

Javascript CheatSheet

Data Types: var age = 9; //number
 var a = true; //boolean
 var a; //undefined
 var b = null; //null
 var name = "Vishwas"; //string
 var name = {first: "Vishwas", last: "Malik"}; //object
Operators: +, -, /, %, *, ++, --

Bitwise Operators → & AND 5&1 ($0101 \& 0001 = 1$)
 | OR 5|1 ($0101 | 0001 = 5(101)$)
 ~ NOT ~5 ($\sim 0101 = 101010$)
 ^ XOR $2^4 1$ ($0010 ^ 0001 = 0111$)
 << left shift 5<<1 ($0101 << 1 = 10(1010)$)
 >> right shift 5>>1 ($0101 >> 1 = 2(10)$)

Strict Equal → a === b

Strict Unequal → a !== b

typeof → typeof b // type (string, object ...)

Loops: for (var i=0; i<10; i++) {
 -
 -
 -
 }
 -
 -

var i=0;
 while (i<10) {
 -
 -
 -

3 i++;

```
var i = 0;
```

```
do {
```

```
    i++;
```

```
} while (i < 10);
```

Strings:

```
var name = "vishwas";
```

```
var len = name.length; // 7
```

```
name.indexOf("sh"); // 2 , if absent → -1
```

```
name.lastIndexOf("s"); // 6
```

```
name.slice(1, 4); // ish , 4 not included, can accept -ve value
```

```
name.substring(1, 4); // ish
```

```
name.substr(1, 4); // ishw , 4 → length
```

```
name.toLowerCase(); // vishwas
```

```
name.toUpperCase(); // VISHWAS
```

```
name.replace("s", "t"); // without
```

```
var a = "Hello World";
```

```
a.split(" "); // ["Hello", "World"]
```

```
a.trim(); // removes whitespace from both ends of string
```

Arrays :

```
let arr = [ ];  
let fruits = ["apple", "banana"];  
let numbers = [1, 2, 3, 4, 5];  
console.log(fruits[0]); //apple  
console.log(numbers.length); //5  
fruits.push("apple"); // ["apple", "banana", "apple"]  
numbers.unshift(0); // 0, 1, 2, 3, 4, 5  
fruits.pop(); // Removes last element  
fruits.shift(); // Removes first element  
  
splice() -> array.splice(start, deleteCount, item1, item2...);  
if 0, no element removed
```

Removing elements :

```
let fruits = ["apple", "banana", "cherry"];  
fruits.splice(1, 2);  
console.log(fruits); // ["apple"]
```

Adding elements :

```
fruits.splice(2, 0, "grapes", "kiwi");  
console.log(fruits); // ["apple", "banana", "grapes", "kiwi",  
"cherry"]
```

Replacing elements :

```
fruits.splice(1, 2, "mango", "pineapple");  
console.log(fruits); // ["apple", "mango", "pineapple"] "banana",  
"cherry"
```

Shallow removed elements:

```
let removed = fruits.slice(1, 2);
```

```
console.log(removed); // ["banana", "cherry"]
```

```
fruits.forEach(function(a){
```

```
    console.log(a);  
});
```

```
fruits.reverse();
```

```
numbers.sort();
```

```
numbers.sort(function(a, b){ return b-a}); // descending
```

```
(function(a, b){ return a-b}); // ascending
```

```
fruits.join("-"); // apple - banana - cherry
```

```
var a = arr1.concat(arr2, arr3); [arr1, arr2, arr3]
```

Multidimensional Array: let mat = [[1, 2, 3], [4, 5, 6], [7, 8, 9]];

```
console.log(mat[0][1]); // 2
```

Copying Array:

```
let a1 = fruits.slice(); // shallow copy, copies reference
```

```
let a2 = [...fruits]; // shallow copy
```

```
let dup = JSON.parse(JSON.stringify(fruits));
```

// deep copy, completely new

Math :

```
Math.round(4.5); // 5  
Math.pow(2, 3); // 8  
Math.sqrt(49); // 7  
Math. abs(-3); // 3  
Math.ceil(1.2); // 2  
Math.floor(1.2); // 1  
Math.sin(0); // 0  
Math.log(1); // 0, natural log  
Math.min(0, 3, 1, 5) // 0  
Math.max(0, 3, 1, 5) // 5  
Math.random(); // b/w 0 & 1  
var e = Math.E;  
var pi = Math.PI;
```

Errors :

RangeError → out of range
Reference Error → illegal reference has occurred
Syntax Error → some syntax error . console.log("Hi")
TypeError → type mismatch
URIError → An encodeURI error occurred