

React- Day -3: React hooks & states:

Props vs State:

In React, both props and state are important concepts that help **manage data within components**

Props:

Props (short for properties):

- Definition: Props are data that are passed into a component from its parent component.
- Immutability: **Props are immutable**, meaning they cannot be modified by the child component that receives them.

State:

- Definition: State is an internal **data storage mechanism** within a component.
- Immutability: **State is mutable**, and it can be modified using the `setState` method provided by React.
- Role: It is used to manage dynamic data that can change over time within a component.

Working with array lists:

The term "array list" is commonly used to refer to an array—a data structure that **stores elements in a sequential order**. An array is a way to organize and store multiple values under a **single variable name**. Each element in an array has a unique index, **starting from 0**.

Ex:

```
const myList = [1, 2, 3, 4, 5];
```

Usage of keys:

The key attribute is used to **uniquely identify elements** in a rendered list of components. This helps React efficiently update the UI by understanding which **items have been added, removed, or changed**. The key prop should be assigned to the **unique identifier of each item in the list**.

When the list items can **change dynamically** (e.g., if they can be added/removed), you can use the index as a key.

Conditional rendering:

Conditional rendering in React involves rendering different content or components **based on certain conditions**.

Handling Events:

handling events involves defining **functions (event handlers) that are executed when a specific event occurs**. These functions are then attached to the corresponding elements in the JSX code.