# Webentwicklung

HTML : definiert Inhalt eines Website
CSS : Layout
JavaScript: Verhalten interaktives Elemente
} Clientseitig

Next.js : Webserves
Apache : Webserves
Python : Webserves
} Serverseitig

## HTML - Elemente:

Überschriften `<h1> Titel </h1>`

Absatz / Blocktext `<p> ... </p>`

Hervorheben `<em> ... </em>`

Listen geordnet
```
<ol>
  <li> ... </li>
</ol>
```
ungeordnet
```
<ul>
  <li> ... </li>
</ul>
```

div / Unterteilungscontainer `<div> </div>`

Link `<a href="https://lernbaum.ch"> Klicken </a>`

Bild `<img src="klassenfoto.png" alt="Klassenfoto" />`

Andere: `<head> </head>` `<body> </body>`
`<main> </main>` `<footer> </footer>`

## CSS - Elemente:

```
h1 {
    color: red;
}
```
Selektor

} kann in einem style Element stehen

```
<head>
  <style>
    h1 {
      color: red;
    }
  </style>
  ...
</head>
```

weitere Eigenschaften: color
font-family
width
border
margin
padding

## Box Modell:


## Java-Script:

In Browserconsole:

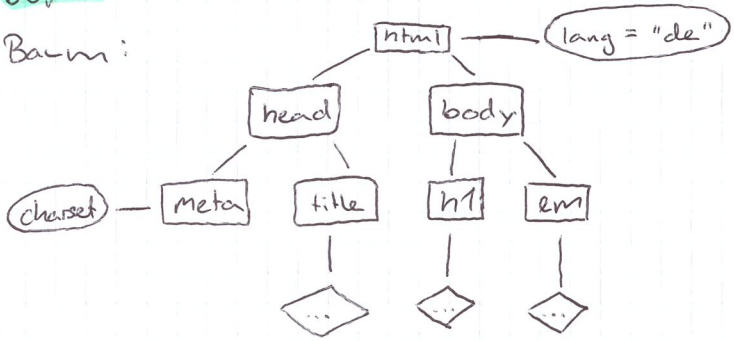
```
var sum = 5 + 10;
console.log(sum);
var a = new Array(10);
for (var i = 0; i < a.length; i++) {
    a[i] = i;
}
```

In HTML-Dokument: Innerhalb script-Tags

```
<script>
    function printParagraph(content) {
        document.write("<p>" + content + "</p>");
    }
    printParagraph("Hallo Welt");
</script>
```

## DOM:

Baum:




Funktionen:

- document.getElementsByTagName(...)
- document.getElementsByClassName(...)
- document.getElementById(...)
- document.createElement(...)
- document.createTextNode(...)
- element.appendChild(...)

Bsp.

```
const f = document.getElementsByTagName("footer")[0];
const n = document.createElement("p");
n.innerHTML = "text"
f.before(n);
```

## Event-Handling:

Bsp.
```
const button = document.getElementById("hallo-button");
button.addEventListener("click", print);
function print(event) {
  const p = document.createElement("p");
  p.innerHTML = "Hallo Welt"
  document.body.appendChild(p);
}
```

button in HTML: `<button type="button" id="b1">` berechne Fläche `</button>`

.value ← damit man Zahl bekommt

Bsp.
```
function difference(a) {
  let max = a[0];
  let min = a[0];
  for (let i = 0; i <= a.length; i++) {
    if (a[i] > max) {
      max = a[i];
    } else if (a[i] < min) {
      min = a[i];
    }
  }
  return max - min;
}
```