

Vue.JS Course

Course Duration: 24 Hours

Course Code: VUE-301

1. Course Overview

The *Vue.js Course* is designed to help learners master **Vue.js**, a progressive JavaScript framework used to build **interactive, efficient, and scalable front-end applications**. This course covers everything from **Vue.js fundamentals to advanced concepts**, including state management, routing, and integrating APIs, ensuring students become proficient in building **modern single-page applications (SPAs)**.

2. What You'll Learn?

- Fundamentals of **Vue.js framework**.
- Creating and managing **components, props, and events**.
- Working with **directives, forms, and data binding**.
- State management using **Vuex**.
- Building **Single Page Applications (SPA)** with Vue Router.
- Consuming **REST APIs and Axios**.
- Structuring and scaling large Vue applications.
- Deploying Vue apps to **cloud and hosting platforms**.

3. Target Audience

- Beginners who want to learn **front-end development** with Vue.js.



- Web developers aiming to upskill with **modern frameworks**.
- JavaScript developers interested in building **interactive UIs**.
- Professionals looking to transition into **Vue.js developer roles**.

4. Pre-Requisites

- Basic knowledge of **HTML, CSS, and JavaScript**.
- Familiarity with ES6 concepts (let, const, arrow functions, promises).

5. Course Content

Module 1: Introduction to Vue.js

- Overview of Vue.js framework
- Setting up the development environment
- Vue CLI and project scaffolding

Module 2: Vue.js Basics

- Vue instance and lifecycle hooks
- Data binding and directives
- Methods, computed properties, and watchers

Module 3: Components in Vue.js

- Creating reusable components
- Props, custom events, and slots
- Component communication patterns

Module 4: Forms and User Input

- Handling form inputs and validation
- v-model binding and modifiers
- Working with checkboxes, radios, and dropdowns

Module 5: Vue Router – Navigation & Routing

- Setting up Vue Router
- Dynamic routes and route guards
- Nested routes and lazy loading

Module 6: State Management with Vuex

- Vuex architecture and core concepts
- State, getters, mutations, and actions
- Best practices for scalable state management

Module 7: Working with APIs

- Introduction to Axios for HTTP requests
- Fetching and displaying data from REST APIs
- Error handling and async/await

Module 8: Advanced Vue.js Concepts

- Mixins and custom directives
- Filters and plugins
- Vue 3 Composition API vs Options API

Module 9: Testing and Debugging Vue Apps

- Vue DevTools for debugging
- Unit testing with Jest
- End-to-end testing with Cypress

Module 10: Deployment & Project

- Optimizing Vue.js apps for production
- Deploying to Netlify, Vercel, or Firebase
- Capstone project: Building a complete SPA with Vue.js