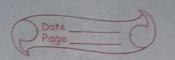
JS



Hoisting

The state where we can use function and variable before the declaration.

> H doesnot deline a constant value et defines a constant reference to a value.

You can NOT

- Reassign a constant value

- Reassign a constant array

- Reassign a constant object

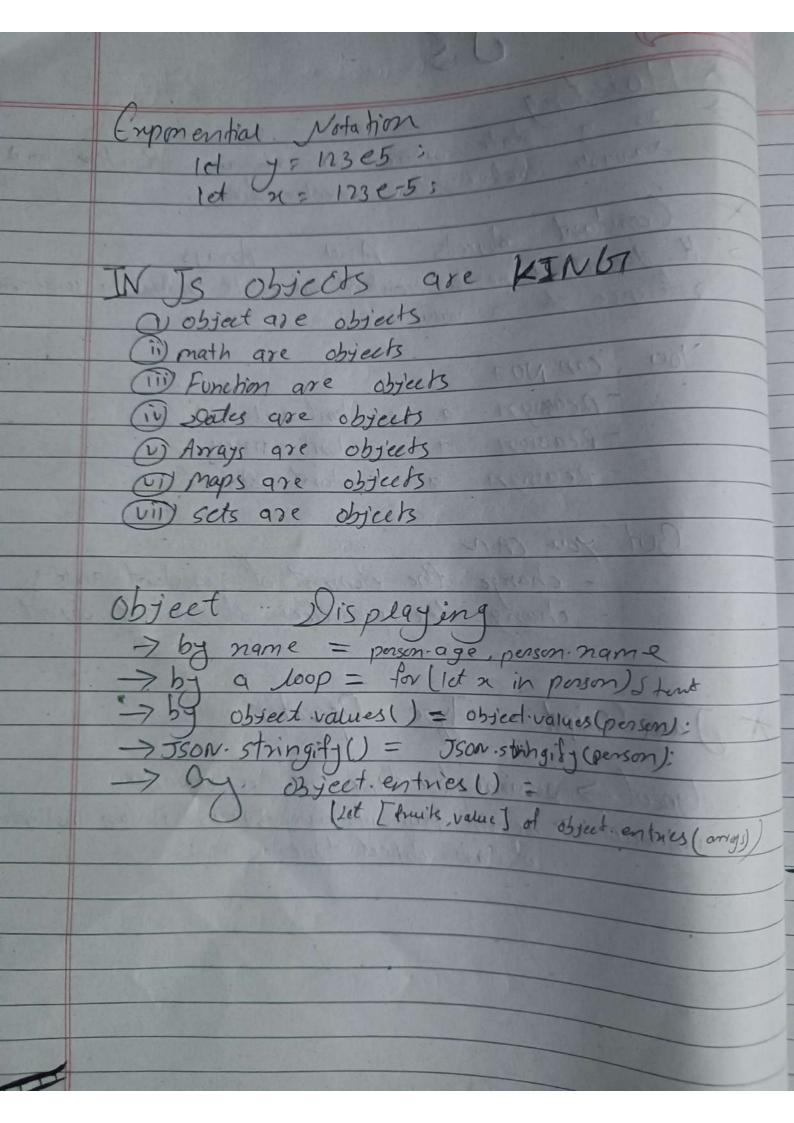
