Web Development

HTML

- HTML Introduction
- HTML Editors
- HTML Basic
- HTML Elements
- HTML Attributes
- HTML Headings
- HTML Paragraphs
- HTML Styles
- HTML Formatting
- HTML Quotations
- HTML Comments
- HTML Colors
- HTML CSS
- HTML Links
- HTML Images

- HTML Favicon
- HTML Tables
- HTML Lists
- HTML Block & Inline
- HTML Classes
- HTML Id
- HTML Iframes
- HTML JavaScript
- HTML File Paths
- HTML Head
- HTML Layout
- HTML Responsive
- HTML Semantics
- HTML Style Guide

CSS

- CSS Introduction
- CSS Syntax
- CSS Selectors
- CSS How To
- CSS Comments
- CSS Colors
- CSS Backgrounds
- CSS Borders
- CSS Margins
- CSS Padding
- CSS Height/Width
- CSS Box Model

- CSS Outline
- CSS Text
- CSS Fonts
- CSS Icons
- CSS Links
- CSS Lists
- CSS Tables
- CSS Display
- CSS Max-width
- CSS Position
- CSS Z-index

- CSS Overflow
- CSS Float
- CSS Inline-block
- CSS Align
- CSS Combinators
- CSS Pseudo-class
- CSS Pseudo-element
- CSS Opacity

Bootstrap

- BS Get Started
- BS Grid Basic
- BS Typography
- BS Tables
- BS Images
- BS Jumbotron
- BS Wells
- BS Alerts
- BS Buttons
- BS Button Groups
- BS Glyphicons
- BS Badges/Labels
- BS Progress Bars
- BS Pagination
- BS Pager
- BS List Groups
- BS Panels

- BS Dropdowns
- BS Collapse
- BS Tabs/Pills
- BS Navbar
- BS Forms
- BS Inputs
- BS Inputs 2
- BS Input Sizing
- BS Media Objects
- BS Carousel
- BS Modal
- BS Tooltip
- BS Popover
- BS Scrollspy
- BS Affix
- BS Filters

Javascript

- JS Introduction
- JS Where To
- JS Output
- JS Statements
- JS Syntax
- JS Comments
- JS Variables
- JS Let
- JS Const
- JS Operators
- JS Arithmetic
- JS Assignment
- JS Data Types
- JS Functions

- JS Objects
- JS Events
- JS Strings
- JS String Methods
- JS String Search
- JS String Templates
- JS Numbers
- JS Number Methods
- JS Arrays
- JS Array Methods
- JS Array Sort
- JS Array Iteration
- JS Array Const
- JS Dates

- JS Date Formats
- JS Date Get Methods
- JS Date Set Methods
- JS Math
- JS Random
- JS Booleans

- JS Comparisons
- JS If Else
- JS Switch
- JS Loop For
- JS Loop For In
- JS Loop For Of
- JS Loop While
- JS Break
- JS Iterables
- JS Sets
- JS Maps
- JS Typeof
- JS Type Conversion
- JS Bitwise
- JS RegExp
- JS Errors
- JS Scope
- JS Hoisting
- JS Strict Mode
- JS this Keyword
- JS Arrow Function
- JS Classes
- JS Modules
- JS JSON
- JS Debugging
- JS Style Guide
- JS Best Practices
- JS Mistakes
- JS Performance
- JS Reserved Words

JQuery

- jQuery Intro
- jQuery Get Started
- jQuery Syntax
- jQuery Selectors
- jQuery Events
- jQuery Effects
- jQuery Hide/Show
- jQuery Fade
- jQuery Slide
- jQuery Animate
- jQuery stop()
- jQuery Callback
- jQuery Chaining
- jQuery HTML
- jQuery Get
- jQuery Set
- jQuery Add
- jQuery Remove
- jQuery CSS Classes
- jQuery css()
- jQuery Dimensions
- jQuery Traversing
- jQuery Traversing
- jQuery Ancestors
- jQuery Descendants
- jQuery Siblings
- jQuery Filtering
- jQuery AJAX
- jQuery AJAX Intro
- jQuery Load
- jQuery Get/Post

REACT COURSEMAP

Module 1 – Intro to REACT

- React JS Introduction – Why When ..
- What is SPA
- React types – Class Based and Functional
- React Basics – What is Component, JSX, props and state
- Different types of Component – Stateful, Stateless, Presentational etc.,
- Concept of Virtual DOM
- Basics of NODE – for packaging purpose

Module 2 – Useful Javascript concepts

- ES6 – let, const, import export, spread and rest operation, Arrow functions, Destructuring, Classes and its properties
- Promises, fetch, Async/Await, Array and it's methods, Object and Its methods
- Third party library – Lodash and its functions – A useful library for sorting, filtering, deep copy and many more – (Underscore – being an alternative)

