· Tavascript which is often known as JS, is a highlevel dynamic interpreted programming language.

· It allows client-si'de scripting to treate complétely dynamic web applications l'websites.

server be executed on the brower as well as the

Javascript is a safe language when used in the

"Thuse are languages that get "transpiled" to !

* Javascript was invented by Brendan Eich in 1995.

* TS code is inserted between < script > a < | script > fag

* Stripts can be placed in the (body), of in the (head) section of an HTML, page of in both

* We can place the external script reference in < heads

* Is displays possibilities wasing ever 27

Js can use the document. get Element Id (id) method

downent. write() methods should be used only for testing

· using window.alust()
we can skip the window keyword

for debugging purpose, we can use console. (vg()
in the browser to display data

* innerHTML

- downent. get Element By Id (id)

- doument. write () town cribt window. alert() or alest() conson. 109 () * we can we window. print() method in the browers to brint the content of current windows * Ending statements with semicolous is not sequived but highly recommended 115-7319 april the total interior in its interior # Syntax Jan 12 Eller * Is values nobrested by Esterado and Editional Fixed values or orner liferals and it it or 27 Variable value or Variables Start Ni 10 years, INTH NO 10 NO POST (bred) he stobbirotethot bund suigh deferre in which 65 = 1 1 3 02 W UKE Is identifiers are case-sensitive TS une unicode character het IMTHISTIAL FROM . Hope (scomments 3 fep. tremusab est us no) 25 Single live comment of the followard pries of promision of comment with a comment WHAT WINDOWS CLUETT Variables askated will give me no
 - #
 - 3 ways to declase Is variable
 - · ming var declare a variable
 - Using let declare a block variable
 - using court declare a block courtant

(bi) Elystown of the opening

militar 1 41.07 / * Let Variables defined with let cannot be Redechred. Variables defined with let have so block scope

= Ex- let x = "ash" 17+11+" MA" = 15 +21 let n = 0 Paintell - their

Variable de dans inside block scope { } block cannot be accessed from outside the block

let=2 cannot in asser accient

bannoto lett betvar = 2 can the accessed from outside its types are pharmic

let noisting

- this MIPONE THAT THE - variables defined with vas are hoisted to the top and can be initialized at any time
- wing let variable before it is declared will result in a referenceuros : "N 48" = 11

* const

· variables défined with coust cannot be sidecluses & reasigned

* Is Buckeys

· variables defined with coust have block

Is const variables must be assigned a value when they are declared.

stantino 2t to 0-1040 with > declaring a variable with constris similar to let when it comes to block scape.

1). Monst traisting toom. barilation where using a const variable before it is declared will vesult in refuseralessos

X Data types sielet no= 16+4, to "Ash"; when being is used in Jose result - 201Ashfil Alles budjet municipe let n = "Ash"+16+4; 2 -11 131 result - Ash164 when addin a number le a string. Ts traf the number as a string In the 1st example, Is trats 16 & 4 as number until it reaches " Ash". In the 2nd example, since the first operand is a String, all operands are treated as string Js types are Dynamic X PNHZFON 15; this means that the same variable can be un to hold diffirmt data types. wing let variable before it is declarifical TERING IN A NIGHTENER n= "Ash"; Francis X Is Booleans · bookans can only have two values: true & falle · they are Often und in conditional testing The type of operator islaminos times al We can use the TS typeof Operator to fiend Undefined of Js variable without a value that the volue undefined. The type is also undefined let car = undefind; > resort - un defined

