



KIDS & TEENS FREELANCING TRAINING INSTITUTE

Next JS Training Course Outline

Module 1: Introduction to Next JS

- What is Next JS and why it's ideal for building fast, SEO-friendly web apps
 - Real-life example: A website that loads fast and is easily searchable on Google (server-side rendering)
 - Setting up Next JS project with Create Next App
 - The power of SSR (Server-Side Rendering) and SSG (Static Site Generation)
 - Activity: Create your first Next JS app with a basic page
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Module 2: Pages and Routing in Next JS

- Understanding file-based routing in Next JS
 - Real-life example: A library where each shelf is a page (pages in Next JS)
 - How to create new pages and set up navigation links
 - Dynamic routing with file names and parameters
 - Activity: Create a multi-page app with navigation between different pages
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Module 3: Static Site Generation (SSG) with Next JS

- What is Static Site Generation (SSG) and when to use it
 - Real-life example: A printed book (static content ready to go)
 - How to use `getStaticProps()` for fetching data at build time
 - Activity: Build a static page that fetches data from an API and displays it
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Module 4: Server-Side Rendering (SSR) in Next JS

- What is Server-Side Rendering (SSR) and why it's important for SEO
- Real-life example: A chef preparing a meal when ordered (SSR fetches data on demand)

- How to use `getServerSideProps()` to fetch data on each request
 - Activity: Create a page that fetches data using SSR
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Module 5: Client-Side Rendering (CSR) in Next JS

- What is Client-Side Rendering (CSR) and how it complements SSR and SSG
 - Real-life example: A dynamic dashboard that updates on the user's interaction (CSR)
 - Using React hooks (`useState()`, `useEffect()`) in Next JS for CSR
 - Activity: Build an interactive page that fetches data after the page has loaded
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Module 6: API Routes in Next JS

- What are API routes in Next JS and how to handle backend logic
 - Real-life example: A food delivery app with APIs for orders, payments, etc.
 - Creating serverless functions with Next JS API routes
 - Activity: Create a basic API route to handle form submissions
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Module 7: Optimizing Performance in Next JS

- Best practices for optimizing performance in Next JS apps
 - Real-life example: A fast food restaurant that prepares food quickly (optimization)
 - Using image optimization with the `next/image` component
 - Lazy loading components and dynamic imports for performance
 - Activity: Implement image optimization and lazy loading in your app
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Module 8: Final Project – Build a Complete Next JS App

- Plan and build a full-featured Next JS app using SSR, SSG, and API routes
 - Use client-side rendering, server-side rendering, and static generation to optimize your app
 - Test the app for performance and SEO using Next JS tools
 - Activity: Present your final project, explaining how you used different Next JS features
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Bonus Materials

- Next JS cheat sheet with SSR, SSG, and API route syntax

- List of resources for learning advanced Next JS features
- Links to useful Next JS plugins and libraries
- Interactive coding challenges and quizzes
- Certificate of Completion for Next JS Basics