

**Nama** : Yan Daffa Putra Liandhie  
**No Absen:** : 23  
**Kelas** : TI-3E

## **JOBSHEET PRAKTIKUM**

**Mata Kuliah:** Pemograman Framework

**Program Studi:** D4 (Sarjana Terapan)

**Topik Praktikum:** Setup Project Next.js menggunakan Pages Router

**Alokasi Waktu:** 2 × 50 menit

**Model Pembelajaran:** Praktikum Berbasis Proyek

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### **A. Capaian Pembelajaran Praktikum (CPMK-Praktikum)**

Setelah menyelesaikan praktikum ini, mahasiswa mampu:

1. Menjelaskan konsep dasar framework **Next.js**.
  2. Membuat project Next.js menggunakan **Pages Router**.
  3. Menjalankan aplikasi Next.js pada server pengembangan.
  4. Mengidentifikasi struktur folder utama pada project Next.js.
  5. Memodifikasi halaman awal (index.js) pada Pages Router.
- 

### **B. Dasar Teori Singkat**

**Next.js** adalah framework React yang menyediakan fitur siap pakai seperti routing berbasis file, optimasi performa, dan dukungan rendering modern. Pada **Pages Router**, routing ditentukan oleh struktur folder pages/, di mana setiap file JavaScript akan otomatis menjadi halaman (route).

Contoh:

- pages/index.js → /
  - pages/about.js → /about
- 

### **C. Alat dan Bahan**

#### **Perangkat Lunak**

- Node.js (versi LTS)
- NPM atau Yarn
- Code Editor (Visual Studio Code)
- Browser (Chrome / Firefox)
- GIT

#### **Perangkat Keras**

- Laptop/PC Mahasiswa

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## D. Langkah Kerja Praktikum

### Langkah 1 – Pengecekan Lingkungan

1. Buka terminal / command prompt.

```
C:\Users\YAN DAFFA>
```

2. Jalankan perintah berikut:

3. node -v

```
● PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code> node -v
v24.13.0
● PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code> npm -v
11.6.2
❖ PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code> █
```

```
C:\Users\YAN DAFFA>node -v
v24.13.1
```

```
C:\Users\YAN DAFFA>npm -v
11.8.0
```

4. npm -v

```
● PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code> node -v
v24.13.0
● PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code> npm -v
11.6.2
❖ PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code> █
```

```
C:\Users\YAN DAFFA>node -v
v24.13.1
```

```
C:\Users\YAN DAFFA>npm -v
11.8.0
```

5. Pastikan Node.js dan npm sudah terinstal. Jika belum terinstall maka Install pada alamat berikut : <https://nodejs.org/en/download>

## 6. Git -V

```
● PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code> git -v  
git version 2.48.1.windows.1  
○ PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code> []
```

```
C:\Users\YAN DAFFA>git -v  
git version 2.42.0.windows.2
```

## 7. Jika belum install maka install pada alamat berikut : <https://git-scm.com/install/windows>

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### Langkah 2 – Membuat Project Next.js

#### 1. Buat direktori baru dan masuk ke direktori kerja

```
● PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code> mkdir praktikum  
  
Directory: D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code  
  
Mode          LastWriteTime        Length Name  
----          -----          ----  
d---          2/7/2026   4:13 AM           praktikum  
  
● PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code> cd praktikum  
○ PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code\praktikum> []
```

```
D:\tugas\semester 6\framework\js 1\code\master>mkdir praktikum  
D:\tugas\semester 6\framework\js 1\code\master>cd praktikum  
D:\tugas\semester 6\framework\js 1\code\master\praktikum>
```

2. Jalankan perintah:

```
PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code\praktikum> npx create-next-app@13.4.7
✓ What is your project named? ... my-app
✓ Would you like to use TypeScript with this project? ... No / Yes
✓ Would you like to use ESLint with this project? ... No / Yes
✓ Would you like to use Tailwind CSS with this project? ... No / Yes
✓ Would you like to use `src/` directory with this project? ... No / Yes
✓ Use App Router (recommended)? ... No / Yes
✓ Would you like to customize the default import alias? ... No / Yes
Creating a new Next.js app in D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code\praktikum\my-app.

Using npm.

Initializing project with template: default

Installing dependencies:
- react
- react-dom
- next
- typescript
- @types/react
- @types/node
- @types/react-dom
- eslint
- eslint-config-next

::
```

3. Kita menggunakan versi 13.4.7 bukan yang latest (**npx create-next-app@latest nextjs-pages-router**) dan Tunggu hingga proses instalasi selesai.

```
D:\tugas\semester 6\framework\js 1\code\master>cd praktikum

D:\tugas\semester 6\framework\js 1\code\master\praktikum>npx create-next-app@13.4.7
Need to install the following packages:
create-next-app@13.4.7
Ok to proceed? (y) y
✓ What is your project named? ... my-app
✓ Would you like to use TypeScript with this project? ... No / Yes
✓ Would you like to use ESLint with this project? ... No / Yes
? Would you like to use Tailwind CSS with this project? » No / Y? Would you like to use Tailwind CSS
with this project? » No / Y? Would you like to use Tailwind CSS with this project? ... No / Yes
? Would you like to use `src/` directory with this project? » No? Would you like to use `src/` direc
tory with this project? » No? Would you like to use `src/` directory with this project? ... No / Yes
✓ Use App Router (recommended)? ... No / Yes
? Would you like to customize the default import alias? » No / Y? Would you like to customize the de
fault import alias? ... No / Yes
Creating a new Next.js app in D:\tugas\semester 6\framework\js 1\code\master\praktikum\my-app.

Using npm.

Initializing project with template: default

Installing dependencies:
- react
- react-dom
- next
- typescript
- @types/react
- @types/node
- @types/react-dom
- eslint
- eslint-config-next
```

```
added 340 packages, and audited 341 packages in 6m

138 packages are looking for funding
  run `npm fund` for details

10 moderate severity vulnerabilities

To address all issues, run:
  npm audit fix

Run `npm audit` for details.
Success! Created my-app at D:\tugas\semester 6\framework\js 1\code\master\praktikum\my-app

A new version of 'create-next-app' is available!
You can update by running: npm i -g create-next-app

npm notice
npm notice New minor version of npm available! 11.8.0 -> 11.10.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v11.10.0
npm notice To update run: npm install -g npm@11.10.0
npm notice

D:\tugas\semester 6\framework\js 1\code\master\praktikum>
```

