JavaScript

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- javascript is a high-level object-oriented multi-paradigm programming language.

Note if we have to write in-line "css" in Html file we write that in <style> inline css. </style>.

- Same if we have to write in-line "js" in Html file we write that in <script> in line js. </script>.
- & both are written below <title> & not in <head></body>

like.

```
<script>
    let js = "amezing";
    if (js = "amezing") alert("javscript is fun");
</script>
```

- To print some thing in console e.g.

```
<script>
    console.log(40 + 8 - 23 - 10);
</script>
```

- Now we can see the result in console in browser inspect.

[in console we see 15]
↳ The result of our calculation.

- in calculation ⇐ console.log() prints it's result not the text we put.
- but in alert() it prints text we type.

To link js file with Html file

<script src = "chapter1.js"></script>.

- if we js file is in other folder we have to give correct path then using ../foldername/etc.
Same in css file.

values & variables

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→ a piece of data.

(e.g)

```
console.log("Danish Nisar Kumar");
```

⇒ Danish Nisar Kumar is value.

→ a box of memory in which we store our values e.g.

```
let firstName = "Danish Nisar Kumar";
```

↓

here this is variable in which we store our (data or values). like (we can use it now eg

```
console.log(firstName);
```

⇒ we got printed our value now (Danish Nisar Kumar)

→ It can be useful like e.g.

```
if Hello = "Brother";

console.log(Hello);
console.log(Hello);
console.log(Hello);
```

⇒ we got this result.

Brother.
Brother.
Brother.

⇒ now if we want to change it to we only have to change in variable in in 3 places. like.

```
if Hello = "Buddy";
```

How to give name to the variable?

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① like if we have to give many words name then?

⇒ we type 1st word small then after in capital.

like if variable name has to put (Hello tom kaise ho)

⇒ we write like helloTomKaiseHo ✓

⇒ this is the correct way but in modern js.

we can write all small or all capital. like

~~hellotom kaise~~

① hellotomkaisekho. ✓

② HELLOTUMKAISAho. ✓

③ Hello_Tom_kaise_ho. ✓

⇒ And we could not name any variable starts with number.

(e.g) /// 3Hello X ⇒ no we could not start variable name with any no.

- But in middle or end we can put numbers. like

let H3e11450 = ✓.

⇒ And also we can put symbols dollar and underscore not in start not in middle & not in end. e.g.

(!, @, #, $, %, ^, &, *).

(⇒here only $ & _ works) (dollar & underscore works here.)

⇒ Also we can name variable that are functions of javascript. like.

① new (is a reserved keyword in js) ⇒ so we could not name them in variables.

② function (also reserved keyword.)

⇒ we should not use variable name starts with capital letter ~~so~~ we should start it with small letter. But why? (we read that later).

⇒ we type all capital for constants like.

PI = 3.1415; (we can also type like pi = 3.1415;

⇒ but in companies we have to maintain format of coding.

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* Now what approach we use to write name of variable

(eg):

①
```
let myFirstJob = "programmer";
let mySecondJob = "Teacher";
```

or.

②
```
let job1 = "programmer";
let job2 = "teacher";
```

⇒ As we see to make our code cleaner we use Approach 1. (1's Last Approach to make code clean).

* Value
is either object or primitive

object (e.g)

```
let me = { name: "Danish" };
```

primitive. (e.g).

```
let firstName = "Danish";
let age = 18;
```

There are 7 types of primitive data types.

① Numbers: floating point numbers means - used for decimals & integers (e.g) 11, 3.33

② Strings: Sequence of characters → used for text.
(eg) let firstname = "Danish"; string data type.
• Always put in single or double coat's. other wise .js will confuse & think these are variables not values.

③ Booleans: → logical type that can be true or false → used for taking decisions. (e.g) let fullAge = true;

Mansa

* No need to put it in single or double coat's because if we put they become "strings then not boolean

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④ ⇒ Undefined: Value taken by a variable that is not yet defined. (empty value) eg: let children;

e.g ~~let child~~ DATE ⇒ here it no value so it is called. undefined.

- why we use undefined beoz if in future we have add their anything then we can add.

⑤ Null: Also means empty value ~~use this~~ but we use it in other circumstances don't worry about details of it for now. (for now just remember null also exists)

⑥ Symbol (ES 2015): Value that is unique & can't be changed [this is not useful now a days].

⑦ BigInt (ES 2020): Larger integers than the no. type can hold.

* In js we can comment by // or by (ctrl + /)
⇒ & if we want many lines to comment once. In the starting of 1st line type /* .... then in last line at last type */

Actually a fun thing to do....
⇒ if we want to know that the value we type is what data type like is it a (no., a string, Boolean)
Then we can do this like. (typeof).

```
"""
console.log(typeof true);
console.log(typeof false);
console.log(typeof 29);
console.log(typeof "Danish");
"""
```

- You know what result we get.
- Boolean
- Boolean.
- Number
- String.

⇒ This is the result we got.

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js has dynamic typing:.

→ means we can change the value of some variable if we want eg.

① . if we have. ''' let hello = 23;
console.log (hello);
⇒ it is number here (data type now).

② . if we want to change the (value or data type).
''' hello = "Danish";
console.log (hello);
⇒ This ''' time we don't type let. (now it knows it is string & also value changed)

{ it happens in some code.
& we can do it how ever many times we want }.
{ just not type (let) again.

eg)

③ '''
hello = false;
~~console.log (false)~~. console.log (hello);

④ ''''
hello = true;
console.log (hello);

{ we can also check this with. typing each time.
console.log (typeof hello);
⇒ it tells us what one we are using right now }