

NextJS is a **React framework**.

NextJS features:

1. Server side rendering

- React: Client side rendering/ browser rendering
- Process:
Client request web page -> server sends html and js static files to the client -> client downloads the file/code and displays the website
- NextJS: Server side rendering
- Process:
Client request web page -> server renders the component on the server only (html and js files) -> server then sends the fully rendered html page to the client -> the website is displayed immediately

Why server side rendering?

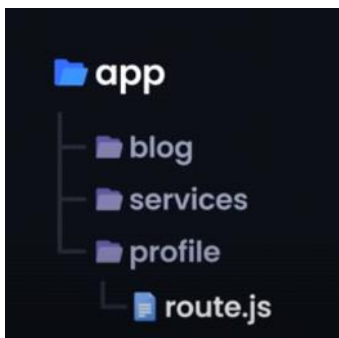
- > SEO (Search Engine Optimization)
- > SEO is crucial for optimizing a website's visibility and ranking in search engine results.
- > So if we have server side rendering, the whole code loads fast in the client machine and it has better SEO.

2. Routing

- In react we have to install react-router-dom
- In nextJS, we have file based routing system
- The routing is handled by file system
- Each folder in the **app directory** becomes a route.
eg. about folder -> localhost:3000/about

3. Fullstack Applications

- API Routes: Enables the creation of serverless functions to handle API requests
- Serverless APIs in nextJS are a way of creating API endpoints without the need of traditional server
- How to create API endpoint?
By creating route.js file in the desired folder



4. Automatic Code Splitting

- Code splitting is a technique that breaks down large bundles of JavaScript code into smaller, more manageable chunks that can be **loaded as needed**.
- Loaded as needed:
 - > Reduces the initial load time of a website
 - > Optimizes UX while browsing
- In react, we have to do it manually

In the end, its all React which provides additional structure, features, and optimizations for your application.