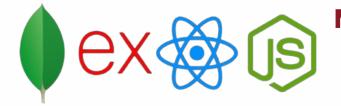


FULL STACK ACADEMY

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4 Months

MERN Full Stack Development

- 1. HTML, CSS & JavaScript
- 2. Node JS & Express JS
- 3. MongoDB
- 4. React JS

HTML, CSS & JAVASCRIPT - COURSE CONTENT

1. HTML - HTML Intro, HTML Editors, HTML Basics, HTML Elements, HTML Attributes, HTML Headings, HTML Paragraphs, HTML Styles, Html Formatting, Html Comments, Html Colors, Html with CSS, Html Links, Html Images, Html Favicon, Html Table, Html Lists, Html Block & Inline, Html Iframes, Html Layout, HTML Responsive, Html Semantics, HTML Forms. HTML Form Attributes, Html Form Elements, Html Input Types, Html Input Attributes & Html Input Form Attribute

2. CSS - CSS Introduction, CSS Syntax, CSS Selectors, CSS How To, CSS Comment, 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, CSS Navigation Bar, CSS Dropdowns, CSS Image Gallery, CSS Image Sprites, CSS Attribute Selectors, CSS Forms, CSS Counters, CSS Website Layout, CSS Specificity, CSS Important, CSS Advanced, CSS Rounded Corners, CSS Border Images, CSS Backgrounds, CSS Colors, CSS Color Keywords, CSS Gradients, CSS Shadows, CSS Text Effects, CSS Web Fonts, CSS Transitions, CSS Animations, CSS Tooltips, CSS Style Images, CSS Image Reflection, CSS object-fit, CSS object-position, CSS Buttons, CSS Box Sizing, CSS Media Queries, CSS Flexbox, CSS Responsive, CSS Grid, Grid Intro, Grid Container & Grid Item

3. JavaScript- I) Introduction to JavaScript: Variables, Functions, data types, everything is a value, Function first-class citizens, Operators, Loops, Conditional statements.

II) Object: Objects in JS, Ways to create Objects, Reflection, this keyword, call, bind and apply methods & inheritance.

III) Advanced: Closures, this keyword, Modules (traditional and modern), Strict mode and sloppy mode & Common design patterns.

IV) ES6: ECMAScript introduction, arrow functions, let and const, classes, ES6 modules, string interpolation, spread operator, destructuring arrays and objects, map, reduce and filter & commonly used ES6 feature.

V) Asynchronous JavaScript: Synchronous Javascript, What is asynchronous code, Callbacks, Promises, Async and Await & Generator.

VI) DOM Manipulation: Introduction to the DOM, Selecting Elements, Manipulating Elements, Styling Elements, Creating and Removing Elements, Handling Events, Working with Forms and Inputs.

NODE JS & EXPRESS JS - COURSE CONTENT



1. Introduction to Node JS - (Week 1): Introduction, Event loop, and Nonblocking, Asynchronous execution, Callbacks, Installation, NPM, Package.json, Creating HTTP server, Serving requests, Streams, Different types of Modules, Routing & Nodemon.

2. Debugging - (Week 2): Console.log, Debugging using VS Code & Debugging using Chome.

3. Express JS - (Week 2): Introduction, Installation, Creating HTTP server, Serving requests, Routing, Middlewares, Creating middleware.

4. Creating REST API - (Week 3): Introduction to REST, Routing, Controllers, Models, GET, POST, PUT and DELETE requests, Paging, searching and sorting data & Using Postman to make post calls.

5. Authentication - (Week 4): Introduction to Authentication, Passport Authentication, JSON Web Token (JWT), Local Auth Strategy, Signup, and log-in, Handling sessions, Cookies & Authorization.

6. File Manipulation - File Upload using Multer & Loggers

6. Packaging & Development - (Week 4): Deploying database to Mongo Atlas & Continuous Integration and Continuous Delivery (CI and CD).



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MONGODB - COURSE CONTENT



- 1. Introduction to MongoDB: Overview, Installation, MongoDB as service, Creating database & Collections
- 2. Operations: Read, Insert, Update, Delete, Count, Sort & Limit.
- 3. Operators: \$eq, \$ne, \$lt, \$gt, \$lte, \$gte & \$in.
- 4. Advanced: Indexes, Creating Indexes, Dropping Indexes, Designing a database, Aggregations, and Projections & Mongo Shell.
- 5. Administration: Db backup, Db restore, User Management & Import and Export

REACT JS - COURSE CONTENT



1. Introduction to React - JSX, Virtual DOM, What is React, Why React, Project setup, Building and running react app

2. Components - Component-driven development, Components basics, State, Props, Traditional Components, ES6 Components, Functional Components, Class Components, Synthetic Events, Condition Rendering, Props Drilling, Rendering Lists using map() & importance of keys.

3. Single Page Applications - Introduction to SPA, Container Components, Presentational Components, Routing & Authentication. 4. HTTP - What is REST?, HTTP request and response format, HTTP status codes, headers, and payload, Fetching data from REST API, Axios, Promises handling & Error handling

5. Forms - Developing Forms using Formik, Posting Data & Validating Form Data using Yup

6. React Hooks - useState, useEffect, useReducer, useMemo, useRef, useContext & Context API and Custom Hooks

7. Miscellaneous - Higher Order Components (HOC's), Styling in React (Inline Styles, CSS Modules & Tailwind CSS)