



# MERN Stack Course Details

Kumari Galli – 2, Putalisadak  
Kathmandu, Nepal  
9847367755, 01-4221450

Copyright Reserved © Mind Risers Consortium Pvt. Ltd

# MERN Stack Training Syllabus

## Introduction:

- Introduction to JavaScript programming language
  - Introduction to javascript
  - Variables
    - var
    - Const
    - Let
  - Naming
  - Data Types
  - Operands and operators
- Technologies around JavaScript.

## Environment Setup:

- Introduction to development tools
- Text Editor, IDE
- Git
- Git workflow(branching,push,pull)
- NPM, Yarn
- Postman

## HTML & CSS

### Node JS:

- Introduction to nodejs
- Node package manager (npm)
- Node modules
- Node CLI
- Global Object
- Creating http server with nodejs
- Working on core NODE API
- Asynchronous and event loop in node js

### Express JS:

- Introduction to framework and Express • The model-view-controller pattern in ExpressJS • Middlewares
- Templating engine (pug,handlebars)
- Routing
- HTTP Protocol
- Http Request Object
- Http Response Object
- User authentication using jwt (json web token) • Garbage collection and error handling

### **Mongo DB:**

- Installation
- Introduction SQL Vs NoSQL
- NoSQL (Schema Less Database)
- MongoDB (Collection & Documents)
- Data Modelling
- Create Database Shell Command
- Datatypes
- Update, insert delete and query documents
- Using MongoDB Native driver with Node
- Database modeling using MongoDB
- Aggregation in mongodb

### **React JS:**

- Introduction Frontend tools (webpack , babel, more...) and React • Single Page Application scope and objectives
- Dev Tool and Environment
- JSX, Babel, Webpack
- ES6 features practices
- Class, Inheritance, Encapsulation and more
- Create-react-app and project setup
- Components patterns in React
- State
- Props
- Life Cycle of React Components
- Functional Component

- Introduction to hooks
- React Router
- SPA using React Router
- Introduction to Redux and Flux Architecture
- State Management
- Reducers
- Action Creators
- Middlewares (thunk,saga)
- Services
- Error Handling