

## Day 16 – Daily Diary (Training TR-102)

**Date:** 17 July 2025

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**Training Location:** STEP GNDEC, Ludhiana

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**Topic Covered:** Setup and Introduction of Node.js, MongoDB, and Express.js

### ◆ What I Learned Today:

On the sixteenth day of my training, I was introduced to **Node.js, MongoDB, and Express.js**, which are key components of the **MERN stack** for full-stack web development.

- **Node.js** is a runtime environment that allows running JavaScript on the server side. I learned how Node.js enables building fast and scalable back-end applications.
- **Express.js** is a framework built on Node.js that simplifies server-side development by providing routing, middleware, and easy handling of requests and responses.
- **MongoDB** is a NoSQL database used to store data in JSON-like documents. I learned why it is preferred for MERN stack projects because of its flexibility and scalability.

The trainer explained how these technologies work together: Node.js and Express.js handle server logic and API creation, while MongoDB stores and retrieves data efficiently.

### ◆ Activities Performed:

1. Installed Node.js and npm on my system.
2. Created a new Node.js project using npm init.
3. Installed Express.js and set up a basic server.
4. Learned to handle GET and POST requests using Express routes.
5. Installed MongoDB and connected it with Node.js using Mongoose.
6. Created a sample database and performed basic operations like adding, retrieving, and deleting data.
7. Tested API endpoints using tools like Postman.
8. Learned how to structure a MERN project with separate folders for routes, models, and controllers.

### ◆ Skills Gained:

- Understanding the role of Node.js in server-side development.
- Ability to set up and configure Express.js for building APIs.
- Knowledge of MongoDB and creating databases and collections.

- Ability to connect Node.js applications with MongoDB using Mongoose.
- Understanding basic server-client interactions using GET and POST requests.
- Hands-on experience in testing APIs and working with a full-stack development environment.

**Reflection:**

Today's session gave me a **strong foundation in back-end development** using the MERN stack. I realized that Node.js and Express.js make server-side programming in JavaScript efficient and easy, while MongoDB provides a flexible way to manage data.

Setting up the server and connecting it to the database was very practical and helped me understand how full-stack applications work. Overall, Day 16 prepared me to start building complete MERN stack projects in the upcoming sessions.