CHAPTER 2 – VARIABLES & OPERATORS

What are Variables?

Variables are containers for storing data values.

There are three types of variables:–

1. var   →   *var x = 2;*
2. let   →   *let y = 3;*
3. const   →   *const z = 4;*

Note : The values of var & let can be changed further, but the value of const can't be changed once declared.

When to use JavaScript const?

Use const when you declare:

- A new **Array**
- A new **Object**
- A new **Function**

Note : These are mutable which means that we can change the elements of constant array & change the properties of constant object.

JavaScript Keywords

Keywords are reserved words that are part of the syntax in the programming language like var, const, let etc..

JavaScript Identifiers

All JavaScript variables must be identified with unique names. These unique names are called identifiers.

Rules for contructing names for Variables (unique identifiers) are:

- Names can contain letters, digits, underscores, & dollar signs.
- Names must begin with a letter.
- Names can also begin with $ and _ .
- Names are case-sensitive.
- JavaScript Keywords cannot be used as names.

JavaScript Operators

1. Arithmetic Operators → +, -, *, **, /, %, ++, -- .
2. Assignment Operators → =, +=, -=, *=, /=, %=, **= .
3. Comparison Operators → ==, ===, !=, !===, <, >, <=, >=, ? .
4. Logical Operators → &&, ||, ! .
5. Bitwise Operators → &, |, ~, ^, <<, >>, >>> .
6. Type Operators → typeof, instanceof .

Precedence Table of JavaScript Operators

Precedence	Type	Operators	Associativity
1	Postfix	() [] -> . ++ - -	Left to right
2	Unary	+ - ! ~ ++ - - (type)* & sizeof	Right to left
3	Multiplicative	* / %	Left to right
4	Additive	+ -	Left to right
5	Shift	<<, >>	Left to right
6	Relational	< <= > >=	Left to right
7	Equality	== !=	Left to right
8	Bitwise AND	&	Left to right
9	Bitwise XOR	^	Left to right
10	Bitwise OR	|	Left to right
11	Logical AND	&&	Left to right
12	Logical OR	||	Left to right
13	Conditional	?:	Right to left
14	Assignment	= += -= *= /= %=>>= <<= &= ^= |=	Right to left
15	Comma	,	Left to right

JavaScript Datatypes

JS datatypes means which type of data we are storing in our variables.

JS Data Type

Primitive
Boolean
Null
Undefined
Number
String
Symbol

Reference
Array
Object
Function
RegEx
Date
. . . .