

Using Javascript in website

Adding Javascript to html file

There are also ways for it like inline, internal & external JS.

① inline JS

single quotation

```
<body onload="alert('Hello');">
```

It become : messy + confusing

single quotation \Rightarrow string

double quotation \Rightarrow element in HTML

Do not use inline Javascript

② Internal Javascript

```
<script type="text/javascript">
```

code

```
</script>
```

All code you write will be in javascript & interpreted as Javascript

③ So avoid both inline & internal Javascript
& we will do all stuff with external JS

JS position ① → Body → Script ⇒ for Javascript file
CSS position → Head → link ⇒ connect CSS file
in body tag

<body>

<script src="file location"> </script>

Here we provide path for file externally

→ HTML carry out work line by line.

→ If with JS you try to handle element which is not created yet so it will fail & not replicate any changes

④ DOM

⇒ Document Object Model

Technology to manipulate HTML elements

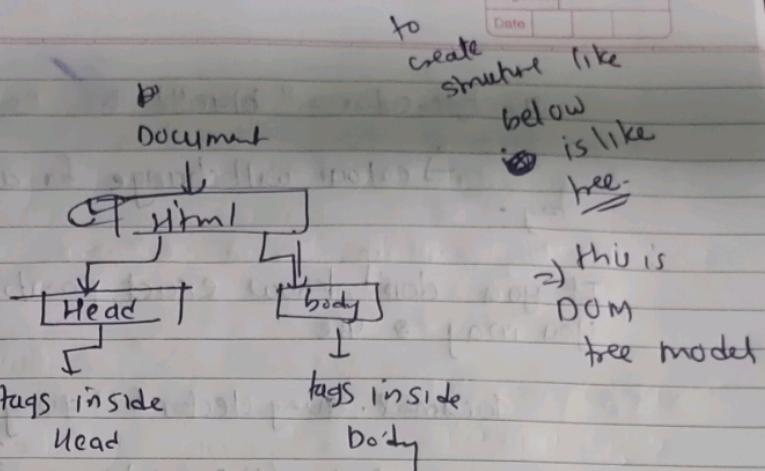
⑤ the document convert your code to a tree structure as JS only have a big container of the data.

Ex: <HTML>

<Head> <body> <head> ⑥
<body> <body> New row
<HTML>

opt file

Page No. _____
Date _____



Relations are mapped from one tag to another

① Download html tree visualizer extension.

so after mapping as document functions of it

① firstElementChild (document.firstElementChild
⇒ i.e always html)

② firstElementChild (document.firstElementChild)

& ③ thirdElementChild.

So say you have to adjust behavior of
body tag

Var a = Document.firstElementChild,
lastElementChild

& now

You can specify changes

a.style.color = "blue")

→ colour will change for all body tag.

If you don't know exact position so you may use

document.querySelector("query name").style
font-size: "some"; say h1

so all h1 will change

④ objects are tags of html element & it has properties & methods to apply

property methods
⇒ describe ⇒ functionalities of
object object

to get property

say

car is object

Car.color ; ⇒ get property

⇒ blue

Get property Car.colour = "Red";

Car.drive();

↳ If this method is called with
=() after name

only object can do methods

Page No. _____
Date _____

method has parenthesis at end

→ You can select variable & assign a tag from document to it + then you just have to apply changes with

• style :- styling you want to do

→ very easy to learn just keep tags in ur mind & half work will done

Inner html tag

→ So It will affect the internal part of Selected path from document.

Type of Childs

→ all childs (text + elements)
→ Elements (only elements)

→ So you can fetch particular element with query selector or with the use of getElementById or by class name or by tagname whatever

→ JS is so flexible so you can get a particular element with ease

→ So say you have multiple same tags & use use query like

document.getElementsByName('H1');

So If you have multiple `h1` tag so it will return a array consisting of all `h1` in that array.

the tag contains word Elements give you an array every time.

→ In `querySelector` you have write name just you did in CSS before styling tag.

→ Selector in CSS & here are same

→ If you have multiple items for particular selector you will get only first one.

In order to select all possible by the

→ `querySelectorAll('tagname')`

& this will return an array

→ mostly use `querySelector`.

manipulate element of CSS with DOM

You can change any CSS property with help of the DOM.

