Industrial Training Daily Diary

MERN Stack Training

Company: Sensation Software Solutions
Student Name: Tajinder Kaur
Training Duration: 6 Months
Day: 12

Day 12 – Props, State & Event Handling in React

Objective of the Day

The objective of Day 12 was to understand **data handling in React** using **props** and **state**, and to learn how **event handling** works in React components. These concepts are essential for building interactive and dynamic React applications.

Understanding Props in React

The trainer explained that **props (properties)** are used to pass data from a **parent component to a child component**. Props make components reusable and configurable.

Key points discussed:

- Props are **read-only**
- Data flows in **one direction** (parent → child)
- Props help in component reusability

We learned how to pass different types of data such as strings, numbers, arrays, objects, and functions as props.

Props Naming Convention & Default Values

The trainer discussed best practices for naming props clearly and meaningfully. We also learned about **default props**, which are used when no value is passed from the parent component.

This helps in preventing errors and makes components more robust.

Understanding State in React

The concept of **state** was introduced as a way to store and manage data that can change over time within a component.

Key differences between props and state:

- Props are passed from outside; state is managed inside the component
- State is **mutable** using setState or hooks
- State changes cause component re-rendering

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useState Hook Introduction

The trainer introduced the **useState hook**, which is used to manage state in functional components.

We learned:

- How to declare state variables
- How to update state values
- How state updates trigger UI re-rendering

Practical examples helped us understand real-time UI updates.

Event Handling in React

The trainer explained how React handles events differently from traditional JavaScript.

Topics covered:

- Using camelCase for event names
- Passing functions as event handlers
- Handling button clicks and input changes
- Preventing default behavior

We learned how to pass parameters to event handler functions.

Updating Input Fields

We practiced creating **controlled components**, where form input values are controlled using state.

This approach ensures better control over form data and validation.

Practical Work Done

During the practical session, we:

- Created components that accept props
- Passed data between parent and child components
- Managed state using useState hook
- Handled button click and input change events
- Built small interactive examples like counters and forms

This practice strengthened our understanding of React fundamentals.

Importance in MERN Stack Development

The trainer explained that props and state are the backbone of React applications. They help in managing data flow and user interactions while building frontend interfaces that communicate with backend APIs.

Conclusion of Day 12

Day 12 helped me clearly understand how data flows in React applications. I learned how to use props for passing data, state for managing dynamic data, and events for handling user interactions.

Outcome of the Day:

- Clear understanding of props and state
- Ability to manage state using hooks
- Knowledge of React event handling
- Improved confidence in building interactive components