Training Day 14

Day 14 - 8th July 2025

TOPICS COVERED – React: Props, map() Function, Re-rendering, useEffect Hook

1. Props in React

- **Props** (short for *properties*) are used to pass data from one component to another.
- They make components dynamic and reusable.

Example:

```
function Greet(props) {
  return <h2>Hello, {props.name}</h2>;
}

<Greet name="Sarthak" />
```

Props are **read-only** and cannot be modified by the receiving component.

Often used to send data from parent to child components.

2. map() Function in JSX

- Used to render lists dynamically in React.

Example:

```
const students = ["Aman", "Neha", "Ravi"];

function StudentList() {
  return (
    <ul>
      {students.map((name, index) => (
       <li key={index}>{name}</li>
      ))}
```

```
    </ul>
  );
}
```

The key prop is important for optimization.

Ensures each child in a list has a unique identifier.

3. Re-rendering in React

- React **re-renders** components when:
  - State changes (useState)
  - Props change
- This keeps the UI in sync with the application state.

Note: Too many re-renders can reduce performance. Always manage state efficiently.

4. useEffect() Hook

- Used to run **side effects** like API calls, timers, or logging.
- Runs **after** render.

Example:

```
import { useEffect } from "react";

useEffect(() => {
  console.log("Component mounted or updated");
}, []);
```

If dependency array is empty [], it runs only once (on mount).

Add dependencies inside the array to track specific changes.