

# Industrial Training Daily Diary

## MERN Stack Training

**Company:** Sensation Software Solutions

**Student Name:** Gurvinder Singh

**Training Duration:** 6 Months

**Day:** 29

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### Day 29 – Redux with React Hooks: useSelector, useDispatch & Middleware Enhancements

#### Objective of the Day

The objective of Day 29 was to learn **React-Redux hooks** for managing state, using `useSelector` and `useDispatch`, and enhancing middleware for better state and API management.

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#### useSelector & useDispatch Hooks

Trainer explained:

- `useSelector` to select and access Redux state in functional components
- `useDispatch` to dispatch actions from components
- Advantages over `connect` HOC: simpler, cleaner code, easier to manage functional components

Example: Selecting counter value and dispatching increment/decrement actions.

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#### Middleware Enhancements

Key points covered:

- Using Redux Thunk for async API calls
  - Combining multiple middleware for logging, error handling, and async calls
  - Understanding the order of middleware execution
  - Practical demonstration with API requests
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## Practical Work Done

During lab session:

- Converted previous forms to use React-Redux hooks
- Replaced `connect` with `useSelector` and `useDispatch`
- Enhanced middleware by adding logging of actions and API responses
- Tested async form submissions and observed middleware handling

Hands-on practice helped in understanding modern Redux patterns with hooks.

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## Weekly Task – Week 7 (Advanced)

Tasks included:

- Update all forms to use Redux hooks
  - Implement enhanced middleware logging and error handling
  - Test async API calls using Redux hooks
  - Push code and diary updates to GitHub Pages
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## Importance in MERN Stack Development

Using Redux hooks simplifies state management in functional components, improves code readability, and allows better control over middleware, enhancing the scalability of MERN applications.

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## Conclusion of Day 29

Day 29 gave practical knowledge of React-Redux hooks and middleware enhancements. I can now manage global state more efficiently and handle async actions with logging and error management.

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### Outcome of the Day:

- React-Redux hooks implemented
- Middleware enhanced for logging and error handling
- Async API calls tested using hooks
- Week 7 advanced tasks progressed and documented