#### 4. Masuk ke folder projectnya

```
PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code\praktikum> cd ..\my-app\
> PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code\praktikum\my-app> []
```

```
D:\tugas\semester 6\framework\js 1\code\master\praktikum>cd ..\my-app\
```

#### 5. Tunggu hingga proses instalasi selesai.

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### Langkah 3 – Menjalankan Server Development

#### 1. Masuk ke folder project:

```
PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code\praktikum> cd ..\my-app\
> PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code\praktikum\my-app> []
```

```
D:\tugas\semester 6\framework\js 1\code\master\praktikum>cd ..\my-app\
```

#### 2. Jalankan aplikasi:

```
npm run dev
```

```
PS D:\1.MateriKuliah\2026-ganjil\PemogramanFramework\Code\praktikum\my-app> npm run dev
```

```
> my-app@0.1.0 dev ...
```

```
▲ Next.js 16.1.6 (Turbopack)
- Local:          http://localhost:3000
- Network:        http://192.168.1.28:3000
```

```
✓ Starting...
```

We detected TypeScript in your project and reconfigured your `tsconfig.json` file for you.  
The following mandatory changes were made to your `tsconfig.json`:

```
- jsx was set to react-jsx (next.js uses the React automatic runtime)
```

```
✓ Ready in 2.2s
```

```
D:\tugas\semester 6\framework\js 1\code\master\praktikum\my-app>npm run dev
```

```
> my-app@0.1.0 dev
> next dev
```

```
▲ Next.js 16.1.6 (Turbopack)
- Local:          http://localhost:3000
- Network:        http://192.168.11.198:3000
```

```
/ Starting...
```

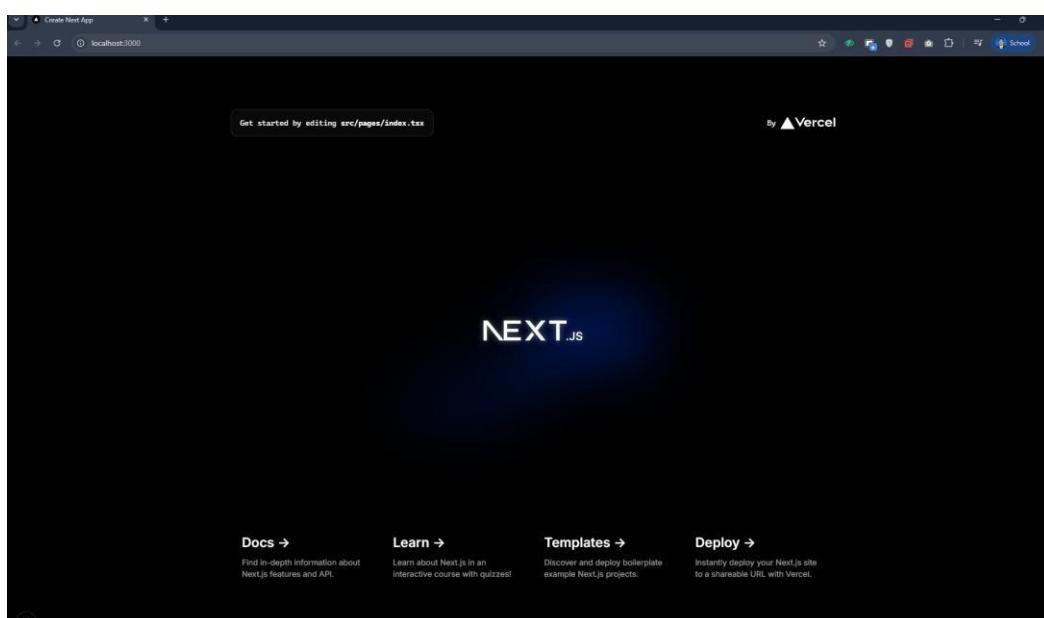
**Attention:** Next.js now collects completely anonymous telemetry regarding usage.  
This information is used to shape Next.js' roadmap and prioritize features.  
You can learn more, including how to opt-out if you'd not like to participate in this anonymous p  
ram, by visiting the following URL:  
<https://nextjs.org/telemetry>

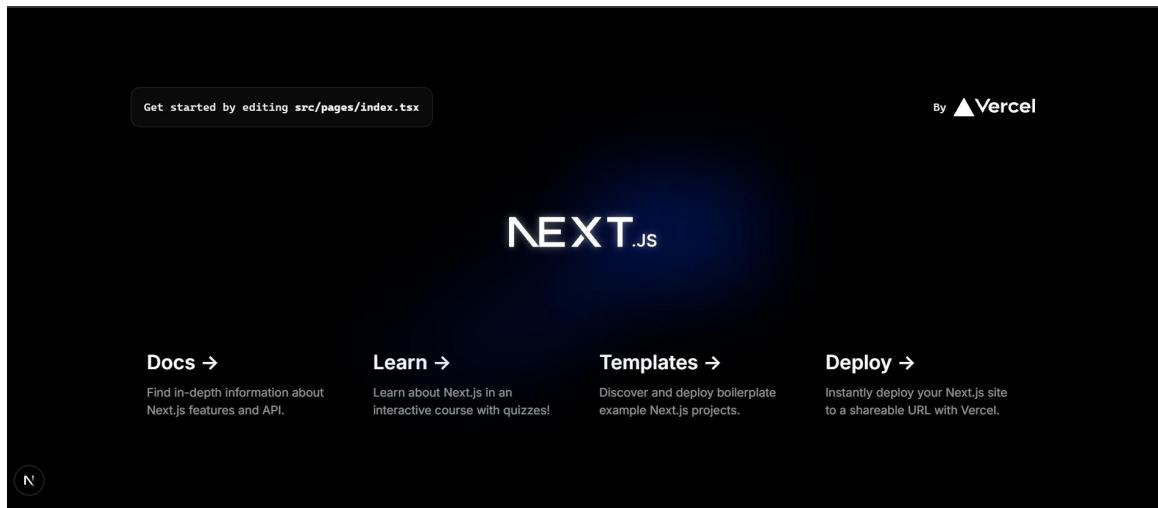
We detected TypeScript in your project and reconfigured your `tsconfig.json` file for you.  
The following mandatory changes were made to your `tsconfig.json`:

```
- jsx was set to react-jsx (next.js uses the React automatic runtime)
```

```
/ Ready in 1060ms
```

