

# Industrial Training Daily Diary

## MERN Stack Training

**Company:** Sensation Software Solutions

**Student Name:** Gurvinder Singh

**Training Duration:** 6 Months

**Day:** 6

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## Day 6 – JavaScript Functions, Loops & Events

### Objective of the Day

The objective of Day 6 was to strengthen JavaScript fundamentals by learning **functions**, **loops**, and **events**. These concepts are essential for writing reusable code, handling repeated tasks, and making web pages interactive based on user actions.

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### JavaScript Functions

The trainer explained that **functions** are reusable blocks of code designed to perform a specific task. Functions help reduce code repetition and improve readability and maintainability.

### Types of Functions Covered

- **Function Declaration** – Traditional way of defining a function
- **Function Expression** – Function stored in a variable
- **Arrow Functions** – Modern ES6 syntax for shorter functions

We learned how to pass parameters to functions and return values from them.

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### Importance of Functions

Functions are widely used in real-world applications to:

- Handle button click actions
- Perform calculations
- Validate form data
- Fetch and process data

The trainer emphasized that React components themselves are based on functions, so mastering functions is very important.

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## JavaScript Loops

The trainer introduced **loops**, which are used to execute a block of code multiple times.

### Types of Loops

- `for` loop
- `while` loop
- `do-while` loop
- `forEach` loop (for arrays)

We practiced looping through arrays and displaying values dynamically on a webpage.

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## Arrays and Basic Array Methods

Arrays are used to store multiple values in a single variable. We learned:

- Creating arrays
- Accessing array elements
- Common array methods like `push`, `pop`, and `length`

These concepts are frequently used when working with lists of data.

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## JavaScript Events

The trainer explained **events**, which occur when a user interacts with a webpage.

### Common Events Covered

- `click`
- `mouseover`
- `keydown`
- `submit`

We learned how to use event listeners to trigger JavaScript functions when events occur.

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## Practical Work Done

During the practical session, we:

- Created functions for calculations
- Used loops to display list items dynamically
- Handled button click events
- Built small interactive examples

This hands-on practice improved our logical thinking and coding confidence.

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## Relevance to MERN Stack

The trainer explained that JavaScript functions, loops, and events form the base of frontend and backend logic. React uses event handling and functions extensively, while Node.js uses functions and loops for server-side processing.

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## Conclusion of Day 6

Day 6 helped me gain confidence in writing JavaScript logic. I learned how to structure code using functions, perform repetitive tasks using loops, and respond to user actions using events. These skills are crucial for building dynamic web applications.

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### Outcome of the Day:

- Strong understanding of functions
- Knowledge of loops and arrays
- Practical experience with events
- Improved logical thinking