

# Training Day 14 Report

**Date:** 15 July 2025

**S.T.E.P** – Science & Technology Entrepreneurs' Park, GNDEC, Ludhiana

**Topic Covered:** Introduction to React & React Environment Setup

## Introduction

On Day 14 of our MERN Stack training, we were introduced to React, a powerful front-end JavaScript library developed by Facebook. React allows developers to build dynamic and responsive user interfaces efficiently using reusable components.

## What is React?

- React is a JavaScript library for building UI components.
- It uses a virtual DOM to improve performance.
- React follows a component-based architecture.
- It is declarative, efficient, and flexible for single-page applications (SPA).

## Key Features of React

- Component-based development
- One-way data binding
- Virtual DOM for faster rendering
- JSX syntax for writing HTML in JavaScript
- Reusable and maintainable code

## Setting Up React Environment

### Option 1: Using Create React App (CRA)

#### 1. Install Node.js & npm

Download and install from: <https://nodejs.org>

Verify using:

```
node -v
```

```
npm -v
```

## **2. Install React App Globally (Optional):**

```
npm install -g create-react-app
```

## **3. Create a New React App:**

```
npx create-react-app myapp
```

## **4. Run the App:**

```
cd myapp
```

```
npm start
```

## **5. Access in Browser:**

```
http://localhost:3000
```

## **Folder Structure (CRA default)**

```
myapp/  
├── public/  
│   └── index.html  
├── src/  
│   ├── App.js  
│   ├── index.js  
│   └── .....  
├── package.json  
└── README.md
```

## **Activities Performed**

- Installed Node.js and verified environment
- Created a new React project using npx create-react-app
- Explored the basic file structure (src, App.js, index.js)

- Ran the default React app in the browser

### **Task of the Day**

- Create a new React app named 'react-demo'
- Modify the App.js file to display:
- Your name
- Course name: MERN Stack
- A simple heading and paragraph