But you CAN

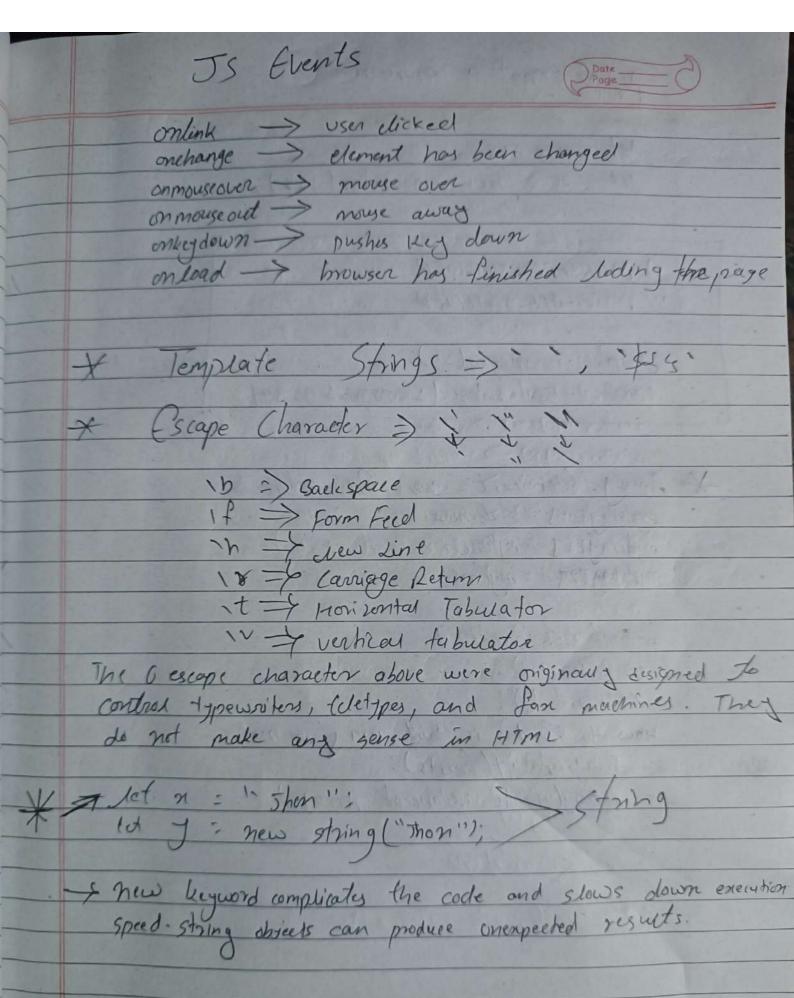
- change the element of constant away.

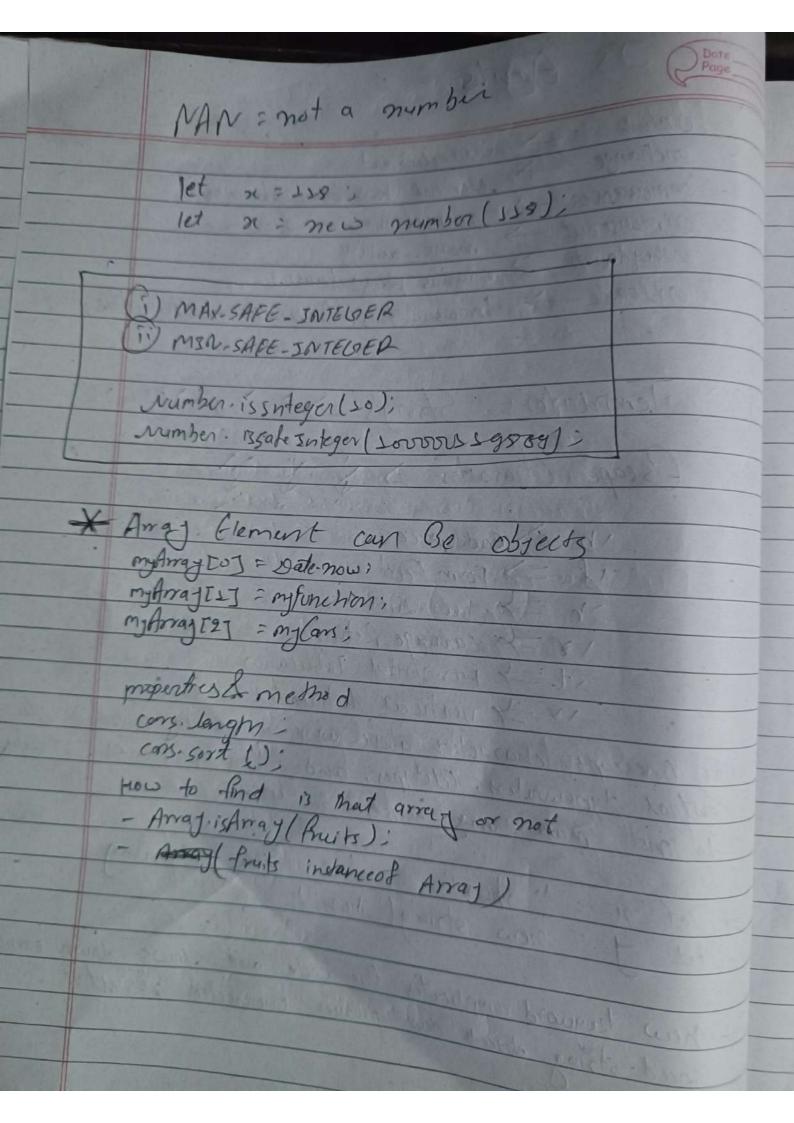
- change the properties of constant object.

\* Java Script Type Operator

instanceof > petums the type of a variable
instanceof > petum true if an objects is an instance
of an object type.









