# Variable

1. You should not use any of the JavaScript **reserved keywords** as a variable name. For example, **break**or **boolean**variable names are not valid.
2. JavaScript variable names should not start with a numeral (0-9). They must begin with a letter or an underscore character.   
   For example,   
   **123name**is an invalid  
    **\_123name**is a valid.
3. Variable may start with a “$” .But it’s not recommended.  
   **$name** is valid , but not recommended.
4. JavaScript variable names are **case-sensitive**. For example, **Name**and **name**are two different variables.
5. You can’t have space in variable name  
   var **na me** = “hasan”; // invalid

# Reserved Words

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# Data type

var length = 16;                               // Number  
var lastName = "Johnson";                      // String

var admitted = true; // boolean

(few more to learn later)

# Weakly typed

the term “Weakly Typed” actually means that JavaScript is smart enough to do the work of determining what type of data any given variable should be.

## Example :

Var a = 20;

Var b= 20;

Var c= ”20”;

Var d= ”20”;

a+b results in 20

c+d results in “2020”

Here JavaScript automatically determines that a and b hold numbers when c and d hold Strings

# Alert

# Prompt

# Operators

+ - \* /

“+” can do both concatenation and calculation

“-”,”\*” and “/” can do only calculation

## Examples :

### Example 1:

var a = "20";

var b = "2";

var c= a\*b; // 40

alert (c);

### Example 2:

var a = 20;

var b = 2;

var c= a\*b; //40

alert (c);

In both example 1 and example 2 **a\*b** results in **40** .

# Concatenation and Calculation

Var a = 20;

Var b= 20;

Var c= ”20”;

Var d= ”20”;

a+b results in 20 // calculation

c+d results in “2020” // concatenation

# JavaScript Programs

A **computer program** is a list of "instructions" to be "executed" by a computer.

In a programming language, these programming instructions are called **statements**.

A **JavaScript program** is a list of programming **statements**.

# JavaScript Statements

JavaScript statements are composed of:

Values, Operators, Expressions, Keywords, and Comments.

This statement tells the browser to write "Hello Dolly." inside an HTML element with id="demo":

document.getElementById("demo").innerHTML = "Hello Dolly.";

# Method/functions

# Get element by id

document.getElementById("demo").innerHTML = "Hello JavaScript";

document.getElementById("myAnchor").href = "https://www.w3schools.com";  
document.getElementById("myAnchor").target = "\_blank";

document.getElementById("demo").style.fontSize = "35px";

document.getElementById("myText").value = "Johnny Bravo";

document.getElementById("number").value;

document.getElementsByName(val);

document .getElementsByClassName("js");

document.getElementsByTagName(tag\_name);

document .querySelectorAll("p");

# Changing Background color

# Append child

var node = document.createElement("LI");                 // Create a <li> node  
var textnode = document.createTextNode("Water");         // Create a text node  
node.appendChild(textnode);                        // Append the text to <li>  
document.getElementById("myList").appendChild(node);

# Append child before

<https://developer.mozilla.org/en-US/docs/Web/API/Node/insertBefore>

document.getElementById("myList").insertBefore(newNode, sp2)

# Literals

# Numbers , Scientic Notations , Hexadecimal Literals , Strings

# The Escape Sequence for Strings

• Boolean Values

# • Calculations and Concatenations

• Objects as Literals

# Functions as literals

• Undened and Null Values

• Regular Expression Literals

• Declaring and Naming

• Global and Local Variables

• Primitive and Compound Data

Demonstrate arrays

• Setting up and array

• Array properties and methods

• Array length

• Functions of array object

# • Operators in JavaScript

# Variable Declaration and Assignments

• Function Denitions

• Function Calls

• Increment/Decrement Statements

Apply skills on conditional structures

• Demonstrate the if statements

• Demonstrate the else keyword

• Demonstrate the else if convention

• Apply skills on using switch, case and break

# Reserved words