

WEB PROGRAMMING

→ HTML

- <form> tag

Use name attribute in server side, not client side (not necessary). Name is necessary because server reads it.

- <button> tag inside & outside forms.

- Audio Tag - wav, mp3, ()

<audio> tag -- attributes

↳ control, autoplay, loop.

eg: <audio attributes = " " >

<src=source src = " " type=" " >

</audio>

- <video> tag -- attributes

↳ control, autoplay

- <image> tag

<header>

<body>

<footer>

<html>

<html>

<head>

<style>

hi {

}

<body>

hi class="

Hello

#name { } </body>

* (universal) </html>

</style>
</head>

3 ways to add CSS to an HTML file:

- 1) In line
- 2) External (`<link rel="stylesheet" href="css">`)
- 3) Internal

~~++~~ JAVASCRIPT

Operators

- 1) Arithmetic - $+$, $-$, $/$, $*$
- 2) Comparison - $= =$, \neq , \leq , \geq
 value + data type
- 3) Logical - ~~$\&$~~ , $\|$, $!$
- 4) Bitwise - $\&$, \sim , \wedge , \mid
- 5) Special Operators

~~++~~

```
var x=2; if (x!=y) {document.write("1");}
var y=2; if (x!=y) {document.write("0");}
```

$$O/P = 1$$

\rightarrow Special Operator

- (1) new - to create instance of an object
- (2) instanceof - check if the instance is an "

(3) typeof - check datatype of object

Eg: ① <script>

```
var x = 2;
function four() {
    a) var x = 3; b) var x = 4;
    document.write(x);
}
document.write(x),
four();
document. — " — ;
```

</script>

x got "bracketed"

O/p : 2 4 2

x	x
2 3 2	4
global	local

- Inside the fn x global ~~2~~ becomes 3 then ~~3~~ changes to 2 because of b)

② <script>

var x = "2";

var y = 3;

var z = 4;

document.write(x + y + z);

document.write("4/bd")

— " — (y + x + z);

O/p

234 [2xx]

324 ↓

</script>

document.write(y + ~~z + x~~);

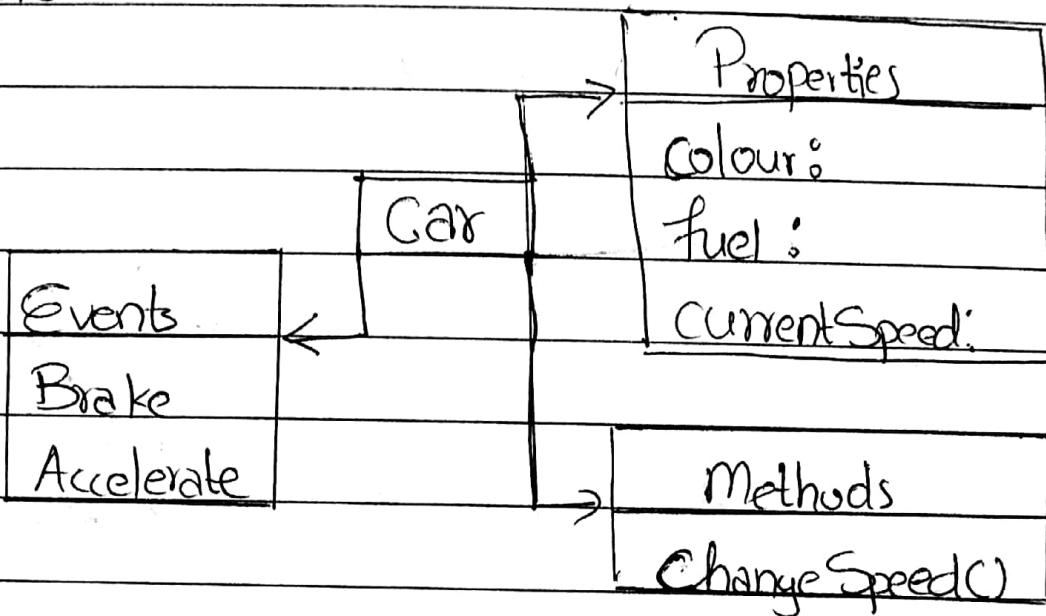
\therefore 1st one is string (or any?)

