

Course Name : NEXT.JS IN ACTION: BUILDING DYNAMIC WEB APPLICATIONS
Duration : 3 Days (Physical Classroom / Virtual Live Instructor)
Skill Level : Beginner

COURSE DESCRIPTION:

Embark on a comprehensive journey into modern web development with our Next.js course. Starting with essential JavaScript concepts like arrow functions, list comprehensions, and the event loop, you'll establish a robust foundation. Dive into the intricacies of React, mastering client and server-side rendering, file structures, and routing. Explore hooks, functional components, and styling techniques with tools like Tailwind CSS and purgess. Delve into Next.js specifics, learning about `getStaticProps` and `getServerSideProps`, handling state effectively, and understanding Serverless API Routes. Elevate your applications with insights into forms, SEO, and image optimization.

Security and authentication are pivotal aspects, and you'll learn best practices in a serverless world, implement authentication with Auth0, and protect API routes. The course covers testing and error handling strategies, including custom error pages and react-testing-library. Finally, focus on optimization, from efficient data-fetching mental models to leveraging streaming for high-performance applications. Whether you're a beginner or an experienced developer, this course equips you to create robust and optimized web applications using Next.js, empowering you to excel in the dynamic field of web development. Join us on this transformative learning journey and elevate your web development expertise.

WHAT WILL YOU LEARN?

In this Next.js course, you'll master key JavaScript concepts, React fundamentals, and Next.js specifics. Learn to use hooks, functional components, and styling techniques. Explore Serverless API Routes, state management, and application optimization. Enhance security with authentication best practices, and perfect testing and error handling. Whether you're a beginner or an experienced developer, this course equips you to create efficient, secure, and optimized web applications using Next.js.

PREREQUISITE:

Beginners. Having React programming knowledge is an added advantage.

METHODOLOGY:

This program will be conducted with interactive lectures, PowerPoint presentations, discussions, and practical exercises. This course can be conducted as instructor-led (ILT) or virtual instructor-led training (VILT).

JOB SCOPE:

Upon completion of this course, candidates may pursue the following career paths:

- Frontend Developer
- Full Stack Developer
- UI/UX Developer
- Next.js Developer
- Backend Developer

MODULE 1: KEY JAVASCRIPT CONCEPTS

- Welcome
- Arrow functions
- List comprehensions (map, filter, reduce)
- Hoisting and scopes
- Spreading and destructuring
- The event loop
- Promises and async/await

MODULE 2: INTRODUCTION TO NEXT.JS

- React overview
- Client and server-side rendering
- File structure and routing
- Benefits and future

MODULE 3: HOOKS IN REACT

- What are hooks?
- useState
- useEffect

MODULE 4: FUNCTIONAL COMPONENTS

- What are functional components?
- Props and children
- Inheritance and composition

MODULE 5: STYLING

- Overview of the diverse landscape
- Getting setup with Tailwind and purgecss

MODULE 6: SPECIAL NEXT.JS FUNCTIONALITY

- getStaticProps
- getServerSideProps
- Custom _app.js and _document.js files

MODULE 7: HANDLING STATE

- Prop drilling, context sharing and hooks
- UI state vs server state
- React-query and the stale-while-revalidate approach

MODULE 8: SERVERLESS API ROUTES

- How do they work?
- Interacting with 3rd party services
- Keeping secrets from clients

MODULE 9: SUCCESSFUL APPLICATIONS

- Working with forms in React
- SEO and analytics
- Image optimization

MODULE 10: SECURITY AND AUTHENTICATION

- Security and authentication in a serverless world
- Authentication with Auth0
- Protecting API routes

MODULE 11: TESTING AND ERROR HANDLING

- Custom error and 404 pages
- Best practices with react-testing-library

MODULE 12: OPTIMISING NEXT.JS APPLICATIONS

- Optimizing images
- Develop data-fetching mental models
- Using streaming in applications

CONCLUSION

- QA
- Useful References and Books
- Feedback