### 3. Buka browser dan akses: <http://localhost:3000>

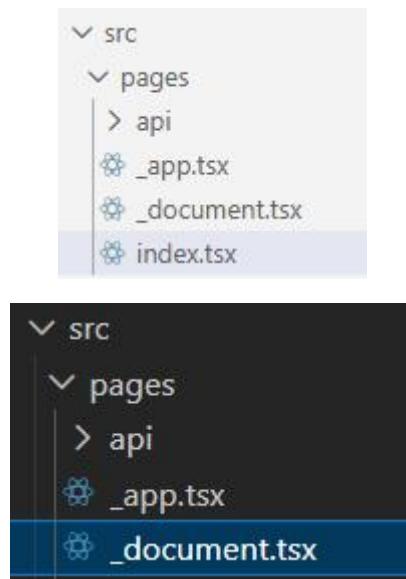




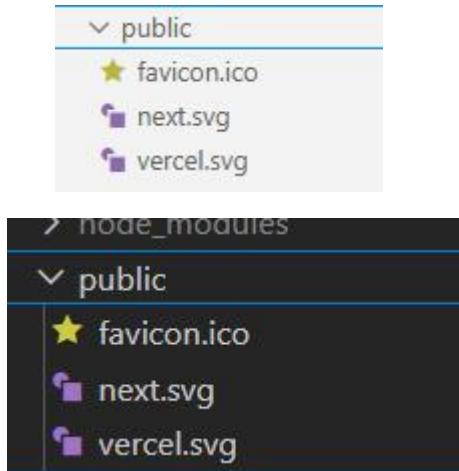
## Langkah 4 – Mengenal Struktur Folder

Amati folder utama:

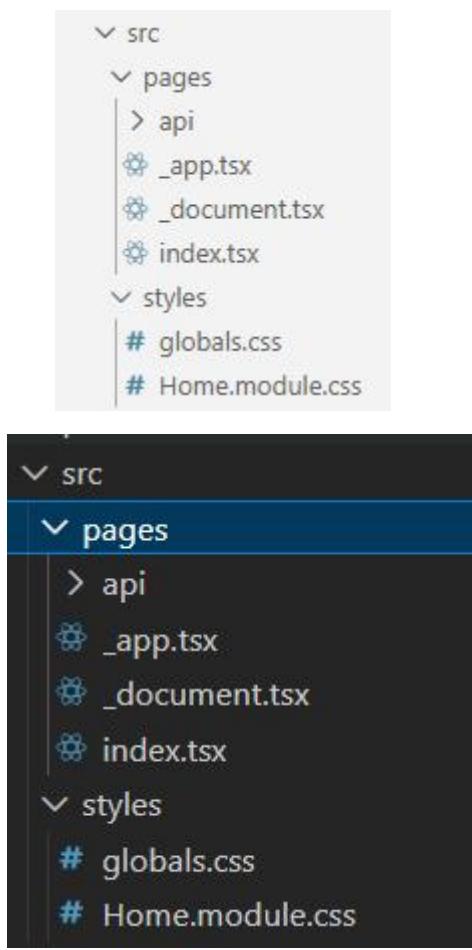
- `pages/` → tempat routing halaman



- `public/` → asset statis



- styles/ → file CSS



- package.json → konfigurasi project

```
praktikum > my-app > (1) package.json > () dependencies
  1 {
  2   "name": "my-app",
  3   "version": "0.1.0",
  4   "private": true,
  5   "scripts": {
  6     "dev": "next dev",
  7     "build": "next build",
  8     "start": "next start",
  9     "lint": "next lint"
 10   },
 11   "dependencies": {
 12     "@types/node": "25.2.1",
 13     "@types/react": "19.2.13",
 14     "@types/react-dom": "19.2.3",
 15     "eslint": "9.39.2",
 16     "eslint-config-next": "16.1.6",
 17     "next": "16.1.6",
 18     "react": "19.2.4",
 19     "react-dom": "19.2.4",
 20     "typescript": "5.9.3"
 21   }
 22 }
```

```
1  {
2    "name": "my-app",
3    "version": "0.1.0",
4    "private": true,
5    "scripts": {
6      "dev": "next dev",
7      "build": "next build",
8      "start": "next start",
9      "lint": "next lint"
10 },
11 "dependencies": [
12   "@types/node": "25.2.3",
13   "@types/react": "19.2.14",
14   "@types/react-dom": "19.2.3",
15   "eslint": "9.39.2",
16   "eslint-config-next": "16.1.6",
17   "next": "16.1.6",
18   "react": "19.2.4",
19   "react-dom": "19.2.4",
20   "typescript": "5.9.3"
21 ]
22 }
23 }
```

- **gitignore** -> file konfigurasi di Git yang berfungsi untuk **memberitahu Git file atau folder apa saja yang TIDAK perlu di-track / di-commit ke repository.**

```
praktikum > my-app > ⚡ .gitignore
1   # See https://help.github.com/articles/ignoring-files/ for more about ignoring files.
2
3   # dependencies
4   /node_modules
5   /.npm
6   .npm.js
7
8   # testing
9   /coverage
10
11  # next.js
12  /.next/
13  /out/
14
15  # production
16  /build
17
18  # misc
19  .DS_Store
20  *.pem
21
22  # debug
23  npm-debug.log*
24  yarn-debug.log*
25  yarn-error.log*
26
27  # local env files
28  .env*.local
gnore
# See https://help.github.com/articles/ignoring-files/ for more about igno
# dependencies
/node_modules
/.npm
.pnpm.js

# testing
/coverage

# next.js
/.next/
/out/

# production
/build

# misc
.DS_Store
*.pem

# debug
npm-debug.log*
yarn-debug.log*
yarn-error.log*

# local env files
.env*.local
```

