

List Rendering

What is List Rendering?

List Rendering means displaying multiple items (like data from an array) in JSX.

We use JavaScript's `.map()` method to loop through data and return JSX elements.

```
function NameList() {  
  const names = ["Manas", "Riya", "Karan"];  
  
  return (  
    <ul>  
      {names.map((name, index) => (  
        <li key={index}>{name}</li>  
      ))}  
    </ul>  
  );  
}
```

Why we use .map() in React

React works with immutable UI updates, and .map() creates a new array without modifying the original.

JSX can embed JavaScript expressions inside { }, so we can directly use array.map() in our JSX return.

Different Types of Arrays to Render

(A) Normal Array

```
const fruits = ["Manas", "Muskan", "Mehek"];
```

```
<ul>
  {fruits.map((name, i) => <li key={i}>{name}</li>)}
</ul>
```

(B) Array of Objects

```
const users = [
  { id: 1, name: "Manas", age: 21 },
  { id: 2, name: "Muskan", age: 19 },
  { id: 3, name: "Mehek", age: 18 }
];
```

```
<ul>
  {users.map(user => (
    <li key={user.id}>
      {user.name} – {user.age} years old
    </li>
  ))}
</ul>
```

(C) Array of Arrays

```
const data = [
  ["HTML", "CSS", "JavaScript", "React"],
  ["Node", "MongoDB", "SQL"]
];
```

```
<div>
  {data.map((group, i) => (
    <ul key={i}>
      {group.map((item, j) => (
        <li key={j}>{item}</li>
      ))}
    </ul>
  ))}
</div>
```

Rendering Components with .map()

Instead of inline JSX, create a reusable component.

```
function UserCard({ user }) {
  return <li>Name is {user.name} and age is {user.age}</li>;
}

function UserList() {
  const users = [
    { id: 1, name: "Manas", age: 21 },
    { id: 2, name: "Muskan", age: 19 },
  ];

  return (
    <ul>
      {users.map(user => <UserCard key={user.id} user={user} />)}
    </ul>
  );
}
```

Conditional Rendering with Mapping

You can also conditionally show elements during map

```
{users.map(user =>
  user.age > 18 && <p key={user.id}>{user.name}</p>
)}
```

```
{users.map(user => (
  <p key={user.id}>{user.age > 18 ? user.name : "Too young"}</p>
))}
```

Common Beginner Mistakes

- 🚫 Mistake 1: Forgetting return when using curly braces in arrow function:

```
// Wrong
{items.map(item => { <li>{item}</li> })}

// Correct
{items.map(item => <li>{item}</li>)}
// OR
{items.map(item => { return <li>{item}</li>; })}
```

- 🚫 Mistake 2: Not using key prop.
- 🚫 Mistake 3: Mutating the original array before mapping.
- 🚫 Mistake 4: Returning multiple root elements inside .map() without wrapping (use <React.Fragment>).

Thank
You