JavaScript Topics for React - Complete List

1. Variables & Data Types

- `let`, `const` (prefer `const` for most React code)

- Primitive types: `string`, `number`, `boolean`, `null`, `undefined`

- Reference types: `array`, `object`, `function`

2. Functions

- Function declarations vs expressions

- **Arrow functions** `() => {}` - React loves these

- **Callback functions**

- Higher-order functions (functions that return/take other functions)

3. Array Methods (Critical in React)

- `map()` - used for rendering lists in JSX

- `filter()` - filtering data before rendering

- `reduce()` - summarizing data (e.g. totals)

- `find()`, `some()`, `every()`

- `forEach()` (less used in JSX, but useful)

4. Object Manipulation

- Object creation and access

- Updating nested objects

- `Object.keys()`, `Object.values()`, `Object.entries()`

5. Destructuring (Very Common in React)

- `const { name, age } = user;`

- `const [first, second] = items;`

6. Spread & Rest Operators

- `const newObj = { ...oldObj, updatedKey: 'value' };`

- `const newArr = [...oldArr, newItem];`

7. Template Literals

- `const greeting = `Hello, ${name}`;`

8. Conditional Logic

- `if/else`, `switch`

- Ternary operator (`condition ? true : false`) - very common in JSX

- Logical `&&` (`isLoggedIn && <Component />`)

9. Loops

- `for`, `while` (rarely used directly in React)

- Prefer `map()` for rendering

10. `this` Keyword (Basic Understanding)

- Especially in class components (optional now, but good to know)

11. ES Modules

- `import`, `export`, default vs named exports

12. Events

- Understanding event handlers like `onClick`, `onChange`

- Basic DOM events (React abstracts most, but understanding helps)

13. Truthy/Falsy Values

- Useful in conditional rendering

14. Short-Circuiting

- `isLoggedIn && <LogoutButton />`

15. Asynchronous JavaScript

- Promises: `.then()`, `.catch()`

- `async/await`

- `fetch()` API (used to get data in React)

16. Error Handling

- `try...catch`

- Optional chaining (`user?.name`)

- Nullish coalescing (`user.name ?? "Guest"`)

17. JSON Handling

- `JSON.parse()`, `JSON.stringify()` - for API requests/responses

18. Basic DOM Understanding (Optional)

- React handles the DOM, but basic understanding of:

- `document.querySelector`

- Event bubbling

- Input values

19. Local Storage & Session Storage

- Storing user data or tokens

20. Type Conversion & Equality

- `==` vs `===`

- Implicit vs explicit coercion