

Industrial Training Daily Diary

MERN Stack Training

Company: Sensation Software Solutions

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Training Duration: 6 Months

Day: 16

Day 16 – React Router (Advanced): Hooks, Query Parameters & Navigation Flow

Objective of the Day

The objective of Day 16 was to gain **advanced knowledge of React Router**, including the use of **routing hooks**, **route parameters**, **query string parameters**, and understanding real-world navigation flow in Single Page Applications (SPA).

Revising React Router Basics

The session started with a short revision of concepts learned earlier, including:

- BrowserRouter
- Route configuration
- Link and NavLink
- Basic navigation structure

This revision helped in connecting basic routing with advanced routing concepts.

Route Parameters in Detail

The trainer explained **route parameters** in depth. Route parameters allow passing dynamic values through the URL.

Key learning points:

- Creating dynamic routes
- Accessing parameters inside components
- Use cases such as product details and user profiles

React Router Hooks

We were introduced to important **React Router hooks** used for navigation and data access:

useParams Hook

- Used to access route parameters
- Helps fetch dynamic values from URL

useNavigate Hook

- Used for programmatic navigation
 - Helpful after form submission or authentication
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Query String Parameters

The trainer explained **query parameters** used to pass optional data in the URL.

Topics covered:

- Difference between route params and query params
 - Reading query parameters using hooks
 - Real-life examples like filters and search results
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Redirecting Users & Navigation Flow

We learned how to:

- Redirect users to another page
- Handle invalid routes
- Create fallback routes (404 pages)

This improves user experience and application reliability.

Practical Work Done

During the practical session, we:

- Created dynamic routes using parameters
- Used useParams and useNavigate hooks

- Implemented query string handling
 - Built a small SPA with protected navigation flow
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Weekly Task – Week 3 (Extended)

As part of the weekly task extension, we were assigned to:

- Improve the existing React Router project
 - Add dynamic routes and query parameters
 - Implement programmatic navigation
 - Update diary and code on GitHub Pages
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Importance in MERN Stack Development

Advanced routing is essential for building scalable frontend applications that interact smoothly with backend APIs and databases.

Conclusion of Day 16

Day 16 enhanced my understanding of advanced React Router concepts. I learned how to manage complex navigation, dynamic URLs, and routing hooks effectively.

Outcome of the Day:

- Advanced knowledge of React Router
- Ability to use routing hooks
- Understanding of query parameters
- Improved SPA navigation skills