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NAGPUR IT TRAINING INSTITUTE

# FULL STACK DEVELOPER

## Full Stack Developer Training course Overview

Nagpur IT training institute will provide you with the best training in Nagpur. Nagpur IT is one of the top institutes in Nagpur that is committed to providing a great learning experience to students which helps them to reach successful positions in their careers. All our trainers at Nagpur IT Training Institute are qualified professionals who will teach according to the standards of the industry.

Full stack development courses are becoming increasingly popular in today's tech-driven world, and for good reason. Here are a few reasons why pursuing a full stack development course can be beneficial:

1. Versatility: Full stack development courses provide a comprehensive understanding of all the components that make up a web application, from the front-end user interface to the back-end server and database. This versatility allows developers to work on multiple aspects of a project and gives them the ability to work with a wider range of technologies.
2. In-demand skills: With the rise of digital transformation, the demand for full stack developers is on the rise. According to recent job market data, full stack development is one of the most in-demand skills in the IT industry.
3. Job opportunities: Full stack development courses open up a wide range of job opportunities for developers. From startups to established enterprises, every company is looking for skilled full stack developers who can build scalable, robust, and user-friendly web applications.
4. Higher salary: Due to the high demand and scarcity of full stack developers, they often command higher salaries than their specialized counterparts. Having knowledge of both front-end and back-end development can make developers more valuable to companies.

WE Start this course from the basics of HTML,CSS and JAVASCRIPT. So that it lays a good foundation for the Full Stack Developer Course

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## Module 1: HTML

- Introduction to HTML
- HTML Basic Formatting Tags
- HTML-Grouping Using Div Span
- HTML Lists
- HTML Images
- HTML Hyperlink
- HTML Tables
- HTML iFrame
- HTML Form
- HTML Headers
- HTML Miscellaneous

## Module 2: CSS

- CSS2 Introduction
- CSS2 Syntax
- CSS2 Selectors
- CSS2 Colour Background Cursor
- CSS2 Text Fonts
- CSS2 List Tables
- CSS2 Box Model
- CSS Display Positioning
- CSS Floats

## Module 3: JAVASCRIPT

- JS Introduction
- JS Versions
- JS Objects
- JS Functions
- JS Classes
- JS Async
- JS HTML DOM
- JS Browser BOM
- JS Web APIs
- JS AJAX
- JS JSON
- JS vs jQuery

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## Module 1: Introduction

- What is the MERN Stack?
- MERN A first Overview

## Module 2: The MERN Stack-Theory

- Module introduction
- Diving Into the Frontend
- Understanding the Backend
- REST vs GraphQL
- Connecting Node & React

## Module 3: Planning the App

- Module introduction
- Sketching out the Frontend

## Module 4: React.js -A Refresher

- Module introduction.
- What is React?
- A Note About The NodeJS Version.
- React 18.
- Understanding JSX.
- Understanding Components.
- Working with Multiple Components.
- Using Props to pass Data between Components
- Rendering Lists of Data.
- Handling Events.
- Efficient Child<=>Parent Communication.
- Working with "State".
- More on State
- Fetching User Input (Two-way Binding).

## Module 5: React.js -Building the Frontend

- Module introduction.
- Starting Setup, Pages & Routes.
- Adding a UsersList Page / Component.
- Adding a UserItem Component..

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- Styling our App & More Components
- Presentational vs Stateful Components.
- Adding a Main Header.
- Adding Navlinks.
- Implementing a Basic Desktop & Mobile Navigation.
- Understanding Portals
- Handling the Drawer State
- Animating the Sidedrawer.
- Rendering User Places & Using Dynamic Route Segments
- Getting Route Params
- Adding Custom Buttons
- Adding a Modal.
- Rendering a Map with Google Maps.
- Adding a Custom Form Input Component.
- Managing State in the Input Component.
- Adding Input Validation.
- Sharing Input Values & Adding Multiple Inputs.
- Managing Form-wide State.
- Finishing the "Add Place" Form.
- Starting Work on the "Update Place" Page.

- Adjusting the Input Component.
- Creating a Custom Form Hook (useForm).
- Adjusting the Form Hook.
- Fixing Minor Issues.
- Showing a Deletion Warning.
- Adding an "Auth" Page & Login Form
- Adding Signup + "Switch Mode" Button.
- Adding Auth Context for App-wide State Management.
- Listening to Context Changes.
- Adding Authenticated & Unauthenticated Routes.
- More Auth Context Usage.

