🌀 What is the Spread Operator (…)

The **spread operator** allows you to **expand** or **copy** elements from arrays or properties from objects.

📦 Syntax:

javascript   Copy   Edit

```javascript
const newArray = [...oldArray]; const newObject = { ...oldObject };
```

◆ 1. Spreading in Arrays

✅ Copying an Array

javascript   Copy   Edit

```javascript
const fruits = ["apple", "banana"]; const moreFruits = [...fruits, "orange"];
console.log(moreFruits); // ["apple", "banana", "orange"]
```

✅ Combining Arrays

javascript   Copy   Edit

```javascript
const a = [1, 2]; const b = [3, 4]; const combined = [...a, ...b]; console.log(combined); // [1,
2, 3, 4]
```

◆ 2. Spreading in Objects

✅ Copying an Object

javascript   Copy   Edit

```javascript
const person = { name: "Alice", age: 25 }; const copy = { ...person };
```

✅ Updating an Object

```javascript
const updated = { ...person, age: 26 }; // age is updated
```

🔁 Order matters: properties on the right overwrite ones on the left.

◆ 3. Using Spread in React

✅ Updating State (Arrays)

```jsx
const [items, setItems] = useState([1, 2, 3]); const addItem = () => { setItems(prev => [...prev, 4]); };
```

✅ Updating State (Objects)

```jsx
const [user, setUser] = useState({ name: "John", age: 30 }); const updateName = () => { setUser(prev => ({ ...prev, name: "Jane" })); };
```

✅ Passing Props to Components

```jsx
const user = { name: "Alice", age: 25 }; <MyComponent {...user} /> // same as: <MyComponent name="Alice" age="25" />
```

🧠 TL;DR - When to Use Spread

Use Case	Code Example
Copy an array	const copy = [...arr]

Use Case	Code Example
Copy an object	`const copy = { ...obj }`
Add items to array	`[...arr, newItem]`
Merge objects	`{ ...obj1, ...obj2 }`
Update part of an object	`{ ...old, key: newValue }`
Pass props into a component	`<Comp {...props} />`