Browser Object Model

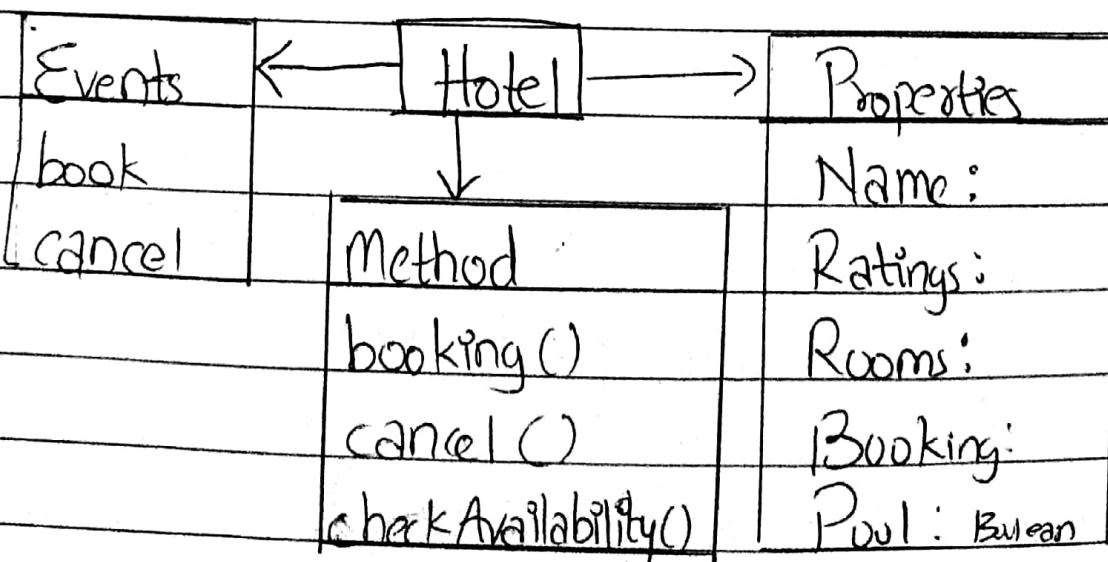
Everything is an object in JS, prototype based, not ~~class~~ class-based.

Every object has its own

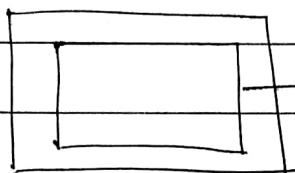
- Properties
- Methods
- Events



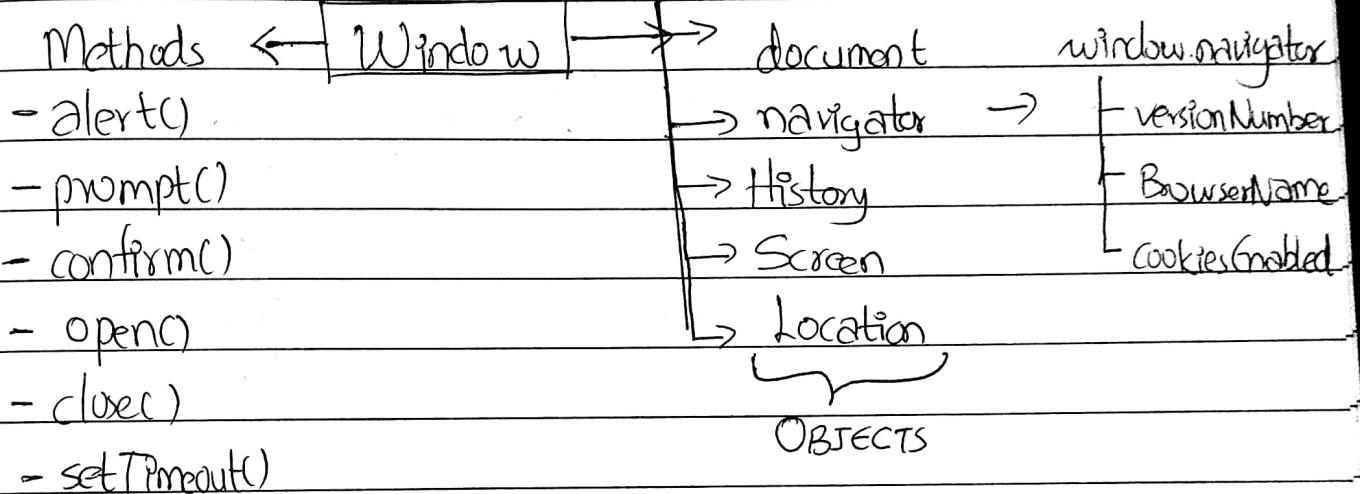
To change properties, trigger event that will call a method to modify the property