## Module 6: Node.js & Express.js - A Refresher

- Module introduction.
- What is Node.js?
- Sending Requests & Responses.
- What is Express.js?
- Adding Express.js.
- Understanding the Advantages of Express.js.
- How Code Execution Works.

## Module 7: Node.js & Express.js - Building our REST API

- Module introduction
- Implementing Basic Routing.
- Adding Place-Specific Routes.
- Getting a Place By User ID.
- Handling Errors.
- Adding our own Error Model.
- Adding Controllers.
- Adding a POST Route & Using Postman.
- Adding Patch Routes to Update Places.
- Deleting Places.
- Finalizing the "Get Places by User ID" Resource
- Setting Up the User Routes (Signup, Login, Get users)
- Validating API Input (Request Bodies).
- Validating Patch Requests & User Routes.
- Using Google's Geocoding API to Convert an Address into coordinates.

## Module 8: Working with Mongo DB & Mongoose - A Refresher

- Module introduction.
- What is Mongo DB ?
- SQL vs NoSQL.
- Connecting React to a Database?Forums Submission.
- Setting Up MongoDB.
- Creating a Simple Backend & Connecting it to the Database.
- Creating a Document with MongoDB.
- Getting Data from the Database.
- Installing Mongoose.
- Understanding Models & Schemas.
- Creating a Product.
- Connecting to the Database & Saving the Product.
- Getting Products.
- Understanding the ObjectID.

## Module 9 : Connecting the Backend to the Database - MongoDB and Mongoose

- Module introduction
- Installing Mongoose & Connecting our Backend to MongoDB
- Creating the Place Schema & Model.
- Creating & Storing Documents in the Database.
- Getting Places by the PlaceID.
- Getting Places by the UserID.
- Updating Places.
- Deleting Places.
- How Users & Places are Related.
- Creating the User Model.
- Using the User Model for Signup.
- Adding the User Login.
- Getting Users.
- Adding the Relation between Places & Users.
- Creating Places & Adding it to a User.
- Deleting Places & Removing it From the User.
- Getting Places - An Alternative.

## Module 10 : Connecting the React.js Frontend to the Backend

- Module introduction
- Initial setup.
- Sending a POST Request to the Backend.
- Handling CORS Errors.
- Getting Started with Error Handling.
- Proper Error Handling in the Frontend.
- Sending a Login Request.
- Getting Users with a GET Request.
- Creating a Custom Http Hook.
- Improving the Custom Http Hook.
- Using the Http Hook to GET Users.
- Adding Places (POST).
- Loading Places by User Id.
- Updating Places.
- Deleting Places.
- Fixing NavLinks & "My Places".

## Module 11 : Adding File Upload

- Module introduction
- Building an ImageUpload Component.
- Finishing & Using the ImageUpload Component (in a form)
- On the Backend: Using Multer to Save Files.
- Filtering Files on the Backend (Images Only!).
- Wiring Frontend and Backend Up.
- Connecting Users to Images.
- Serving Images Statically.
- Uploading Images for New Places.
- Deleting Images When Places Get Deleted.

## Module 12 : Adding Authentication

- Module introduction
- How Authentication Works (in a MERN App).
- Hashing the User Password.
- Logging Users In (with Hashed Passwords).
- Generating Tokens (JWT) on the Backend.

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- Backend Route Protection with Auth Middleware.
- Using & Attaching JWT (Tokens) in React.
- Using Tokens to Update and Delete Places.
- Adding Authorization.
- Authorization on "Delete Places".
- Storing the Token in the Browser Storage.
- Adding Auto-Login (Basic Version).
- Managing the Token Expiration Date.
- Finished Auto-Login & Auto-Logout.
- Creating a Custom Authentication Hook.

## Module 13 : Application Deployment

- Module introduction
- Deployment Steps Overview.
- Using Environment Variables (Node.js).
- Environment Variables in React Apps.
- Preparing API Keys & Credentials.
- Building the React App
- Adding Code Splitting to React

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- Understanding Possible Deployment Alternatives.
- Deploying a Standalone REST API (Example: Heroku.
- Deploying a Standalone React SPA (Example: Firebase hosting.
- Fixing Style Issues.
- Deploying a Combined App.
- Storing Files/ Uploads.

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