

Spread Operator (...)

- Used to copy data from array or object.
- keeps original data safe.
- `const newArr = [...oldArr]`
- `const newObj = {...oldObj, extra: value}`

Merging Arrays and Objects.

- Joining two arrays: `[...arr1, ...arr2]`
- Joining two objects: `{...obj1, ...obj2}`
- Useful for combining user data or lists.

Destructuring

- Pull values out from objects or arrays
- Object: `const {name} = person;`
- Array: `const [a, b] = arr`
- Makes code clean and short.

Map and Key

- Map changes all array items:

`arr.map (n) => n*2)`

- Returns a new array.

- In React, 'key' is used to uniquely identify list items.

`users.map (user) =>`

`<li key={user.id}> {user.name} `

Filter

- Returns only matching items from an array.

- Example:

`marks.filter (m) => m > 60);`

- Useful to find passed students, active users, etc.

Reduce

- Combine array items into one value.

- Example:

arr. reduce ((acc, val) \Rightarrow acc + val, 0)

- Useful for total, sum, average etc.

Summary:-

Spread → Copy data cleanly.

Merge → Join arrays / objects

Destructure → Extract value directly

Map → Modify each item.

key → Identify items uniquely in React

filter → Pick matching items.

Reduce → Final single result from array.