

# Vue JS Course Syllabus

## *1. Introduction to Vue.js*

### **Learning Objective:**

By the end of this module you will learn what kind of problems vue.js will solve and how to setup and run a vue app.

- What is Vue.js
- Why Vue.js
- Quick tour of Vue-cli
- Hello World with Vue.js
- Anatomy of Hello world vue app

### **Hands-on:**

Create new vue app using vue cli, execute and debug.

## *-2. Working with Template & viewmodel*

### **Learning Objective:**

By the end of this module you will learn about the templating syntax and its abilities.

- What is vue.js template
- What is viewmodel / vue instance?
- Template syntax
- Interpolation
- Directive
- Filters
- Shorthands
- Javascript expressions
- Computed properties

- Watchers
- Class and style bindings
- HTML classes
- Inline styles
- Conditional Rendering
- Iterative Rendering

### Hands-on:

Create a vue app which explores the template syntax features like interpolation, directives, expressions, watchers, filters, computed properties, iterative & conditional rendering.

### *3. Vue Instance Revisited*

#### Learning Objective:

By the end of this module you will gain deeper understanding about vue instance, lifecycle and data access from vue instance.

- Basic vue instance usage
- Multiple vue instances
- Vue instance Lifecycle
- Accessing data from outside vue instance
- Data and methods
- More about \$el, \$data and \$refs

### Hands-on:

Create a vue application that creates multiple vue instances, explore through the lifecycle methods and code data access from outside vue instance

## *4. Event handling*

### **Learning Objective:**

By the end of this module you will learn how to work with events in vue.

- Introduction
- Listening to events
- Method Event handlers
- Event modifiers
- Key modifiers

### **Hands-on:**

Create a vue app that responds to events.

## *5. Working with forms & two way binding*

Quality Management System : ISO 9001:2015

### **Learning Objective:**

By the end of this module you will learn how to develop forms and the power of 2 way binding.

- Introduction to two way binding via v-model
- Handling user input with HTML form controls
- Data binding
- .lazy, .number, .trim modifiers
- Submitting a form

### **Hands-on:**

Create forms and apply two way binding to read and write data to forms.

## *6. Introduction to components*

### **Learning Objective:**

By the end of this module you learn about the significance of components and their power in reusability. You will also learn how to decompose a given web page into individual components and how to compose them to make them represent a page.

- What are components?
- Why components
- Hello World component
- Anatomy of a component
- Registering Components Locally and Globally
- Root Component
- Thinking in components
- Composing application as components

### **Hands-on:**

Convert a single html web page into a series of components, register components and compose components into application.

## *7. Passing data to components*

### **Learning Objective:**

By the end of this module you will learn how to enable communication between components.

- Props, parent to child communication
- Custom events, child to parent

- Non parent child communication event emitter style using .emit, .on

### Hands-on:

Create multiple components and enable communication between independent component props for parent to child communication, events for child to parent and non parent child components using event emitter.

## 8. Content distribution with slots

### Learning Objective:

By the end of this module you will learn how to embed arbitrary content inside of child components.

- Compilation scope
- Single slot
- Named slot
- Scoped slot

### Hands-on:

Create a reusable component which accepts arbitrary content using slots.

## 9. Dynamic components

### Learning Objective:

By the end of this module you will learn how to switch between various

arbitrary components at the same mount point using dynamic components.

- Switching Multiple Components with Dynamic Components
- Dynamic Component Behavior
- Keeping Dynamic Components Alive
- Lifecycle hooks

### **Hands-on:**

Create a component with tabbed layout that switches components between tabs dynamically.

## **10. Custom directives**

### **Learning Objective:**

By the end of this module you will learn how to develop a custom directive beside the built in directives.

- Introduction
- Directive hook functions
- Developing custom directive
- Passing values and arguments to custom directives
- Directive hook arguments

### **Hands-on:**

Create a custom directive that modifies the background colour of the element when the directive is applied.

## 11. Mixins

### Learning Objective:

By the end of this module you will learn a flexible way to distribute reusable functionalities for Vue components using mixins.

- Introduction
- Creating and using mixins
- Option merging
- Global mixin

### Hands-on:

Create a mixin and apply to components.

## 12. Filters

### Learning Objective:

By the end of this module you will learn how to format data in vue template without altering the original value using filters.

- Introduction
- Local filters
- Global filters
- Chaining filters

### Hands-on:

Create a component that uses default filters to format data in template, also chain multiple filters.

### 13. Remote communication with vuejs

#### Learning Objective:

By the end of this module you will learn how to consume remote apis in vue applications.

- Using vue-resource to working with HTTP
- Fetch data
- Post data to server
- Request Response Interception
- Template URLs

#### Hands-on:

Create components that fetch data from remote api and post data to remote api.

Creating Webs, Connecting Everyone

### 14. Routing

#### Learning Objective:

By the end of this module you will learn how to power vue application with routing. Also learn how to protect routes using guards.

- Introduction
- Setting up vue-router
- Loading routes
- Routing modes
- Navigation with router links
- Styling active links
- Imperative navigation
- Route Parameters

- Setting up child or nested routes
- Named routes
- Query parameters
- Named router views
- Wildcard routes
- Route guards

### Hands-on:

Setup and configure vue-router, create navigation component and code declarative routing using router links, code imperative routing from component methods, configure route parameters and read them from inside component. Protect routes using guards.

## 15. State Management

### Learning Objective:

By the end of this module you will learn how to take the advantage of state management, how to setup vue app with vuex.

- Introduction
- What is need for state management
- What is vuex
- Centralized store
- Understanding Getters
- Using Getters
- Mapping Getters to Properties

### Hands-on:

Create a centralized store, getter & setters, actions

## *16. Understanding Mutations*

### **Learning Objective:**

By the end of this module you will learn how to apply mutation to change state in a Vuex store.

- Using Mutations
- Using Actions
- Mapping Actions to Methods

### **Hands-on:**

Create mutations to change the data in the store