

Day 14 – Daily Diary (Training TR-102)

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Training Location: STEP GNDEC, Ludhiana

Topic Covered: Introduction to React & React Environment Setup

◆ **What I Learned Today:**

On the fourteenth day of my training, I was introduced to **React**, a popular JavaScript library used for building **modern, interactive, and dynamic user interfaces**. React allows developers to create reusable components and manage the state of applications efficiently.

The trainer explained the **advantages of using React** over traditional JavaScript and other frameworks, such as:

- Component-based architecture for reusability and modularity.
- Virtual DOM for faster rendering and improved performance.
- Easy integration with other libraries and back-end technologies.
- Efficient handling of application state using React hooks and state management.

The session focused on setting up the **React development environment**, which included installing Node.js and npm (Node Package Manager), creating a new React project using create-react-app, and understanding the folder structure of a React project. The trainer also explained how React files are organized, including public and src folders, and the role of JSX (JavaScript XML) in combining HTML and JavaScript seamlessly.

◆ **Activities Performed:**

1. Installed Node.js and npm on my system.
2. Created a new React project using the command:

```
npx create-react-app my-app
```

3. Explored the project folder structure, understanding the purpose of public and src folders.
4. Run the React development server using:

```
npm start
```

5. Learned about JSX and how it allows writing HTML-like syntax in JavaScript.
6. Created a simple React component and rendered it in the browser.
7. Practiced using props to pass data from parent to child components.

8. Understood the concept of **state** and how it is used to manage data in React components.
9. Tested changes in the browser to observe real-time updates using the virtual DOM.

◆ **Skills Gained:**

- Understanding the basics of React and its advantages for web development.
- Ability to set up a React environment using Node.js and npm.
- Knowledge of React project structure and organization.
- Experience in creating functional React components.
- Understanding of JSX for integrating HTML and JavaScript.
- Basic knowledge of props and state for managing data in components.
- Confidence in running and testing React applications locally.

Reflection:

Today's session was very engaging and marked the beginning of **modern front-end development using React**. I realized that React makes building dynamic and interactive web applications much easier compared to traditional JavaScript, especially when managing complex user interfaces.

Setting up the React environment and creating my first component gave me hands-on experience and boosted my confidence in starting React-based projects. I also understood how JSX and component-based architecture help in writing cleaner, modular, and maintainable code.

Overall, Day 14 provided a solid foundation in **React development** and prepared me for advanced topics like state management, hooks, and building complete React applications in the upcoming sessions.