





# Routing

#### React.js:

• Manual Routing: React itself does not include a builtin routing solution. You typically use libraries like React Router for routing.

#### Next.js:

• **File-Based Routing:** Next.js has a built-in file-based routing system, which automatically creates routes based on the file structure in the 'pages' directory.





## Rendering Methods

#### React.js:

• Client-Side Rendering (CSR): React renders components on the client side after the initial HTML is loaded.

#### Next.js:

- Server-Side Rendering (SSR): Next.js can render pages on the server before sending the HTML to the client.
- Static Site Generation (SSG): Generates static HTML at build time for better performance.
- Incremental Static Regeneration (ISR): Allows you to update static content after the site is built.





## Purpose and Scope

#### React.js:

- **Library:** React.js is a JavaScript library for building user interfaces, primarily for single-page applications (SPAs).
- **Focus:** It focuses on the view layer of the application (i.e., the component-based UI).

#### Next.js:

- **Framework:** Next.js is a React framework that provides a more complete solution for building web applications.
- **Focus:** Includes additional features such as serverside rendering (SSR), static site generation (SSG), and API routes.





## Performance

#### React.js:

• **Depends on Implementation:** Performance depends on how the developer implements optimizations.

#### Next.js:

 Optimized by Default: Offers optimized performance through SSR, SSG, and code splitting by default.





# Configuration and Setup

#### React.js:

- **Flexible:** Requires more setup and configuration, giving you the flexibility to choose your own tools and structure.
- **Tooling:** Often set up using Create React App (CRA) which provides a standard structure but is still less opinionated compared to Next.js.

#### Next.js:

- Convention over Configuration: Comes with built-in conventions and requires less setup, making it easier to get started with common patterns.
- **Pre-Configured:** Provides a lot of configuration out of the box (e.g., webpack, Babel).





# Development Experience

#### React.js:

- Component-Based: Focuses purely on building UI components, which can be integrated into various parts of an application.
- Hot Module Replacement: Supported through tools like Webpack for faster development.

#### Next.js:

- Full Stack Development: Supports both frontend and backend development within the same project.
- **Hot Reloading:** Comes with hot reloading out of the box for a smoother development experience.





### API Routes

#### React.js:

• External APIs: React does not handle backend logic or APIs directly. You need to set up a separate backend server.

#### Next.js:

• **Built-In API Routes:** Allows you to create API routes within the same project, providing a simple way to handle server-side logic and endpoints.





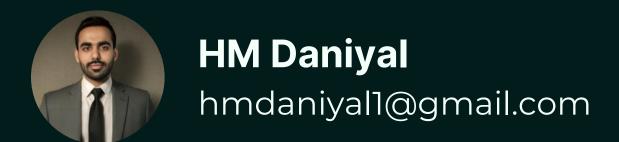
## Deployment

#### React.js:

• **External APIs:** Static Files: Typically results in a bundle of static files that can be served by any static file server.

#### Next.js:

- **Versatile Deployment:** Can be deployed as a static site, on serverless platforms, or traditional server environments.
- Vercel: Officially supported by Vercel for deployment, providing seamless integration and additional features.







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