---

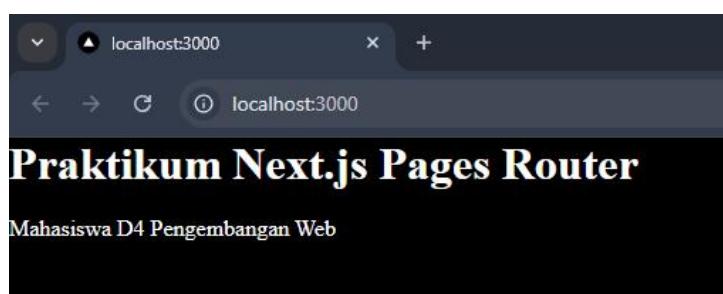
## Langkah 5 – Modifikasi Halaman Utama

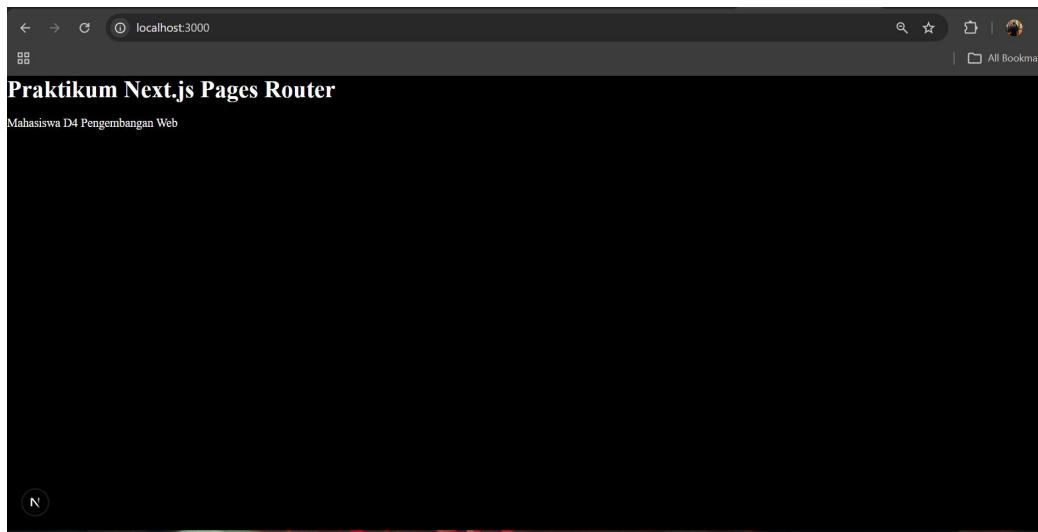
1. Buka file:
2. pages/index.js
3. Ubah isi halaman, misalnya:

```
praktikum > my-app > src > pages > index.tsx > ...
1  import Head from 'next/head'
2  import Image from 'next/image'
3  import { Inter } from 'next/font/google'
4  import styles from '@/styles/Home.module.css'
5
6  const inter = Inter({ subsets: ['latin'] })
7
Windsurf: Refactor | Explain | Generate JSDoc | X
8  export default function Home() {
9    return (
10      <div>
11        <h1>Praktikum Next.js Pages Router</h1> <br />
12        <p>Mahasiswa D4 Pengembangan Web</p>
13      </div>
14    )
15  }
16
17
```

```
src > pages > index.tsx > ...
1  import Head from 'next/head'
2  import Image from 'next/image'
3  import { Inter } from 'next/font/google'
4  import styles from '@/styles/Home.module.css'
5
6  const inter = Inter({ subsets: ['latin'] })
7
8  export default function Home() {
9    return (
10      <div>
11        <h1>Praktikum Next.js Pages Router</h1> <br />
12        <p> Mahasiswa D4 Pengembangan Web</p>
13      </div>
14    )
15  }
16
```

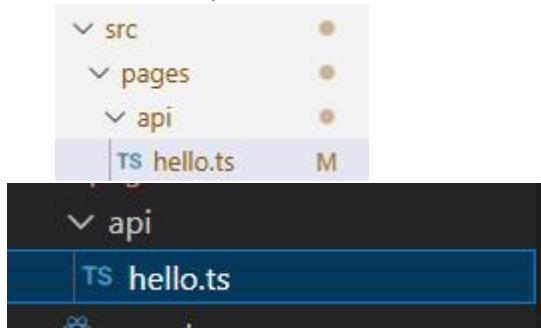
4. Simpan dan lihat perubahan di browser.





