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Next JS

A powerful React-based framework for building server-rendered and statically generated web applications.

Overview of what i learned in
my class



What is page.tsx ?

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The main file in a Next.js route that defines the content of a specific page or URL.

How it works:

Any file within the app directory is a route within Next.js. So if you had **app/service/page.tsx**, it would display content at the **/service** URL.

For example: if you have `app/service/page.tsx`, it renders content at the `/service` route.

Why It's Important:

Next is file-based routing using "*page-centric*" approach which means each **page.tsx** in your application is basically by default another page in your project, while organizing and creating pages has become quite simple and plain.



What is Layout.tsx ?

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Special file that defines common layouts for pages within the same directory.

Purpose:

Headers, navigation bars, sidebars, footers which are implemented to ensure uniform looks and feels across different pages.

Example:

- Put layout.tsx in the root of the app directory for a site-wide layout, or into subfolders for section-specific layouts.

Benefits:

- It ensures UI consistency across pages. Code Reusability by writing common things such as navigations or footers together in one place.



What is Link tag ?

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A Next.js component that enables internal navigation between pages without full page reloads.

Why Use It ?

- Unlike the standard `<a>` tag, the Link component preloads linked pages, making faster and smoother transitions.

Purpose:

- Improves User Experience by reducing load time.
- Optimizes Performance by keeping users within the single-page app experience.

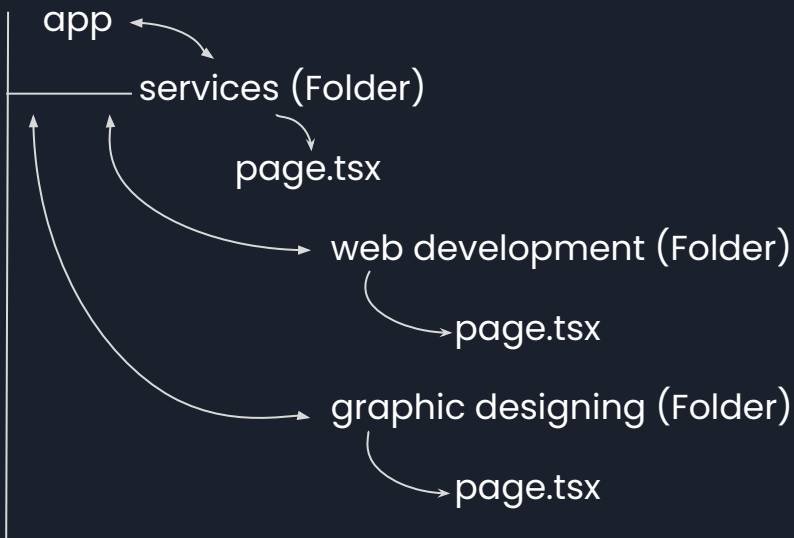
Example:

```
import Link from 'next/link';  
  
<Link href="/about">About Page</Link>
```

What are Nested Pages ?

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Pages organized in a folder structure that represents the URL hierarchy.





What are Components ?

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Reusable UI elements that represent specific parts of the interface, like buttons, cards, or forms.

Why use components:

- **Code Reusability:** Build once, use multiple times.
- **Modularity:** Keep UI organized and maintainable.

Overall, components enhance code maintainability, readability, and scalability, making them a fundamental concept in React and Next.js development.



How can we apply css in Next JS ?

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There are two main methods for applying CSS: **Global CSS** and **CSS Modules**.

CSS Modules: Ideal for component-specific styles. They prevent style clashes and promote modularity, ensuring that styles are scoped locally to each component.

Global CSS: Best for consistent styles across the entire application, such as typography and layout. It helps maintain uniformity across all pages.



What is Tailwind CSS ?

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Tailwind CSS is a utility-first CSS framework allowing developers to code in HTML or JSX using classes. Tailwind concentrate on simple classes when you have to design something by mixing classes within markup.

CSS:

- Styles are usually written in separate files, and you link them to HTML using class names or IDs.
- You define custom classes and write specific styling rules in a CSS file.
- Can be slower as you switch between HTML and CSS files to make updates.

Tailwind CSS:

- Styles are applied directly in the HTML using utility classes, making it faster to build and adjust designs.
- Provides pre-built utility classes (like p-4, m-6, bg-blue-500) so you can style directly without writing custom CSS.
- Speeds up development since you style directly in your HTML, reducing the need for going back to check adjustments.