

MERN Stack Training

Company: Sensation Software Solutions

Student Name: Gurvinder Singh

Training Duration: 6 Months

Days: 36

Objective of the Day

The objective of Day 36 was to begin **backend development** by understanding the fundamentals of **Node.js**, its purpose in web applications, and its role in the MERN stack.

Work Done on Day 36

The training session started with an explanation of **backend architecture** and how it differs from frontend development. The trainer explained that backend handles business logic, database communication, and server-side processing.

Node.js was introduced as a **JavaScript runtime environment** that allows JavaScript to run outside the browser.

Introduction to Node.js

Topics discussed:

- Node.js is built on **Google Chrome's V8 engine**
- It supports **asynchronous and non-blocking execution**
- It is suitable for scalable and high-performance applications

The trainer also compared Node.js with traditional backend technologies to highlight its advantages.

Node.js Architecture

The following concepts were explained:

- Single-threaded architecture
- Event loop
- Callback mechanism
- Non-blocking I/O

These concepts helped in understanding how Node.js handles multiple requests efficiently.

Hands-on Practice

Practical work included:

- Installing Node.js
- Verifying installation using terminal
- Running a basic Node.js program

```
console.log("Node.js is working");
```

Conclusion

Day 36 provided a strong foundation in backend development and clarified the importance of Node.js in modern web applications.