

JavaScript Notes by ME 😊

**** Topics ****

hosting

new keyword

scope

This

lexical scope

temporal deadzone

shadowing

map

filter

reduce

polyfills

lexical scope

params vs arguments

spread operator/rest operator

prototype inheritance

Core JavaScript Concepts

Data Types and Variables

Primitive and reference types (e.g., strings, numbers, objects, arrays).

var, let, const keywords and their scopes.

Functions

Function declarations, expressions, and arrow functions.

Default parameters, rest parameters, and spread operator.

Higher-order functions and callbacks.

Objects

Creating and manipulating objects.

Object methods, this keyword, and prototypes.

Object destructuring and property shorthand.

Closures

Persistent data with closures.

Definition and use-cases.

Practical examples in real-world scenarios.

Promises and Asynchronous Programming

async/await syntax.

Error handling (try-catch and .catch()).

Event loop, microtasks, and macrotasks.

DOM Manipulation

Selecting and modifying DOM elements.

Event listeners and delegation.

Handling user inputs and form validations.

ES6+ Features

let and const, template literals.

Modules (import/export).

Classes and inheritance.

Iterators and generators.

Advanced JavaScript

Execution Context and Scope

Global and local scope.

Hoisting and Temporal Dead Zone.

Prototype and Inheritance

Prototypal inheritance.

Understanding **proto** and prototype.

Event Loop and Concurrency

Callbacks, promises, and async/await.

Event loop phases.

Memory Management

Garbage collection.
Common memory leaks.

Error Handling

try-catch blocks.
Custom error creation.

Performance Optimization

Debouncing and throttling.
Lazy loading and code splitting.

JavaScript in the Browser

Browser APIs

LocalStorage, sessionStorage, and Cookies.
Fetch API and AJAX.
Geolocation, Web Workers.

Event Propagation

Event bubbling and capturing.
Stopping propagation.

Cross-Origin Communication

CORS basics and solutions.

Data Structures

Arrays (methods like map, filter, reduce, etc.).
Sets, Maps, and WeakMaps.
Stacks, Queues, Linked Lists (basic).

Algorithms

Sorting and searching algorithms.
String manipulation.

Recursion basics.