

## HTML 5.0, CSS, BOOTSTRAP

Creating HTML Documents and using All Tags of HTML Like , Heading , Tables, Div, embed etc. Making a Look and Feel Website implementing various options of CSS on the website . Making website responsive using bootstrap classes , using bootstrap modals , components , navigation .

## JAVA SCRIPT

Creating Basic Javascript functions and then cruising through variables , data types , If Else , Loops , Array , Strings fiddling CSS with Java Script and creating effects using Java Script .

## GETTING STARTED WITH NODE

Installing Web Storm and understanding NPM and various commands to install and run your first Program

## NODE JS

Understanding NODE JS & NPM , working with modules , HTTP Modules , URL Modules , Understanding Events , File Upload , Email. Using Express Framework with Node for Web development.



## MYSQL DATABASE

Connecting with My SQL , performing CRUD operations on My SQL , Generating JSON , Creating Web Services.

## CRUD OPERATIONS

Connecting to MYSQL and performing CRUD operations using NOde to create a data driven Application

## AJAX AND FETCH

To Communicate with Server to Fetch Data without refreshing whole page. Working with REST API. Working with POSTMAN

## GENERATIVE AI

Understanding LLMs (GPT, Claude, Gemini) integration

Building text generation, chatbots, image generation, summarisation, & content automation.

## AGENTIC AI (AI AGENTS)

Designing autonomous AI agents that can plan, reason, and execute tasks

Integrating agents for customer support, task automation, and personalized user experiences.



## VERSION CONTROL WITH GIT



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# Front-end Development With React

#CodingMtlbVMM

**VMM**  
**EDUCATION**

Best Place to Learn Coding

Online & Offline Classes

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## WEB FUNDAMENTALS

- HTML : Structure, Semantic Tags, Forms, Tables , Links , Images & Lists
- CSS: Selectors, Box Model, Positioning, Flexbox & Transitions
- Bootstrap : Grid System, Components & Utility Classes
- JavaScript : Variables, Data Types, Functions, Conditionals, Loops
- DOM & Events : Select Elements, Handle Events, Basic Manipulation
- Advanced : Arrays & Methods , Objects, Spread/Rest

## INTRODUCTION TO REACT

- *What is React ?*
- *Features of React*
- *Setup Using Vite*

## JSX AND RENDERING

- JSX Syntax and Rules
- Embedding Expressions
- Rendering Elements
- Fragment Usage

## COMPONENTS

- Functional vs Class Components
- Props and PropTypes
- Default and Destructured Props

## EVENT HANDLING

- Handling Events in JS
- Passing Arguments

## CONDITIONAL RENDERING

- If/else in JSX and Ternary Operator
- Short-circuit Evaluation

## LISTS AND KEYS

- *Rendering Lists*
- *keys in Lists & Mapping over Arrays*

## FORMS AND INPUT HANDLING

- *Handling Using React Hook Form*

## HOOKS

- useState & useEffect
- useRef & useContext
- useMemo

## REACT ROUTER (V6)

- Setting Up Router
- Routes and Route Parameters
- useNavigate, useParams
- Nested Routes

## CONTEXT API

- Creating Context
- useContext Hook
- Context Provider & Consumer

## API INTEGRATION

- Fetch API/Axios
- useEffect for Data Fetching
- Handling Loading and Error States

## PERFORMANCE OPTIMIZATION

- React.memo
- Lazy Loading Components
- Code Splitting



## VERSION CONTROL WITH GIT

*Understanding concept of Git & importance of version control , working with core git commands clone, commit, push, pull , branch and merge*



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