* empty string to " + morning in 19 1911 · An empty string has both a legal value la type result - value = industrated to softy benef Evolstring port Ts objects · Objects use variables too, but objects can
confain many values · It is a common practice to declace objects with the const keywords it ex - Vor maries = { . Novo of ranging 4 Sub: 78 10 10 May 59 52 harry: 99,97 Spile 7 · Objects methods - methods are action that can be performed ·on objects - methods are stored in properties as - this Reymosof His I was worked from this refers to the owner of the functions this is the person object that "owns" the fulgame function 10 1/2 2 this. firstname means the first name property or [court person = { ; superfect " det " sonder firstneme ! "lavi"," Salving " sollastuene : " poe",

turname: tunction() &

refuse this firstname + " " + this lastname; By lobal a stad may Broom Byding who result - Pesson-fullnamel) - Rouri Doc A very high level - 2 types of data types ST NI Jos 100 27 Primitive datatypes contains many young binifibaniste esestate is a countries profficient stringtrompor tenos with util boolian. 3 = DITERN 120 symboling 2) Refuence data types - Arrays - Objects · objects withouth Arrays and was fault notice sees wonten -Harina 110. on array is a special variable, which can hold X Coust array-name = [item 1, item 2...] * Me Arrays are debjects now of explan and arrays are special type of objects. The type of operator in its seturus "object" for arrays. - const Person = ["Ash", "Doe", 46] const Person = [firstname: "Ash", 1 cyfname: 101, dyo: 463;

· Day Hall

* properties. · cass length - returns the no of length · (ars. sort () - sost the alley · cars [cars.length-1]; - access last element · Array. for Each () - looping · Cars. push ("") - add elements (als [cars.length] = "Audi"; adds ands Diffence in assays 2 origets · assays use numbered objects use named indexes use array when we we objects when we want the eliment want the clinery name to be string. names to be numbers. const points = new Array (); - Bad const points = []; broad x: grottow to ricognize an array Array (truits); - Travel · fruits instance of Array; - True * Methods · converting arrays to strings - document. get Elemen By Id ("demo"). inner HTHL = fruits. - document. get Element By Id ("demo"). inner HTML = finits. testring (); · Shifting is equivalent to popping working on - fruits suff () (seo. Dill) (1440. xom. Hem unshift() methods add new element at first - truits. curshift (" ");

delete. fsvits [0]; - changes the 1st element in fruits to undefined. Splice () method can be used to add new clements to the array. - fruits . splice (2,0, "lemon", " Kinj"); At what slightly items position = [N goldeted)] stigned by - fruits. splia (0,1); - removes the first element concept() methods create a new away by musing existing away. court my = mygirsi. concat (my boys); consta= b. concat(c,d); the slice () methods slices out piece of an array into a new array. Him - the stice () method creates a new array. It does n't change on remove any clements brom the some ce array. stru (1,3) 1.5.19319 from project of spares projection of ") bigaronalli, . to townson fruits. sost () The fruits reverse () many particular of a formation of points. sort (function (9,6) { refusin 9-63); points. Sort (function (a, b) (return · b-9}); math. max. apply (null, ass); deceiveding order

```
Functions
 * A Js function is executed when "Something"
   involves of the position is
    tunction my Function (PL, P2) &
        C1 = and my Function (4,6)
                      [val 17 10] 250 x.
# spe Conditional statements
   * if (condition) do in positioned at
         { } . ] ( too ide ni posi) to].
         if (condition) (2/00) 10 10
    X
de mile (condition 2) 18 3 20 1 miles sit
         else ( faith for median) 12/
   * Switch Statement
        Switch (condition) & Jean still
            ( Code block ( miliparis) 3/ Wil
         Can y:
          11 coole block
             breau
          defaute: icol. slike ab
            Il coole block
            3
                     While ( countient)
```

```
100ps
                              11 11 20 11
* for - 100ps through a block of Lode
              a number of times
       for (statement 1; statement -2; statement 3)

{
// Lode block
            (1'') maitimal human (1''')
     The for i'm Loop
  the Js for in statement loops through
  the properties of an object ( )
       · for ( ley in Object ) {
              11 code
   The for of loop (nothings) fi
   the Is for of statements loops through
   the values of an 1'terable objects
        for ( variable of iterable) ;
              Mode formulation within
                   ENTITLE ( CONCRATION)
    While
X
       While (condition)
         { Under the second
    do while loop
                          · fletofole
     do ¿ z
                 // m le lock
```

while (condition);