→ Opening Browser
Creates window object



document Object



① <script> function fun () { document.write ("Hello"); }
window.setTimeout (fun, 2000);
</script>

② <script>
window.alert ("Hello");
</script>

Confirm method
③ <script>
if (window.confirm == true)
{ document.write ("Proceed");}
else { " (" stay in same page "); }



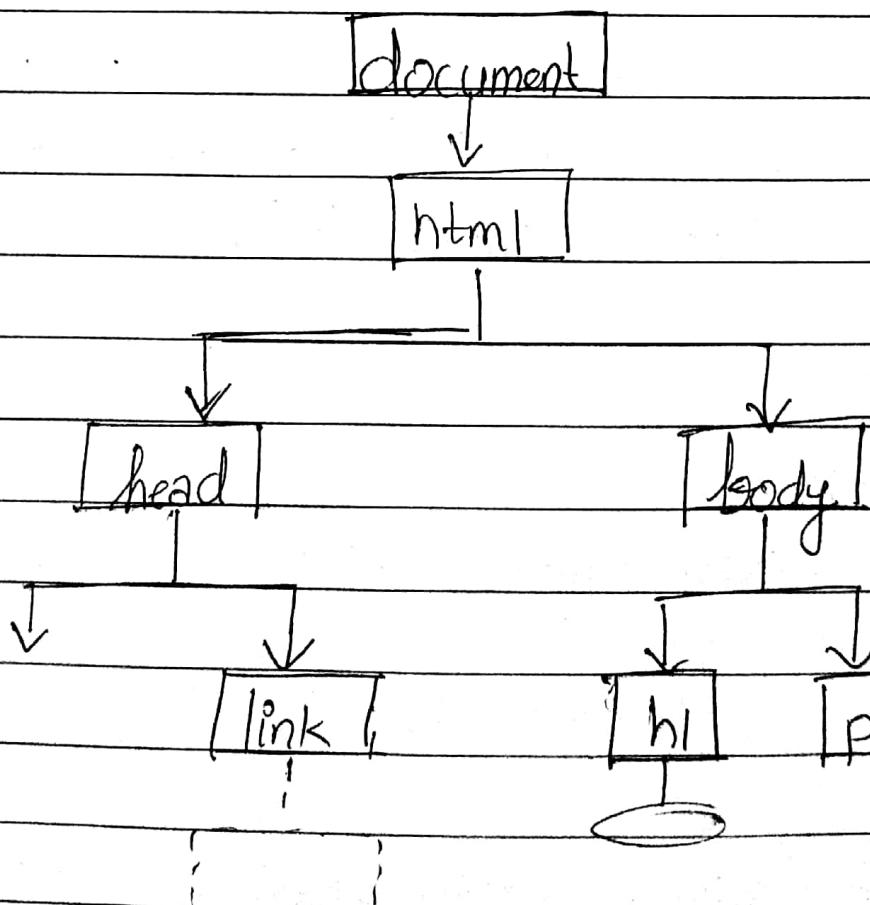
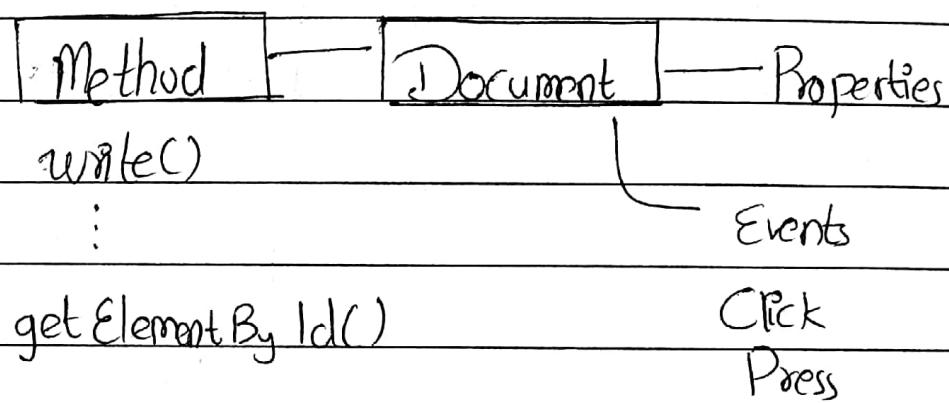
④ <script>

```
var x = prompt ("Enter your name", "Hello");
document.write ("Hello" + x);
```