Module 3 – REACT Basics 1

- Creating our first REACT project
- Project structure overview
- Developing our First Class Based Component
- Understanding props and state
- Understanding jsx and its limitations
- Using React Fragment as a wrapper Component
- Sending props from one component to another component
- Sending functions as props
- Updating state by event handling

Module 4 – REACT Basics 2

- Understanding component lifecycle – Render, Mounting, Unmounting, Re-Rendering etc.,
- Component Re-Render – (Prop Change and State Change)
- Different Lifecycle Methods when state changes
- Different Lifecycle Methods when prop changes
- Understanding purpose of different lifecycle methos like ComponentWillMount, ComponentWillReceiveProps, ComponentDidUpdate, ComponentDidUnmount etc and using it in our project
- Introcuing PropTypes

Module 5 – REACT Basics 3

- Writing First Functional Component
- Managing state in Functional Component – (useState Hook)
- Intorcution to hooks in React 16.8 version and above
- Lifecycle management in Functional component using useEffect hook
- Different ways of using useEffect – For cleanup, state change etc

Module 6 – REACT Basics 4

- Pure Component
- Rendering componets by list (Dynamic Rendering) and adding keys
- Introcution to Refs in React
- Context API in React
- useContext for Functional Component
- useReducer for Functional Component
- Adding inline styling if needs
- Double curley brace for expressions {} – Using JS inside JSX
- String literals
- Children, Two Way Data Binding, Lifting up state concepts

Module 7 – Form Management with React

- Controlled vs Uncontrolled components
- Managing Form elements via state – Controlled
- Managing Form elements via DOM using Ref – Uncontrolled

Module 8 – REDUX

- Understanding REDUX – An alternate to Context API
- Concept of REDUX like Store, Action, Action Creater, Reducer etc.
- React-Redux – Implementing Redux in React

Module 9 – React Router – For achieving SPA

- Both Class Based and Functional Based way of acheviging Routing and all of its concepts being covered

Module 10 – Redux Thunk (Middleware)

- Gulp / Webpack – For packaging, minification etc –

Module 11 – REST http with axios or fetch or promise

- Using React libraries (Material UI) – An Overview –

Module 12 – Unit Testing using JEST and Enzyme

- Installation JEST & Enzyme
- Writing Unit Test scenarios

Node JS

Introduction

- Understating what is node, why and its features

Javascript Basics

- ES6, Array Object and its methods, Async/Await, Promise etc

Node Introduction & Server Setup

- Creating node server, understanding Lifecycle and event loop
- Request/Response routing and redirecting
- Blocking/Non-Blocking code

NPM & Nodemon

- Understanding NPM, Global and local npm install
- Using Nodemon for autorestart, debugging etc.

Working with Express

- Understanding Express.js
- Adding middleware
- Handling routes
- Creating and serving html pages
- error pages

Understanding MVC

- MVC Application Architecture
- Creating the first MVC Application
- CRUD Operations

Dynamic Routes

- Extracting dynamic params, Parsing data with POST request,
- Query params, REST operations

SQL Introduction

- Comparing SQL and NoSQL, Understanding basics of SQL like CRUD operation in DB

Using Sequelize

- Connecting to SQL DB and doing CRUD operations

NoSQL and MongoDB

- Understanding NoSQL and MongoDB

Mongoose

- Using mongoose for doing CRUD in MongoDB

Authentication

- Adding user authentication
- Encrypting password
- route protection etc

Email Sending

- Setting up a Local SMTP Server
- Sending a Plain-Text Email
- Sending Fancy Emails using HTML
- Adding Attachments

Advanced Authentication and validation

- Using Tokens
- Authorization
- Input validations

Error Handling

- Error object
- Try...catch
- Throw
- Call stack
- Effective function naming
- Asynchronous paradigms like promise

File Uploads and Downloads

- Introduction to File Upload
- File Uploads Modules
- How to use Upload Modules
- Hands On File Upload and Download

Working with REST api

- Support for REST (Representational State Transfer)
- GET,POST,PUT,DELETE Methods
- POSTMAN Tool
- JSON Structure
- How to enable Web Service
- Authentication in Node Js
- CRUD Operations API
- Understanding Websockets and Socket.io
- Deploying App

Others

- React Native

Application Development & Evaluation

❯ **E-Commerce Application**
Creating simple Home page, Content page, Product Listing page, Product information page

❯ **Ticket Management like Service Now**
Login, Create ticket, Edit ticket, View ticket

❯ **Internet Banking Application**
Login, Add beneficiary, Fund transfer, Balance Checking

❯ **Video based Learning Management System**
Login, Upload Video chapters, Student Registration, Student Course Purchase , Student Login, View Course Videos

Certification

❯ Certification support
❯ Production support

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