

JavaScript Frontend Essentials

Basic Functions & Operations

`console.log()` - Output to browser console (for debugging)

`alert()` - Show a popup message

`prompt()` - Ask user for input (returns a string)

`typeof` - Check the data type of a variable

`parseInt()` - Convert string to integer

`parseFloat()` - Convert string to float

`isNaN()` - Check if a value is Not a Number

Strings

`str.length` - Get string length

`str.toUpperCase()` - Convert to uppercase

`str.toLowerCase()` - Convert to lowercase

`str.includes("x")` - Check if string contains 'x'

`str.indexOf("x")` - Get position of first 'x'

`str.slice(a, b)` - Extract substring

`str.replace("a", "b")` - Replace 'a' with 'b'

`str.split(" ")` - Split string into array

``Hello ${name}`` - Template string interpolation

Numbers & Math

`Math.random()` - Random number between 0 and 1

`Math.floor()` - Round down

`Math.ceil()` - Round up

`Math.round()` - Round to nearest integer

`Math.max(a, b, c)` - Get largest number

`Math.min(a, b, c)` - Get smallest number

`Math.abs(x)` - Absolute value

Arrays

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`arr.length` - Number of elements

`arr.push(x)` - Add to end

`arr.pop()` - Remove from end

`arr.shift()` - Remove from start

`arr.unshift(x)` - Add to start

`arr.includes(x)` - Check if value exists

`arr.indexOf(x)` - Get index of value

`arr.join(',')` - Combine into string

`arr.slice(a, b)` - Copy part of array

`arr.splice()` - Add/remove from array

`arr.reverse()` - Reverse order

`arr.sort()` - Sort array

`arr.map(fn)` - Transform every item

`arr.filter(fn)` - Keep matching items

`arr.forEach(fn)` - Loop through items

`arr.reduce(fn, init)` - Accumulate to single value (e.g., sum)

Objects

`obj.key` or `obj['key']` - Access value

`Object.keys(obj)` - Get keys as array

`Object.values(obj)` - Get values as array

`Object.entries(obj)` - Key-value pairs as array

`delete obj.key` - Remove key from object

Loops

`for (let i = 0; i < n; i++)` - Classic loop

`for (let item of arr)` - Loop through array

`arr.forEach(fn)` - Functional loop

`for (let key in obj)` - Loop through object keys

`while(condition)` - Loop while condition is true

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Functions

`function name() {}` - Declare a function

`const fn = () => {}` - Arrow function

`return` - Return value from function

`arguments` - Arguments object (old-style)

`function(x = 5)` - Default parameters

Conditions

`if / else if / else` - Conditional branching

`==` vs `===` - Loose vs strict equality

`&& / || / !` - AND / OR / NOT

`cond ? a : b` - Ternary operator

`switch` - Multiple conditions

DOM Manipulation

`document.querySelector()` - Select single element

`document.querySelectorAll()` - Select multiple

`element.textContent` - Get/set text

`element.innerHTML` - Get/set HTML

`element.style.property` - Set inline style

`element.classList.add()` - Add class

`element.classList.remove()` - Remove class

`element.addEventListener()` - Handle events

Fetch (API)

`fetch(url)` - Make GET request

`.then(res => res.json())` - Parse JSON

`.catch(err => {...})` - Handle error

`fetch(url, options)` - Send POST/PUT/DELETE

`JSON.stringify(obj)` - Object -> JSON string

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`JSON.parse(str)` - JSON string -> Object

Other Useful Tools

`setTimeout(fn, ms)` - Delay a function

`setInterval(fn, ms)` - Repeat every ms

`clearTimeout()` - Stop timeout

`clearInterval()` - Stop interval

`try { } catch (e) {}` - Handle errors