</script>

points after
input (?)
No

Document Object Model



→ Methods

by Color
- writeln

get ElementById()

<!DOCTYPE html>

<html>

<head>

<title> Web prog </title>

<script>

var x = 0

function callFunc() {

if (x % 4 == 0)

document.bgColor = "blue";

else if (x % 4 == 1)

document.bgColor = "red";

else if (x % 4 == 2)

document.bgColor = "green";

else if (x % 4 == 3)

document.bgColor = "white";

x++;

}

</script>

</head>

<body>

<input type = "button" onclick = "callFunc()" value = "change">

</body>

</html>

EXERCISE

• `<input type="radio" id="1"> Female
<" " " " " id="2"> Male`

`document.getElementById("1").checked = "true"`

• Autofill form

Exercise:

Primary Address

Address

Zipcode

Select if secondary = primary address

Secondary Address

Address

Zipcode

→ innerHTML

`document.createElement()`

`document.createTextNode()`

`var z = parseInt(document.getElementById(" ")).value`

`z = x + y`

`var p = document.createElement("p");`

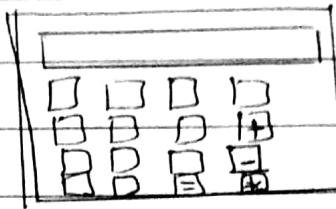
`var t = document.createTextNode("result is :" + z);`

`p.appendChild(t);`

`document.body.appendChild(p);`

Exercise

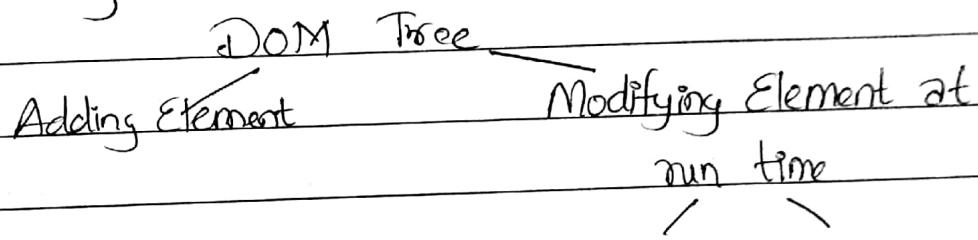
Calculator



→ Document Object Model

DOM tree is created when a webpage loads.

