

# Industrial Training Daily Diary

## MERN Stack Training

**Company:** Sensation Software Solutions

**Student Name:** Gurvinder Singh

**Training Duration:** 6 Months

**Day:** 20

---

## Day 20 – React Form Handling, Validation & Controlled Components

### Objective of the Day

The objective of Day 20 was to learn **React form handling**, implementing **controlled components**, and adding **form validation** to ensure data integrity in React applications.

---

### Introduction to React Forms

The trainer explained that forms are essential for taking user input. In React, forms can be handled using:

- **Controlled Components** – form data is handled by React state
- **Uncontrolled Components** – form data is handled by the DOM (less common)

We focused on controlled components as they provide better control over form data.

---

### Controlled Components

Key points learned:

- Input values are controlled by React state
- `onChange` handler updates state
- Form submission uses `onSubmit` event
- Ensures single source of truth for form data

Example: Text input and checkbox controlled using state.

---

# Form Validation in React

Trainer explained importance of validating form inputs:

- Required fields
- Email and password formats
- Minimum and maximum lengths

We implemented simple client-side validation using state and conditional rendering to display error messages.

---

## Practical Work Done

During the lab session, we:

- Created a registration form with name, email, and password fields
- Implemented controlled components using `useState`
- Added validation for required fields and proper formats
- Displayed real-time error messages when input was invalid
- Submitted form data to the console as proof of working

This practical helped understand real-world form handling in React.

---

## Weekly Task – Week 5 (Extended)

Assigned tasks included:

- Build a user registration form using controlled components
  - Implement client-side validation
  - Update diary and push code to GitHub Pages
- 

## Importance in MERN Stack Development

Forms are essential in almost every web application. Controlled components and validation ensure reliable data entry and prevent errors when sending data to backend APIs.

---

## Conclusion of Day 20

Day 20 gave me practical knowledge of React forms, controlled components, and validation, which are crucial for building interactive and reliable frontend forms.

---

**Outcome of the Day:**

- Understanding of controlled vs uncontrolled components
- Ability to handle form inputs using state
- Implemented client-side validation
- Completion of Week 5 extended task