## Langkah 6 – Modifikasi API

1. Buka folder api



2. Modifikasi hello.ts

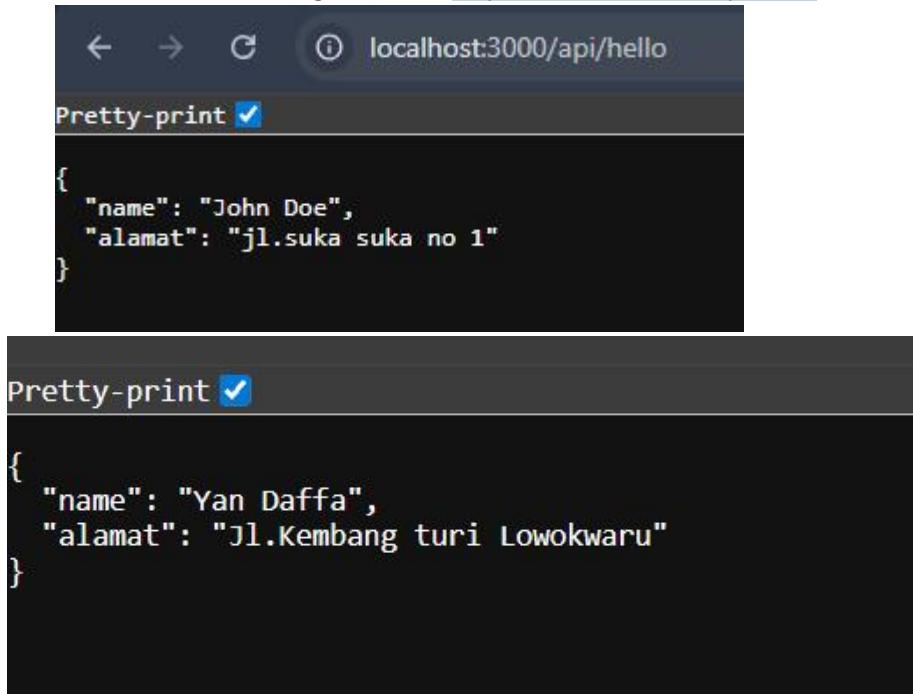
```

TS hello.ts M X
praktikum > my-app > src > pages > api > TS hello.ts > [?] Data
  1 // Next.js API route support: https://nextjs.org/docs/api-routes/introduction
  2 import type { NextApiRequest, NextApiResponse } from 'next'
  3
  4 Windsurf: Refactor | Explain
  5 type Data = {
  6   name: string
  7   alamat: string
  8 }
  9 Windsurf: Refactor | Explain | Generate JSDoc | X
10 export default function handler(
11   req: NextApiRequest,
12   res: NextApiResponse<Data>
13 ) {
14   res.status(200).json({ name: 'John Doe', alamat: 'jl.suka suka no 1' })
15 }

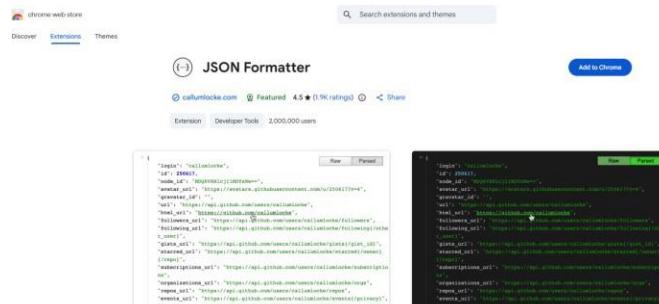
1 // Next.js API route support: https://nextjs.org/docs/api-routes/introduction
2 import type { NextApiRequest, NextApiResponse } from 'next'
3
4 type Data = {
5   name: string
6 }
7
8 export default function handler(
9   req: NextApiRequest,
10  res: NextApiResponse<Data>
11 ) {
12  res.status(200).json({ name: 'Yan Daffa', alamat: 'Jl.Kembang turi Lowokwaru' })
13 }
14

```

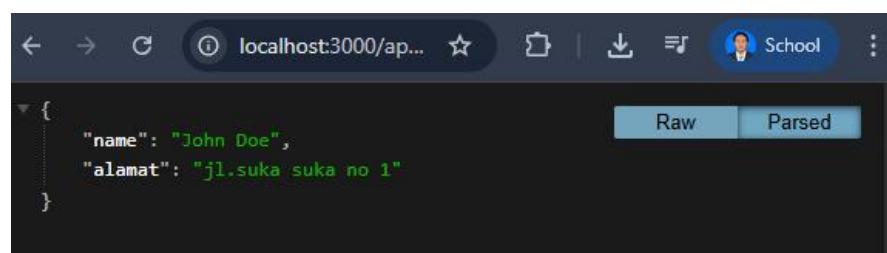
3. Jalankan browser dengan Alamat <http://localhost:3000/api/hello>



4. Tambahkan extensions chrome



5. Jalankan browser chrome



```
Raw Parsed
```

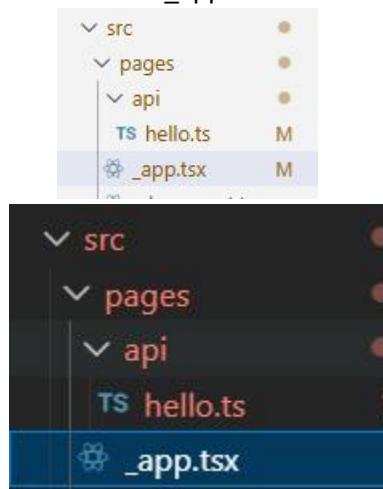
```
{ "name": "John Doe", "alamat": "jl.suka suka no 1" }
```



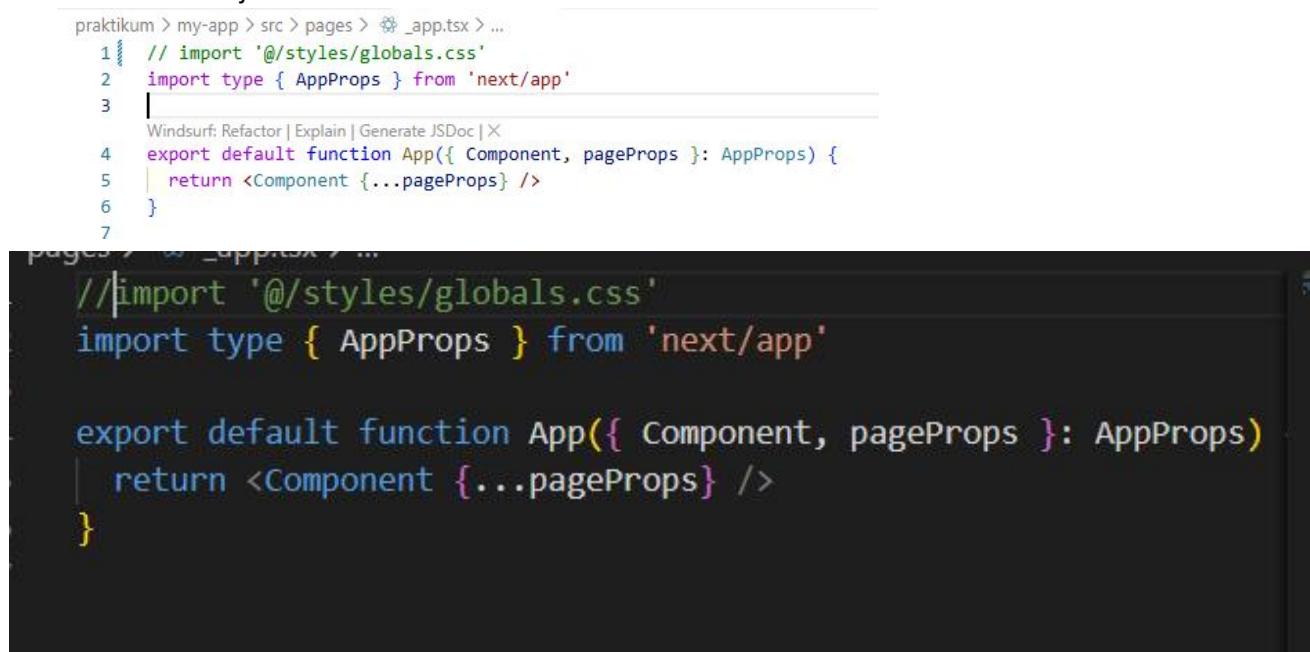
```
{ "name": "Yan Daffa", "alamat": "Jl.Kembang turi Lowokwaru" }
```