Manipulate by



DOM Tree

- Document Node ①
- Element Node ②
- Text Node ③
- Attribute Node ④

<html> ①

<head> ②

<link rel=stylesheet >

</head>

<body> ②

<p> ③ </p>

- </body>

</html>

--

STUDY

GetElement → getElementById (" ")

get ElementByName (" ")

get Element[S]ByName (" ")

get Element By Tag Name (" ")

query Selector ()

query SelectorAll ()

modify Element → nodeValue()

```
var x = getElementsByTagName('p'); // returns a list of all ps
x[0].firstChild.nodeValue = " "
```

eg: var x = document.createElement("p");

x.setAttribute('class', 'cool');

var y = document.createTextNode("Result is " + sum);

x.appendChild(y);

document.body.appendChild(x);

{ Methods }

O/P →

<p class='cool'> Result is (a+b) </p>

{ setAttribute() }

get "

remove "

→ innerTextExercise:Enter Password:

{ has " " tag }

Check dynamically

pwd length

& strength

<input type="password" value="" id="1" onkeyup=callFunc()

document.getElementById ("2").innerText=msg.

```

<!DOCTYPE html>
<html>
  <head>
    <title> JSB </title>
    <script type="text/javascript">
      function addPlayer(var name) {
        get
      }
    </script>
  </head>

```

Object

- Array
- String
- Numeric
- Boolean

DO

- Calculator

<input type="button" value="Add"/>	<input type="button" value="Sub"/>
Team: 1. A 2. B	

Properties

var hotel = {
 properties: {
 name: 'Abc', rooms: 42, booked: 20,
 pool: true, roomType: ['double', 'single']
 }
}

methods → checkAvailability: function () { this.rooms - this.booked; } }

function & hotel (name, rooms, booked ...)

{

this.name = name;

this.roomType = roomType;

this.rooms = rooms

this.checkAvailability

this.booked = booked;

= function () {

this.pool = pool;

return this.rooms - this.booked;

{

}

var x = new hotel ('ABC', 42, 20, true, [20, 40, 30],)

- Array

var x = [1, 2, 3];

var x = new Array();

x[0] = 1;

x[1] = 2;

x[2] = 3;

methods: concat(), indexOf(), pop(), push()

|

x.concat(y), reverse(), sort()

- String

var x = "Hello World";

var x = new String ("Hello World");

methods: toUpperCase(), toLowerCase(), charAt(),
indexOf(), lastIndexOf(), substring(),
split(), trim(), replace().

x.indexOf('e'); ≠ 1

x.lastIndexOf('o'); ≠

x.substring(1, 5); ello

x.split(); ['Hello', 'World'] Removes whitespace
before & after.

`x.replace("el", "wo");` Hello World

I1 Syllabus

HTML

{ I/P - O/P Problems }

CSS

Java Script — (1) Data Types , (2) Variables ,

(3) Browser Object Model

(4) Document — " "

(5) Objects — Array , String , Numeric , Math , Date

(6) Events , (7) Form Validation , (8) Cookies

Thu, 17th Jan 2019

Number → { var x = 1 — type of x = number
 var x = new Number(2);
 ↳ type of x → Object

- isNaN()

$x = "Hello"$

- toFixed()

$\text{isNaN}(x) = \text{true}$

- toPrecision()

$x = 1.37567$

- valueOf()

$x.\text{toFixed}(3) = 1.37(?)$

- toString()

$x = 1, y = 2 \quad z = x.\text{toString}()$

p = y.toString()
document.write(z + p) → 12

Date()

var x = new Date();
get Date() → 1-31
get Day() → 0-6
get Month() → 0-11 String
getFullYear() → 2019

Exercise: Enter DOB: [] | [Calc Age]

← Inner HTML

InnerText

InnerContent

<script>

```
function getAge() {  
    var x = "27/04/1992";  
    var y = new Date();  
    var z = y.getFullYear();  
    t = x.split("-");  
    document.write(z - parseInt(t[0]));  
}
```

3

Events

- ① → UI Events → Load, unload, resize, scroll
- ② → Keyboard Events → key press, key down, key up
- ③ → Mouse Events → click, dblclick, mouseover, mouseout
- ④ → Focus → focus, blur → mouse up, mouse down, mouse move
- ⑤ → form → input (when I/P value changes), change (dropdown...), submit (button type), reset (button type)

⑥ Mutation Events → DomSubtreeModified

DomNodeInserted

DomNodeRemoved

<html>

<body>

<script>

classmate
Date _____
Page _____

```

function callFunc() {
    var x = document.getElementById("1").value;
    var y = 6 - " " - ("2");
    if(x.length < 5)
        y.innerText = "Poor Strength";
    else
        y.innerText = "good strength";
}

var x = document.getElementById("1");
x.addEventListener("keyup", callFunc);

