Javascript Outline

Detailed list of JavaScript concepts, keywords, and built-in functions, arranged from easy to hard:

Basics

1. **Introduction to JavaScript**
   - History
   - Usage in web development
2. **Setting up the Environment**
   - Browser Console
   - Code Editors (VSCode, Sublime Text)
3. **Syntax and Comments**
   - Single-line and multi-line comments
4. **Variables**
   - `var`
   - `let`
   - `const`
5. **Data Types**
   - Primitive Data Types: `String`, `Number`, `Boolean`, `Null`, `Undefined`, `Symbol`
   - Non-Primitive Data Types: `Object`
6. **Operators**
   - Arithmetic: `+`, `-`, `*`, `/`, `%`, `**`
   - Assignment: `=`, `+=`, `-=`, `*=`, `/=`, `%=`
   - Comparison: `==`, `===`, `!=`, `!==`, `>`, `<`, `>=`, `<=`
   - Logical: `&&`, `||`, `!`
7. **Conditional Statements**
   - `if`, `else if`, `else`
   - `switch`
8. **Loops**
   - `for`
   - `while`
   - `do...while`
   - `for...in`
   - `for...of`
9. **Functions**
   - Function Declaration
   - Function Expression
   - Arrow Functions
   - Parameters and Arguments
   - Return Statement

10. **Scope**
    - Global Scope
    - Local Scope
    - Block Scope
11. **Hoisting**

Intermediate

12. **Arrays**
    - Creation
    - Methods: `push`, `pop`, `shift`, `unshift`, `forEach`, `map`, `filter`, `reduce`, `slice`, `splice`, `concat`, `find`, `findIndex`, `indexOf`, `includes`, `some`, `every`, `sort`, `reverse`
13. **Objects**
    - Object Literals
    - Methods: `Object.keys`, `Object.values`, `Object.entries`, `Object.assign`, `Object.freeze`, `Object.seal`

14. **Template Literals**
    - **const greeting = `Hello, my name is ${name} and I am ${age} years old.`;**

15. **Spread and Rest Operators**
    - Spread: `...`
    - Rest: `...`
16. **ES6 Classes**
    - `constructor`
    - Methods
    - Inheritance: `extends`, `super`
17. **Modules**
    - `import`
    - `export`
    - **Dynamic Import (`import()`)**
18. **Promises**
    - `then`, `catch`, `finally`
    - Creating and Using Promises
19. **Async/Await**
20. **Error Handling**
    - `try`, `catch`, `finally`, `throw`
21. **JSON**
    - Parsing: `JSON.parse`
    - Stringifying: `JSON.stringify`
22. **Date and Time**

- Date Object and Methods: `getDate`, `getDay`, `getFullYear`, `getHours`, `getMinutes`, `getSeconds`, `getTime`, `setDate`, `setFullYear`, `setHours`, `toDateString`, `toLocaleDateString`

23. **Math Object**
    - Methods: `Math.random`, `Math.floor`, `Math.ceil`, `Math.round`, `Math.max`, `Math.min`, `Math.abs`, `Math.sqrt`, `Math.pow`

Advanced

25. **DOM Manipulation**
    - `querySelector`, `getElementById`, `getElementsByClassName`, `getElementsByTagName`
    - Creating Elements: `createElement`
    - Modifying Elements: `appendChild`, `removeChild`, `replaceChild`, `innerHTML`, `textContent`
26. **Event Handling**
    - `addEventListener`
    - Event Object
    - Event Delegation
27. **Browser APIs**
    - Fetch API: `fetch`
    - Local Storage: `localStorage`
    - Session Storage: `sessionStorage`
28. **Regular Expressions (RegExp)**
    - Syntax: `/pattern/flags`
    - Methods: `test`, `exec`, `match`, `replace`, `search`, `split`
29. **Higher-Order Functions**
    - Functions that take other functions as arguments or return functions
30. **Async Programming**
    - Callbacks
    - Promises
    - Async/Await
31. **Iterators and Generators**
    - `Symbol.iterator`
    - `function*` and `yield`
32. **Modules and Bundlers**
    - Webpack
    - Babel
33. **TypeScript Basics**
    - Types
    - Interfaces
    - Generics

34. **Optional Chaining (`?.`)**
35. **Nullish Coalescing Operator (`??`)**
36. **Logical Assignment Operators**
   - `&&=, ||=, ??=`
37. **Array findLast and findLastIndex**

38. **Change Array by Copy**
   - Methods: `toReversed`, `toSorted`, `toSpliced`
39. **Set Methods**
   - `union`, `intersection`, `difference`, `symmetricDifference`

Regards:
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