## Langkah 7 – Modifikasi Background

1. Buka file \_app.tsx



2. Modifikasi menjadi berikut



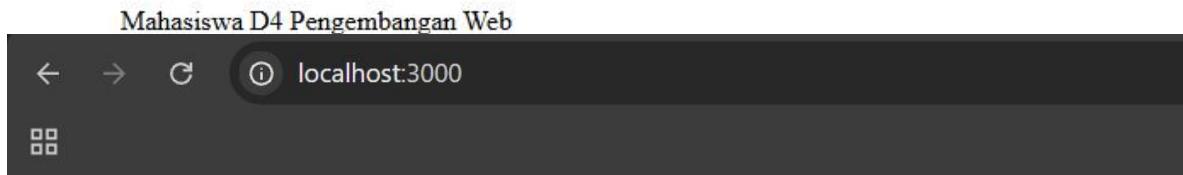
```
praktikum > my-app > src > pages > _app.tsx > ...
1 // import '@/styles/globals.css'
2 import type { AppProps } from 'next/app'
3
4 export default function App({ Component, pageProps }: AppProps) {
5   return <Component {...pageProps} />
6 }
7
pages > _app.tsx > ...
//import '@/styles/globals.css'
import type { AppProps } from 'next/app'

export default function App({ Component, pageProps }: AppProps)
  return <Component {...pageProps} />
}
```

3. Jalankan localhost



## Praktikum Next.js Pages Router

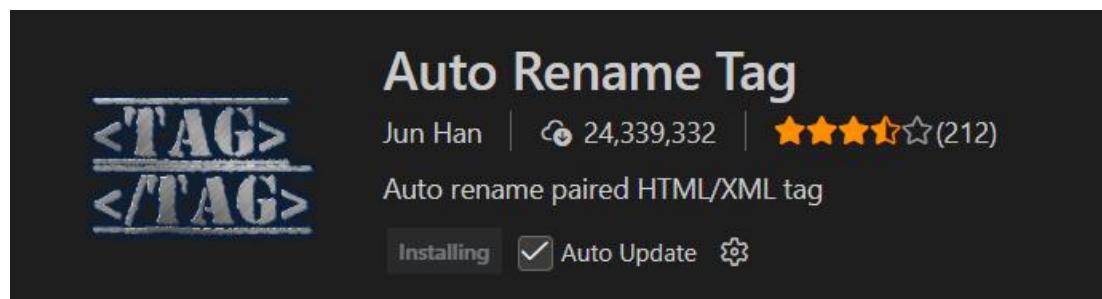


## Praktikum Next.js Pages Router

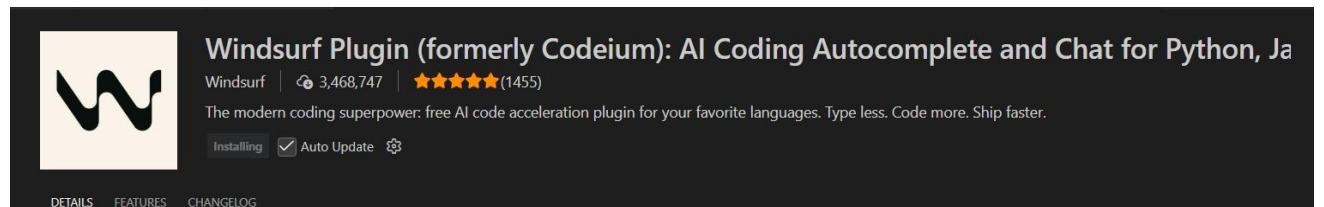
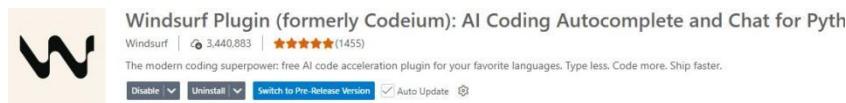
Mahasiswa D4 Pengembangan Web