( December 15 15)

production of the land of the

vested Arrays and objects

Values in objects can be arrays and value in array

can be objects.

JS Dates

new pate (" 1828-03. 95"); -> gue hat glade in format new pate (" 1828-03. 95"); -> gue hat glade in format new pate (year, month, day, hours, minutes, seconds, ms) new pate (date string) new pate (miliseconds)

d. tosting ()

d. toutestring ()

d. toutestring ();

d. to Isostring ();

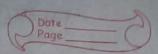
JS math. => return Cuter's number properties] Man sopt of 9 math ps => return ps Man .58PJI-2 => return no of 519 Moth IN2 => logarithm of 2 Math. 2NSO => 109anAhm of 20 > logarithm & base 2 St & => loggrithm base so of E math. 2012t math. 20410E method math. round (x) -> rounded to its neavest integer math. ceiller -> rounded up to its nearest integer math-floor (2) -> rounded down to its newsest integer moth franc() > give the x value math sign(n) > 1,-1,0,(-,+,0) Math. pow (8,2) math. gart (x) man- 965(n) - math. sin(a) math Eosla math. max () math. min() math yandowl) math. log (1) ) 5 Dandom math-floor (math. rando an () x so );

JS loop Date for > 100ps code number of times. for-in > loops through the properties of an object. for-of > 100ps throuble iterable object. while -> wors while a specified condition is true. do-while > 100ps while a specified condition is true. for In loop const person: S-frame: ", Uname: ", age: 25 4; for ( set a in person) {

tent + tent person [x]; Array for tech (myfone from):

\* For of 100P + loops through the values of an iterative object. for (2et n of Aman) 5 4 fent 1= X; Js sets 1 31 mm concetion unique values. each value can only occur once in a set. can be of any type, primitive values or objects. Dessing array to new set () (i) create empty set and use adde eg: const letters = new set (["a","b", "c"]). setters.size eg. const Setters = new setc); Setters.add("9"); setters . add ("b"): we can use for of for 18t dement

## TS Maps



A map object hold key-value pairs he any datatype how to create map (i) new map (i) map. set () e.g: const -Pruits = new maple ["bananas", 3007) eg: -Pruits set ("ogganges", 200); e-9 Bruits-get ("Apples"); =) 500 fruits instance of map; > true fruits instanced object; > true classes a Explanation Medical Medical

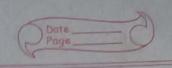
1 ( ) Trans

Javascript Iterables An iterables com be iterated over with forof loop. for (variable of iterable) sylan: Iterating over 7 string Array iterator protocol defines how to produce a Scauence of value from object. object became iterator when implements a next U. next) method return: D'volue - Tralue returns is) done -> true /false if compredes or unionobs[Symbol: Hergtor] = functions nentus

	JS iterator Page
	Page O
	provides a standard way to access elements
-	sequentially.
	5 terator protocert:, must have ment () method
The self	drop () -> slarp ex specified number of elements before
Billie	
	filter ) yew iterator containing element that sutrify a filter
	tinal the stigres a test function
	or ferator object from an enishing I we
	new iterator with horsformed by a mad
1001	Jake() >> return a new iterator that jieds at most a
	specified number of element
	reduce ()
ACT.	reduce )
	A in its and the state of the s
vote:	nul is a minitude realise track
	nul is a primitive value, nowever, typeof return object. This is a well-known bugin is.
	11 13 4 wed-renown bugin 1s.
	Type (oversion
	OP COVERSION
	( sumber ( to Exportant)
	De posseFloat ( AvFixed ()
	( parse Int () toprecision ()
	4
	(r) unary operator (+)
	(r) unary operator (+)  String ()

JS Error try-catch. block -throw > exception is caught by the catch statement and custom error message is dispeaged. HTML validation < input id="demo" type="number" min="5" man="10" step="1"> Pinally statement

-> execute the code after try-cater block. Error Name Values Evalleror -> Am error has occurred in the eval of function Dangeloror -> A number 'out of range" has occured Defference Gros -> illegal reference has occurred syntax from -> syntax em hos occurred UPIError -> An ever i'n encodeopts () has occure newer Is Lonot throw Graverror use syndan Error instead



It The wode Name property \* modeName

- nodename is read-only.

- noderame of an element node is the same astagrame. - 11 11 oftribute mode is the attribute name.

11 11 the document mode is always # document. " a tent document is always It tent.

