React ke liye Zaroori JavaScript Topics - Detailed with Examples

## 1. let, const, var

* 📘 Explanation:

JavaScript me variables declare karne ke liye `let`, `const`, aur `var` ka use hota hai.

- `let` and `const` block scoped hote hain.

- `var` function scoped hota hai.

React me mostly `const` ka use hota hai functional components me.

* 💡 Example:

let name = 'Rahul';  
const age = 25;  
var city = 'Mumbai';

* ⚛️ React me Use:

const App = () => {  
 const name = 'React';  
 return <h1>Hello {name}</h1>;  
};

## 2. Arrow Functions

* 📘 Explanation:

Arrow functions short syntax provide karte hain aur `this` ko lexical bind karte hain. React me event handling aur components banane ke liye bahut useful hain.

* 💡 Example:

const add = (a, b) => a + b;

* ⚛️ React me Use:

<button onClick={() => console.log('Clicked')}>Click Me</button>

## 3. Destructuring

* 📘 Explanation:

Destructuring se hum array ya object ke elements ko easily extract kar sakte hain.

* 💡 Example:

const person = { name: 'Amit', age: 30 };  
const { name, age } = person;

* ⚛️ React me Use:

const Welcome = ({ name }) => <h1>Hello {name}</h1>;

## 4. Array map() method

* 📘 Explanation:

`map()` array ke har element par function apply karta hai aur naya array return karta hai. React me list render karne me use hota hai.

* 💡 Example:

const numbers = [1, 2, 3];  
const doubled = numbers.map(n => n \* 2);

* ⚛️ React me Use:

const items = ['Pen', 'Book'];  
<ul>{items.map(item => <li>{item}</li>)}</ul>

## 5. Ternary Operator

* 📘 Explanation:

Conditional rendering ke liye ternary operator use hota hai.

* 💡 Example:

const age = 20;  
const status = age > 18 ? 'Adult' : 'Minor';

* ⚛️ React me Use:

const isLoggedIn = true;  
<p>{isLoggedIn ? 'Welcome' : 'Please log in'}</p>

## 6. Spread Operator

* 📘 Explanation:

Spread operator `...` ka use arrays ya objects ko copy ya merge karne me hota hai.

* 💡 Example:

const arr1 = [1, 2];  
const arr2 = [...arr1, 3];

* ⚛️ React me Use:

const newUser = { ...user, age: 30 };

## 7. Promises & Async/Await

* 📘 Explanation:

API call karne ke liye React me async/await aur promises ka use hota hai.

* 💡 Example:

async function getData() {  
 const res = await fetch('https://api.example.com');  
 const data = await res.json();  
}

* ⚛️ React me Use:

useEffect(() => {  
 async function fetchData() {  
 const res = await fetch('https://api.example.com');  
 const data = await res.json();  
 }  
 fetchData();  
}, []);