### Langkah 8 – Setup ext pada VSCode (opsional)

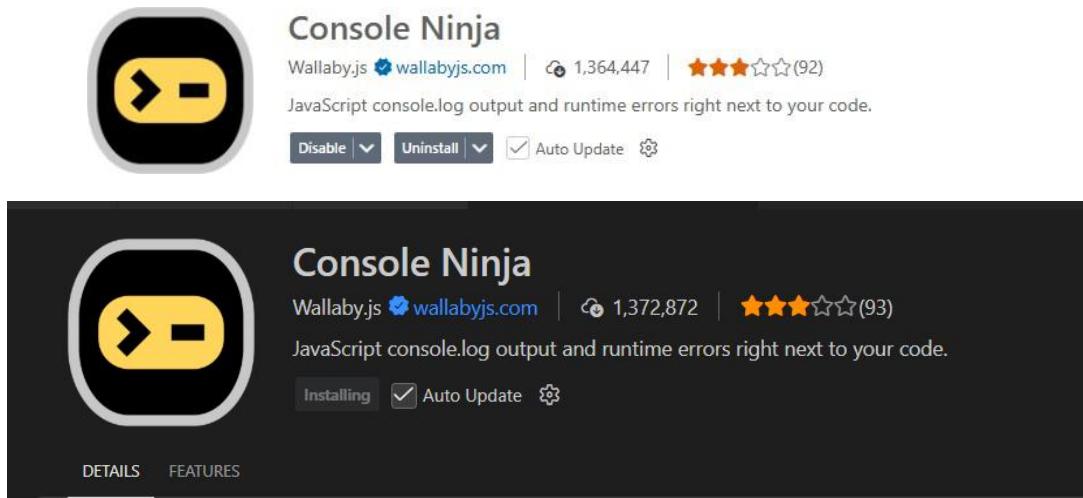
#### 1. Auto rename



#### 2. Windsurf Plugin: Free AI-powered code acceleration toolkit

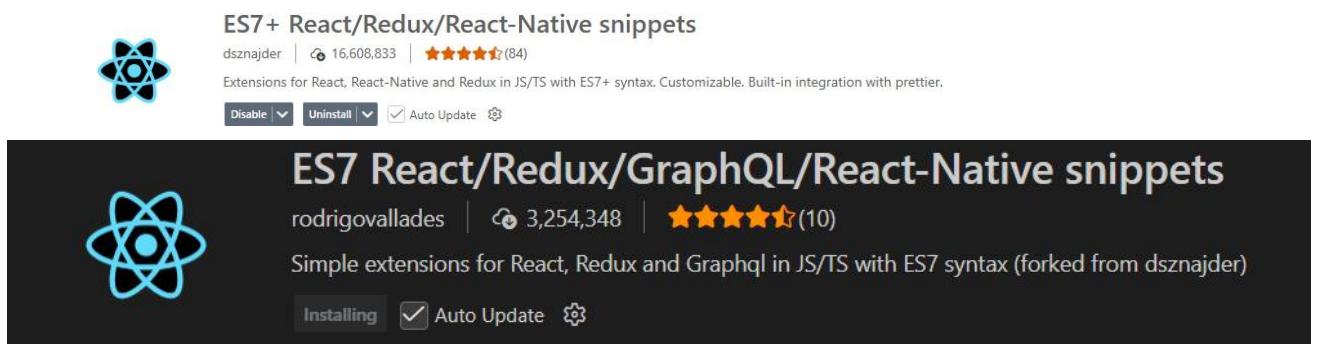


### 3. Console Ninja



The screenshot shows the Microsoft Store page for the "Console Ninja" extension. The extension icon is a yellow arrow pointing right inside a black circle. The title "Console Ninja" is displayed above the developer information "Wallaby.js" and the download count "1,364,447". The rating is shown as 4.5 stars with 92 reviews. Below the title, a description reads "JavaScript console.log output and runtime errors right next to your code." There are three buttons at the bottom: "Disable" (disabled), "Uninstall" (disabled), and "Auto Update" (checked). A "Details" tab is visible below the main card.

### 4. VS Code ES7+ React/Redux/React-Native/JS snippets



The screenshot shows the Microsoft Store page for the "ES7+ React/Redux/React-Native snippets" extension. The icon is a blue atom symbol. The title is "ES7+ React/Redux/React-Native snippets" by "dsznajder". The download count is 16,608,833 and the rating is 4.5 stars with 84 reviews. The description states: "Extensions for React, React-Native and Redux in JS/TS with ES7+ syntax. Customizable. Built-in integration with prettier." There are three buttons at the bottom: "Disable" (disabled), "Uninstall" (disabled), and "Auto Update" (checked). Below the main card, another extension card is partially visible: "ES7 React/Redux/GraphQL/React-Native snippets" by "rodrigovallades" with 3,254,348 downloads and 5 stars with 10 reviews.

### 5. VS Code ESLint extension



The screenshot shows the Microsoft Store page for the "ESLint" extension. The icon is orange with white text "ESLint". The title is "ESLint" by "Microsoft". The download count is 48,064,791 and the rating is 4.5 stars with 247 reviews. The description states: "Integrates ESLint JavaScript into VS Code." There are four buttons at the bottom: "Disable" (disabled), "Uninstall" (disabled), "Switch to Pre-Release Version" (disabled), and "Auto Update" (checked).

The screenshot shows the ESLint extension page. It features a large orange circular icon with the text "ESLint" in white. The title "ESLint" is at the top, followed by the developer "Microsoft" and the URL "microsoft.com". Below that is the download count "48,304,759" and a five-star rating "(248)". A descriptive text says "Integrates ESLint JavaScript into VS Code." At the bottom are buttons for "Disable", "Uninstall", "Switch to Pre-Release Version" (which is highlighted in blue), "Auto Update" (with a checked checkbox), and a gear icon.

## 6. Git Graph extension for Visual Studio Code

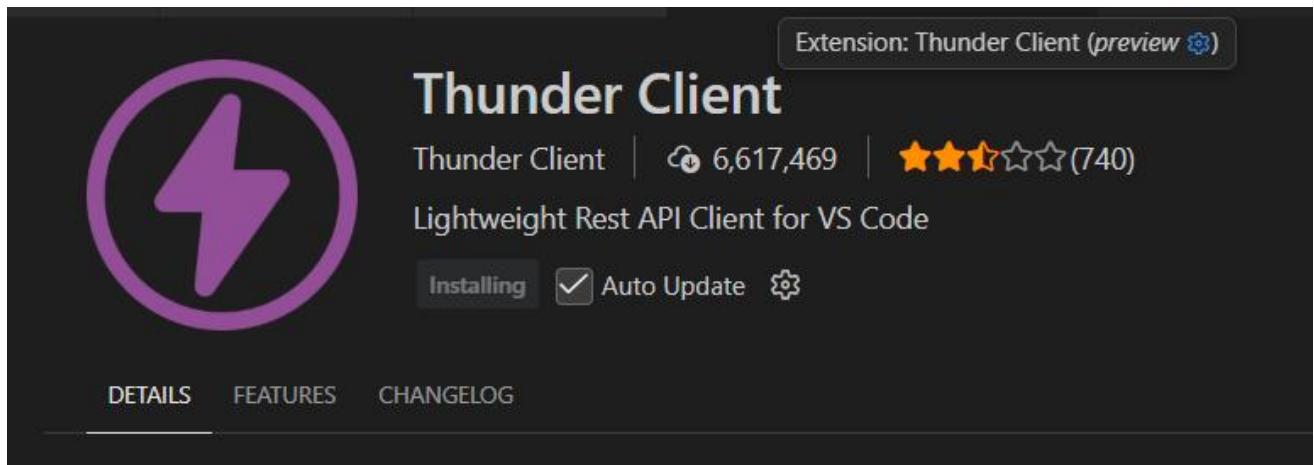
The screenshot shows the Git Graph extension page. It features a small icon of two stylized human figures. The title "Git Graph" is at the top, followed by the developer "mhutchie" and the URL "mhutchie". Below that is the download count "13,380,127" and a five-star rating "(670)". A descriptive text says "View a Git Graph of your repository, and perform Git actions from the graph." At the bottom are buttons for "Disable", "Uninstall", "Auto Update" (with a checked checkbox), and a gear icon. The second part of the screenshot shows the same page after the extension has been installed, with the status "Installing" instead of "Uninstall".

