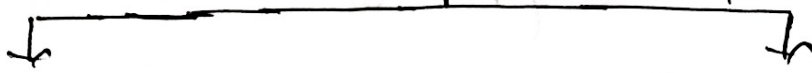# Data types.

- It specifies the type of data that the variable can store like integer, character, floating, double etc.....

Types of data type

i) Primitive data type | (ii) Non-primitive data type

i) Primitive data type

- these are fixed data type
- Some of fixed data types are

i) Number

eg: (0, 100, -28, 8·(4)

ii) String.

- String must be placed within single/double quotes.

eg: 'a', 'ABC', '123'

iii) Boolean

- It can be either true a false

iv) undefined.

- It is not same as Null

v) null null

vi) Bigint

vii) Symbol

(ii) Non-primitive data type

- These are mainly object.
- object are collection of values.
- key and value are important in object.

x Operators x.

- The one who performs any operation.
  are termed as "operators".

  eg:

$$\underbrace{a+b}_{expression} \longrightarrow \begin{cases} a, b \rightarrow operands \\ + \rightarrow operators \end{cases}$$

Types of operators

i) Arithmetic operators
- It includes +, -, *, /, %, etc. ...

  eg: console.log(2*5)
  ↓ output
  10

ii) uninary operator.
↓

Increment operator
- Increases the value
  by 1 (eg: a++)

Decrement operator
- Decreases the
  value by 1 (eg: a--)

Post increment operator
- (a++)
  ↓
eg: Let a = 5
  console.log(a++)
  ↓
  output: 5

Pre increment operator
- (++a)
  ↓
eg: Let a = 5
  console.log(++a)
  ↓
  output: 6)

Pre decrement operator
- (--a)

Post decrement operator
- (a--)
  ↓
eg:
  Let a = 5
  console.log(a--
  5

Note

$$(a+b)++ \atop ++(a+b) \Big\} \to error$$

iii) Assignment operator.

• It assigns the value to a variable.

eg: a=5

Some of the operater are!

• (+=) operator → prior addition then assign
• (-=) "   " Subtractn "   "
• (*=) "   " multiplicatn "   "
• (/=) "   " Division ...   "

eg: a+=1 → a = a+1

iv) comparison operater.

used to compare the values

(==, !=)

eg:

    Let a=5

    Let b=10

    console.log(a==b)

         ↓ ouput

         True.

• Some of comparison operaters are:

    (>=, <=0...)

Logical operator

- Some of the logical operators are
  (AND, OR, NOT) $\left[\begin{array}{c} AND (\&\&) \\ OR\ (\,|\,|\,) \\ NOT\ (\,!\,) \end{array}\right]$

- They have similar function as if
  in mathematical reasoning.

- && (AND) → used when two conditions
  $\underset{\downarrow}{\quad}$ combines

  returns True when both condition
  is true otherwise false.

- OR (||) → True when any cond^n is true

- ! (NOT) → returns

  ↙   ↘

  True   false
  (when condn   (when condn is True)
  is false)