Node.js for Beginners

1. Variables & Data Types

- Variables: var, let, const

- Primitive types: string, number, boolean, undefined, null, symbol, bigint

- Reference types: object, array, function

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2. Operators

- Arithmetic Operators (+, -, *, /, %, **)

- Assignment Operators (=, +=, -=, *=, /=)

- Comparison Operators (==, ===, !=, !==, >, <, >=, <=)

- Logical Operators (&&, ||, !)

- Ternary Operator (condition ? value1 : value2)

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3. Control Structures

- if, else, else if

- switch

- Loops: for, while, do while, for...of, for...in

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4. Functions

- Function Declaration

- Function Expression

- Arrow Functions

- Default Parameters

- Rest & Spread Operators

- Higher Order Functions (map, filter, reduce)

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5. Strings

- String properties (length, charAt, indexOf, includes)

- Manipulation (slice, substring, substr, replace, toUpperCase, toLowerCase, trim)

- Template literals (`${variable}`)

- split, join, concat

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6. Arrays

- Properties (length)

- Methods:

    - Adding/removing → push, pop, shift, unshift

    - Searching → indexOf, includes, find, findIndex

    - Transforming → map, filter, reduce, sort, reverse

    - Combining → concat, slice, splice

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7. Numbers & Math

- Properties (toFixed, toPrecision, Number.isNaN, Number.isInteger)

- Math Object:

  - Constants → Math.PI, Math.E

  - Rounding → Math.round, Math.floor, Math.ceil, Math.trunc

  - Random → Math.random()

  - Power → Math.pow, Math.sqrt, Math.abs, Math.max, Math.min

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8. Dates

- Creating dates → new Date()

- Getters → getDate, getMonth, getFullYear, getDay, getHours

- Setters → setDate, setMonth, setFullYear

- Formatting dates

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9. Objects

- Object literals { key: value }

- Accessing properties (dot, bracket)

- Object methods (keys, values, entries, assign, freeze)

- this keyword

- Destructuring

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10. Classes

- Class declaration

- Constructor

- Methods

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11. File Handling

- Reading files (fs.readFile, fs.readFileSync)

- Writing files (fs.writeFile, fs.appendFile)

- Deleting & renaming files

- Working with JSON files