\* node Value

\* mode Type

document. get flement By Id l'demo'.). node Type;

Dom Navigation Just everything in an Himl document is a mode. - The entire document is a document mode.

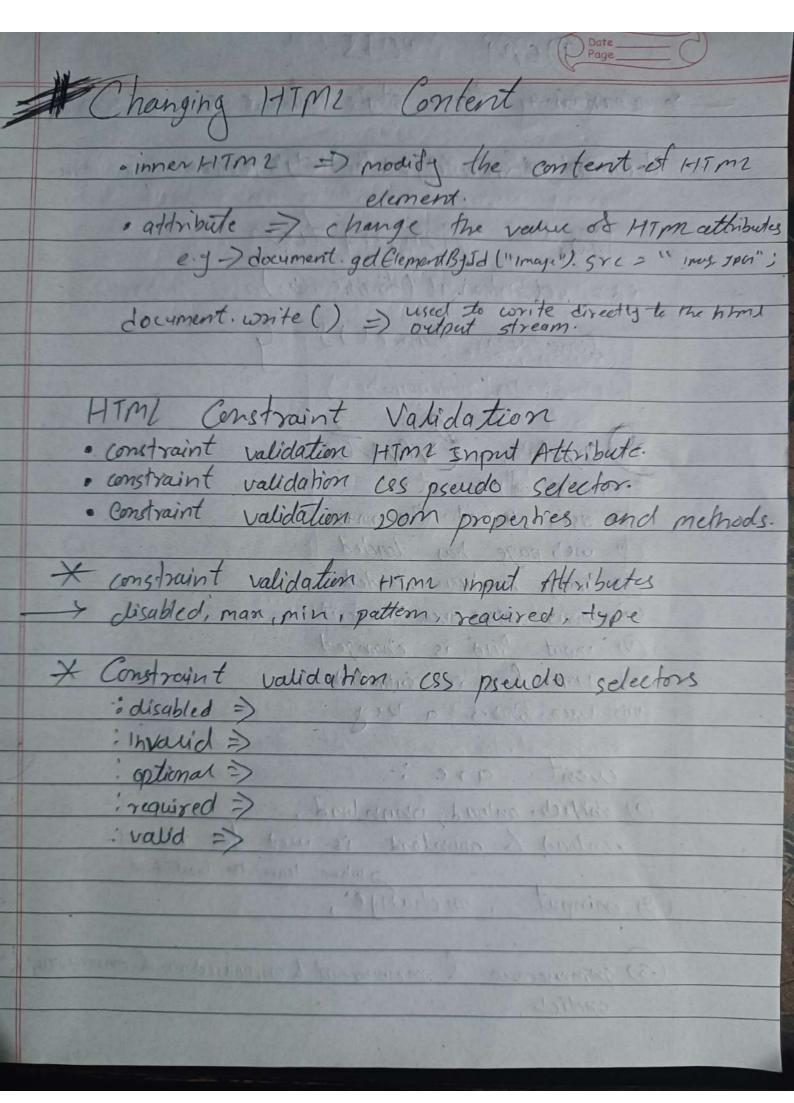
- Reny Hime element is an element node.

The text The text inside HTML elements are text node - Every Home attribute is an attribute node land.

- Au comment are comment nodes. parentNode chid Nodes [node number] firstchild lastchild nextsibbling previousibiling previousibiling document getflement By Il "1801") first child node value; downent body -> body downent downent downent flement -> full document

	Dom Event Listenner Page
	Bubbling -> event first van on that element then on its parent then upward prough the som.
	on its parent then upward mough the som.
	and the state of t
1	add Event Listener () -> adding event lattained event horsen
	servove fruit Listener () -> servorg event
	Controller no er strettette torrer jekter -
	Syntax:
	element add Event Distener (event, function, use Capture);
	1 South Care
	boolean value whether to use crest
	hubblings or event.
	Note: don't use "on" prefix: use "click" instead of
	Note: don't use "on" prefix: use "click" instead of
	Capturing -> event goes from root to child capturing is rarer, used for special cases
	capturing is navor, used for special cases
	like intercepting overts before they hit the
-	like: intercepting events before my hit the
	use the function:
	element acclient 200 tener ( arent, function, use lay time);
	usplapture >> faise bubbling
	inclapture => true capturing
-	

Dom css changing the style of ess. document get Prement By Id (12) style peroperty: new style Don Aning tien id = set Interval (frame, 5); fonetion frame () & G on Event Example of event O user droized the mouse ( web page has loaded mage has been toaded nouse provious element O input field is changed (i) Hime form is submitted (vii) user strokes a key & boldward is event are: O onWick, onload, onunload, - onload ( onunload is used for coolaies. 9) oninput, on change leave the input field (3) communeous & ommousedown & on mouseuf