→ Property names are different in JS as

JS use camel case

Value for attribute should be in "" quotes
when → It is in Javascript

Ex:

```
document.getElementById("tb").style.padding = "10px";
```

④ the separation of web developer

HTML ⇒ Structure

CSS ⇒ Styling

JAVA ⇒ behaviour

⑤ class list

It is property which give list of classes
for any element

Ex:

```
var a = document.querySelector("button").classList;
```

so it will output all class for that Element

⑥ Add new class

```
a.classList.add("newclass")
```

Here how you can add externally JS styles

So this JS style will add externally to the
your code without affecting your predefined
CSS styles

You can remove class

a.remove("newclass");

• toggle

so if exist a new class

so a.toggle("newclass")

⇒ toggle will add class if not exist

⇒ toggle will remove class if exist

name inside toggle will get affected by it

You have write new class in css

& we will do changes in it through Java
Script

⇒ Here ~~the~~ ~~will~~ toggle this time

say

text content

⇒ It will change ~~the~~ text content in
your element

⇒ innerhtml & text element one alike

But if gives
text + Element

only text

orange coloured
in atom \Rightarrow attribute

Page No.	
Date	

to manipulate with innerHTML you have
specify html tags with it

\Rightarrow text element don't need any tags it only
change text content

Manipulate attribute of html elements

so

say

var a = document.body.firstChild;

\downarrow
 \Rightarrow anchor tag

a.setAttribute;

the href , target are attribute & you can
~~add or remove~~ make change with it.

so to view attribute

a.getAttribute("href");

(like something.com)

to set you have to pass 2 parameters

a.setAttribute("href", "www.coep.com");

\Rightarrow thus how

you modify attribute

In Javascript the sort function work alphabetical
if you have alphabets in array

mean

$x = [1, 2, 11, 12, 13, 41, 45, 21, 21, 2]$

$x = "a, b, c, d, e, f, g, h, i, j"$

#Event listeners.

So our target is to create a function which wakes up each time we do click on button

① Add event listener

this function is called whenever specified target event in function is invoked

there are lot of events

$target.addEventListener(eventType, listenerFunction)$

type for

which we want to see event

Here type = click

$target.addEventListener("click", handleClick)$

a function

to see problem in piece of code
debugger's

Piece of code want to check

function will be called every time such target
type is found for target

so Ex: for click

1, 2, 3 function handleclick() {

Code

3 } (scrapping) due

key Var a = document.getElementById('some')

a.addEventListener('click', handleclick)

Type, Function called

? Function will run

They are large no. of types on that for which
you can create a target

→ we not use parenthesis in addEventlistener

② Higher order functions & passing value as argument

In JS you can pass a function as a
argument to any other function such functions
are called higher order functions

It is not universal

So,

function add(n1, n2) {

 return n1 + n2;

}

function sub(n1, n2) {

 return n1 - n2;

function div(n1, n2) { return n1 / n2; }

function mul(n1, n2) { return n1 * n2; }

so for 4 of the above function you
can just use one function & we all of it

function calculate(n1, n2, operator) {

 return operator(n1, n2);

}

Read Javascript audio

Page No. _____
Date _____

Javascript new

So in order to see which item is responsible for click so for that we have a keyword

this It is one responsible for click

& this contains element for that responsible tag

Javascript objects

Objects are elements having some property with them

so there is some data related to single person but in lot of variables & it becomes messy

Ex:- a student-

Var name = "Ghansham";

Var standard = "B.Tech";

Var mis = 11190303;

Var Branch = "CSE";

so 4 variables are there for a single person
so here we can use Javascript objects

on

→ If you have multiple variables of same type so we can use the JS objects

Ex

Var std1 = { }

elements in
objects are
(comm)
separated

name : "Ghansham" → string

std : "B.Tech" → string

branch : "CSE" → string

YearOfPassing : 2023 → number

codingLang : ["CSS", "HTML", "C", "C++"]

array

}

You can store information of multiple type in a single object

in you can accessing value from object by using dot operator

console.log(std1.name);

Output ghansham

constructor function.

First alphabet of a function is Capital

Ex

constructor function

function Student(name, std, branch){}

this.name = name;

this.std = std;

this.branch = branch;

30 self run address 02 09/01

So constructor function use this which acts like current value element & assign funn value to it

⇒ to add new object you just have do

Var Bellboy = new BellBoy ("grs", "10th", "c1cse");
 ↑
 Variable ;

& this will assign, a new values to variable & variable is now an object having several properties

⇒ So Audio is an object created constructor function

⇒ new is used to create new object

⇒ It make this variable points to newly created object

④ Constructor is used to create new object

Prototype

↳ Student.yearOfBirth = 25;
 ↑

So each constructor has addition element which having element year of birth & has value

Console.log(Student.yearOfBirth) = 112;

① In declaration of classes we can also able to declare class.

So

→ now add keyboard inputs so for that we have to add event listening

⇒ Here event is keypress

for keyboard a press so document is our target

⇒ Event

event keyword in event listener it is passed as argument for function which called after function for that event is invoked

② Animation in JS