAll(".bold"));
```

```
</script>  
</html>
```

Whenever the button is clicked I want to add hello class string in the html.

1. Select the button in js
2. On click you want to call some function
3. In the function
4. Create an element.
5. Append that element on the dom
6. Repeat

**Event Listener:** Whenever an event occurs you can call a function that would be executed.

Event- Click, Mouse hover, change

These events are triggered by user interactions with the webpage. Click (click) – When a user clicks an element. Double Click (dblclick) – When a user double-clicks an element.

Hover (mouseover, mouseout) – When a user hovers over or moves out of an element.

Focus (focus, blur) – When an element gains or loses focus (like input fields).

Change (change) – When an input field value changes.

Submit (submit) – When a form is submitted.

Scroll (scroll) – When the page or an element is scrolled.

Resize (resize) – When the browser window is resized.

```
<ul>
```

```
  <li>1</li>
```

```
  <li>2</li>
```

```
  <li>3</li>
```

```
  <li>4</li>
```

```
  <li>5</li>
```

```
  <li>6</li>
```

```
  <li>8</li>
```

```
  <li>9</li>
```

```
</ul>
```

```
<ul>
```

```
  <li>1</li>
```

```
  <li>2</li>
```

```
  <li>3</li>
```

```
  <li>4</li>
```

```
  <li>5</li>
```

```
  <li>6</li>
```

```
  <li>7</li>
```

<li>8</li>

<li>9</li>

</ul>