cir. for each (function (element) } Consolu-log(element) Lecensial + remine inighter many)(E 2001 mount, append Child (+ (mary) Dowment Object Model (DOM) The DOM is a W3C (world wide web Consortium): Standard The Will Dory is a platform & language-neutral interface that allows programs & scripts to dynamically access & update the content, structure style of a document. - Const cleaning: document. the HTML elements as Objects smith pridate the properties of an HTML elements. the methods to access all HTML elements the events for all HTML elements prisons document get Element By Id ("dimo"). inner HTML = "Hi" - get Element By Id is a method - inner HTML is a property - the inner HTML property can be used to get or change any HTML element, including <Hims & * Finding HTML elements - document. get Element By Id (1d) - document. get Elements By TagName (name) - do convert. get Elements By Wass Name (neme) Change HTML elements × · element. inner HTML = new infine confert. Clement. affribite = new Value eliming. style. property = new style

* Adding & Deleting climents - do ament. essate Element (clement) - document . remove Wild (climent) - document. append Child (climent) - do ament · replace Child (new, old) 1 -document · west Ltext) * Adding events handling " HAR DON! " 6 - document - get Element Ry Id Lid) . our d'eu = fun exion () of sights a smarphy small tout and this 7 wale 3 + Hinding HTML elimints by id - Const element = document. get Elementary Ry Ed.

Tinding HTML climants by Tag name "("int - coust climent = document. get Eliments By TagName finding HTML eliments by class name - coust 71 = document get Elinients By Class Name ("I'ntro") finding HTML elements by ICSS schetor - const n = document · query setutos All ("P. intro"): · Trinding HTML elements by HTML Object collections. * Set time out & set interval

* assow Lune L'. * assow function function sum (a, b) { refur 9+bij } . Singson. Sum = (a,b) = (a,b) = 1000 letur 976; Eliment. affir plan : mad virter Edwinds - the cost of a character

```
* set Timeouf (log Karo; 2000);
                              m $11 se conds
pull for this or as for the few littles
      log ((a,o = () => {
        Course leg ["Im ur log")
the will brint after 2
                        15/20 4 pol
     Sef Interval (leg Karo, 2000))
X
                 plocal of copy to go
        copy here are
       after every 2 sec output will bring
He regularity and of whom po would
            Marsi natrolley with la
  * try - test a block of code for errors
     Coutch - lets you handle the esser
     throw - lets you create custom essons
finally - less you execute code, after try &
               Catch
                           Sand States Error
 * try & cough
UKI CHAT - COM BURGO IN BURGETHU .
         block of code to try
       cafin (err) $
         block of code to handle error
```

* Tusow · the throw statements allows you to beate a custom essor Technically you can throw an exception (throw an essor) throw "too big"; - turow test throw soo. * finally · the finally statements lets you execute lode after try e cotch (el Enternal (10) Kons, 2000) · try [ablock of code to try Copy the copo (atch (err) { block of code to handle errors finally & block of code to be executed regardless of the try/cuten result - Trop a place of code les for -Essos names house her for . wo for Evalerroz. - essor o'curisid i'u eval. function Range Euror Refirence Essoz Syntax Eeroz til t catel Ty he Essos URIEssor - on essor in encode URI() has occurred 10 20 2016 (110) (11) \$ 100-5 Mirrord + 25-55 15 2001d

ITS JSON (Javascript Object Notation)

- · Ison is a for storing & transporting data
- · Ison is offen use when data is sent po
 - betteropage from a server to a web page
- · Ison is a lightweight data interchange formet
- * Ison is language indépendent *
- Ison is sufdescribing a casy to understan.

* Rules

- · Data is in name / value pairs
- · Data is separated by commas
- · curly braces had objects
- · Sque brackets hold assays
- · always in double quoty

* examble

"enuployees": [

& "firstname": "Tohn", "lastname": "Doe" },

& "firstname": "Anna", "lastname": "smith" },

& "firstname": "Peter", "lastname": "Jones" }

}

Vessions

ECMAScript is the official name of the lang. that is used to marnfain the standard of TS