## 7. Prettier

The screenshot shows the Prettier - Code formatter extension page. It features a small icon of colored horizontal bars. The title "Prettier - Code formatter" is at the top, followed by the developer "Prettier" and the URL "prettier.io". Below that is the download count "65,292,722" and a five-star rating "(488)". A descriptive text says "Code formatter using prettier". At the bottom are buttons for "Disable", "Uninstall", "Auto Update" (with a checked checkbox), and a gear icon. The second part of the screenshot shows the same page after the extension has been installed, with the status "Restart Extensions" instead of "Uninstall".

## 8. Asa

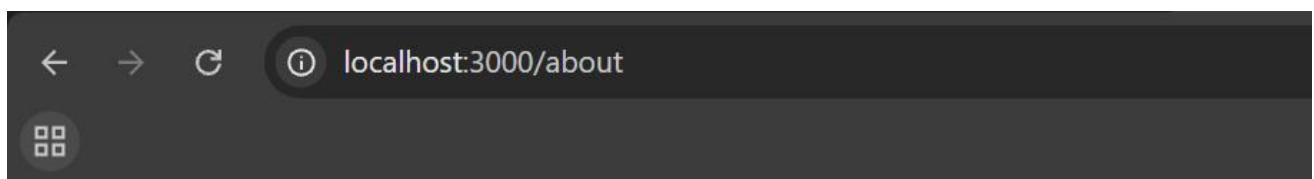
The screenshot shows the Thunder Client extension page. It features a large purple circular icon with a lightning bolt symbol. The title "Thunder Client" is at the top, followed by the developer "Thunder Client" and the URL "thunder-client". Below that is the download count "6,565,031" and a five-star rating "(738)". A descriptive text says "Lightweight Rest API Client for VS Code". At the bottom are buttons for "Disable", "Uninstall", "Auto Update" (with a checked checkbox), and a gear icon.



## E. Tugas Praktikum

### Tugas 1 (Wajib)

- Buat halaman baru about.js di folder pages.
- Tampilkan:
  - Nama Mahasiswa
  - NIM
  - Program Studi



## About Page

Nama Mahasiswa : Yan Daffa Putra Liandhie

NIM : 2341720142

Program Studi : D-IV Teknik Informatika

```
src > pages > js about.js > Copy About
1   export default function About() {
2     return [
3       <div>
4         <h1>About Page</h1>
5         <p>Nama Mahasiswa : Yan Daffa Putra Liandhie</p>
6         <p>NIM : 2341720142</p>
7         <p>Program Studi : D-IV Teknik Informatika</p>
8       </div>
9     ]
10   }
11 }
```

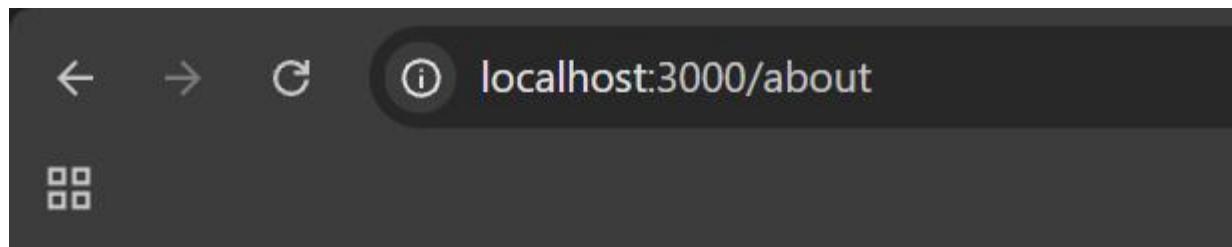
## Tugas 2 (Pengayaan)

- Tambahkan minimal 1 link navigasi dari halaman utama ke halaman about.

# Praktikum Next.js Pages Router

Mahasiswa D4 Pengembangan Web

## About



## About Page

Nama Mahasiswa : Yan Daffa Putra Liandhie

NIM : 2341720142

Program Studi : D-IV Teknik Informatika

```
src > pages > index.tsx > Home
  1 import Head from 'next/head'
  2 import Image from 'next/image'
  3 import { Inter } from 'next/font/google'
  4 import styles from '@/styles/Home.module.css'
  5 import Link from 'next/link'
  6
  7 const inter = Inter({ subsets: ['latin'] })
  8
  9 export default function Home() {
10   return (
11     <div>
12       <h1>Praktikum Next.js Pages Router</h1> <br />
13       <p> Mahasiswa D4 Pengembangan Web</p>
14
15       <Link href="/about">
16         | About
17         </Link>
18     </div>
19   )
20 }
21
```

## F. Pertanyaan Refleksi

1. Mengapa Pages Router disebut sebagai routing berbasis file?

Jawab : karena route otomatis dibuat berdasarkan nama dan struktur file pada folder pages dan tidak perlu konfigurasi routing manual

2. Apa perbedaan Next.js dengan React standar (CRA)?

Jawab : Next.js mendukung SSR, SSG, dan API route serta SEO friendly sementara React hanya client side rendering dan perlu React router untuk routing

3. Apa fungsi perintah npm run dev?

Jawab : npm run dev adalah perintah yang digunakan untuk menjalankan aplikasi dan server lokal dengan hot reload

4. Apa perbedaan npm run dev dan run build ?

Jawab : npm run dev merupakan perintah yang digunakan untuk menjalankan server lokal dengan hot reload dan digunakan untuk membuat dan mengedit aplikasi, sementara npm run build digunakan untuk menyiapkan aplikasi agar siap digunakan publik