```

`x.addEventListener("keyup", callFunc, false);`

Events

7/18th Jan 2019

Working with DOM Tree

① Access the elements

Select an indiv. node → Select multiple nodes → Traverse bet. nodes

nodes

- (a) getElementById()
- (b) querySelector()
- (c) querySelectorAll()
- (d) getElementsByTagName()
- (e) getElementsByClassName()
- (f) getElementsByTagNameNames()

② Work with the elements

(a) ParentNode

- (b) previousSibling / nextSibling
- (c) firstChild / lastChild

④ Access / Update TextNode

(a) nodeValue

⑤ Work with HTML

(a) innerHTML

(b) innerText

(c) textContent

(d) createElement()

(e) createTextNode()

(f) appendChild(), removeChild()

⑥ Access & update

(a) className / id

(b) hasAttribute()

(c) set " " ()

(d) get " " ()

(e) removeAttribute()

⑦ Access & Update Attributes

(a) class Name / Id

(b) hasAttribute()

(c) set " " ()

(d) get " " ()

(e) removeAttribute()

Eg:

Soh

AddPlayer1

<html>

<body>

<input type="text" id="1">

<input type="button" id="2" value="AddPlayer">

<ol id="3">

 Alice

 Bob

classmate
Date _____
Page _____

```
<script href="1.js" type="text/javascript">  
</script>  
</body>  
</html>
```

1.js

```
var x = document.getElementById("1");  
var y = document.getElementById("2");  
var z = document.getElementById("3");  
var count;  
  
function callFunc() {  
    var p = document.createElement("p");  
    var childNode = document.createTextNode(  
        p.appendChild(childNode);  
    z.appendChild(p);  
}  
z
```

x.addEventListener('click', callFunc, false);

```
window.addEventListener('DOMNodeInserted', callFunc1, false);  
function callFunc1 {
```

count++, count + count1.

document.getElementById("4").innerHTML = count;

3

```
window.addEventListener('load', autoFocus, false);
```

classmate
Date _____
Page _____

```
function autoFocus() { x.focus(); }
```



p = z.nextSibling
p.nodeValue = count

FORM

```
<form action="" method="post/get" id="1" name="1">  
</form>
```

Methods — submit(), reset()

Elements — input [text, textarea], button [submit, reset],
checkbox, radiobutton, select, image, link,
email, password

Events on element — focus(), blur(), select(), click()

1st, 2nd ... form

document.form[0] OR document.form[0].name

To access elements of a form — document.form[0].elements[0]
document.form[0].elements.name

<select>
 <option value="select"> Select state </option>
 <option value="karnataka"> Karnataka </option>
 <option value="kerala"> Kerala </option>
 </select>

Change
value, does it
change shown?

State = [...] When selected changeEvent will be triggered.
 Kerala = [...]
 Karnataka = [...]

Q) When state is selected, corresponding cities must be listed in the same / another dropdown.

A:

```

<body>
<select id="1">
  <option value="select"> Select state </option>
  <option value="karnataka"> Karnataka </option>
  <option value="kerala"> Kerala </option>
</select>
<select id="2"> </select>
<script type="text/javascript" href="1.js"> </script>
</body>
  
```

1 js

```

Var x = document.getElementById("1");
Var y = _____ ("2");
  
```

classmate
 Date _____
 Page _____

Karna = ["Mysore", "Bengaluru", "Mangalore"],
 Kerala = ["Calicut", "Cochin", "Kannur"];

function callFun() {

}

x.addEventListener('change', callFun, false);

Var content = "";

if (x.value == 'karna') {

for (var i=0; i < karna.length; i++) {

content += '<option value=' + karna[i] + ">" + karna[i] + "</option>";

}

y.innerHTML = content;

}

EXERCISE

Name:

Short Bio:

At least 140 char

→ * Field is required (If moved away)
Email:

* Field is required

Password:

* Field length should be greater

DOB:

I agree must check before submit