DOM JS & In dom all Houl element are defined as obj. interface is the properties and methods of each object. Value = properties = get & set method = action megomause getPlement By 5d => method innerHIML => property Element select method by id we landed by tag name by class name

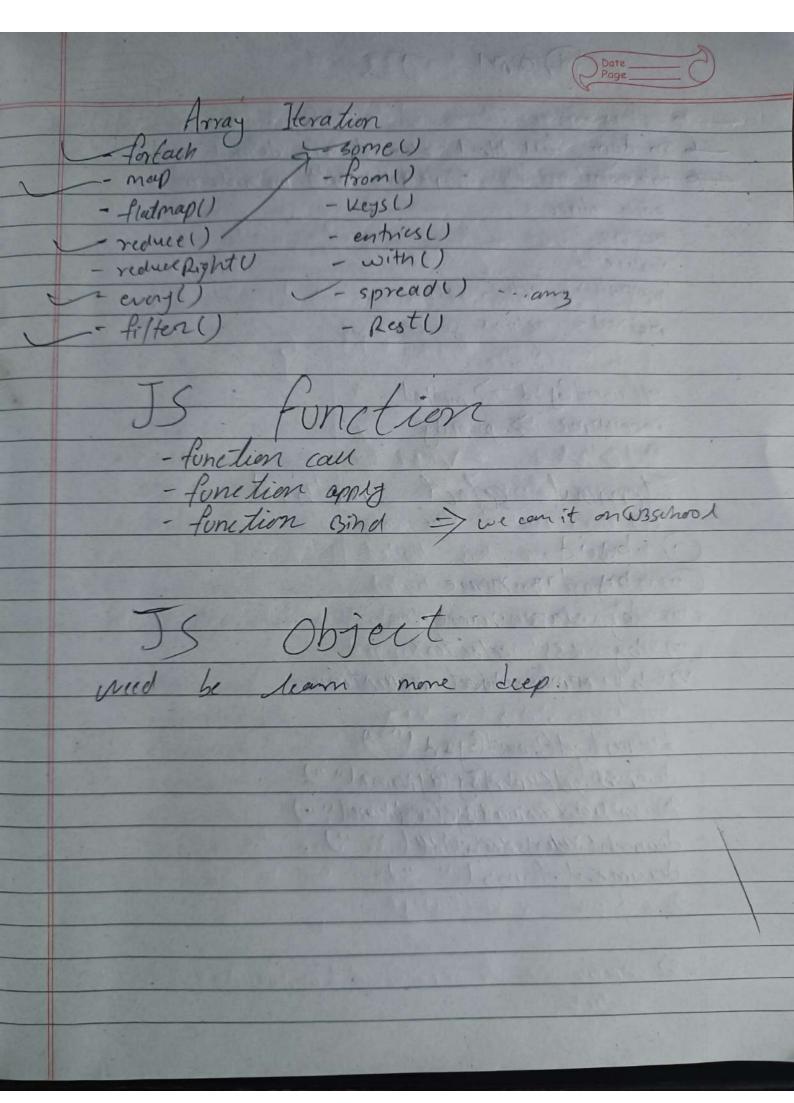
(N) by class name

(N) by class selectors

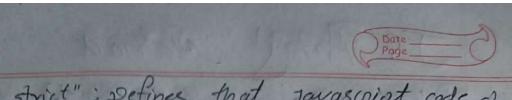
(N) by HTML object collections Lowert get Element By Id (") downent get ( 1 ement By Tag Name ("")

downent getersdector Au ("")

downent getersdector Au ("") document. forms ("")



JS Array Method Office () reduce dimension (it) conjuithin() i) length ii) testring () (xii) splice () > all now item (x) fratMapl) (Fili) slice() salue out a trice iv) Join (x') push popl, (YIY) shift() (XV) vii) unshift ( concal ) a mugity (X VIO) Scarch witho of findinsent) - indenaf() -> find() And Last U -) last Indental may find rastinden() -> Array includes() Alphabelic sort rimeric sort Array sord() Numeric sort Array source() formom sort Array to Sorted () math minu Array to Reverse U muth. man() Array Objects



note: "use strict"; Defines that savascript code should be executed in "strict mode".

JS modules

export (name, age);

enport de fault filmane, function name;

import Sname, age y from "./person.is";

mport

JS JSON

JSON. parse () to convert the string into assobilet.