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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

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

D. Langkah Kerja Praktikum

Langkah 1 – Pengecekan Lingkungan

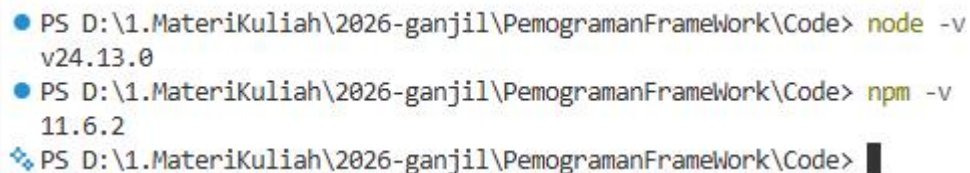
1. Buka terminal / command prompt.



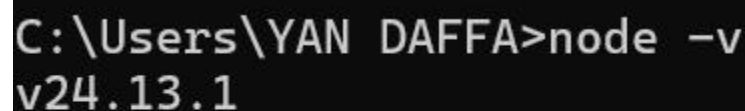
```
C:\Users\YAN DAFFA>
```

2. Jalankan perintah berikut:

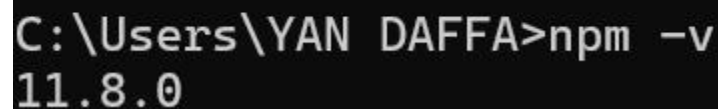
3. `node -v`



```
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>
```

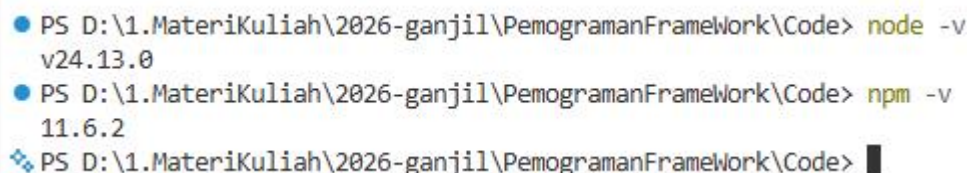


```
C:\Users\YAN DAFFA>node -v
v24.13.1
```

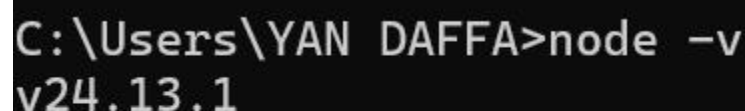


```
C:\Users\YAN DAFFA>npm -v
11.8.0
```

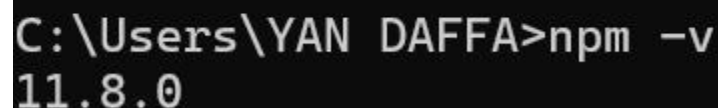
4. `npm -v`



```
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>

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\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.

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

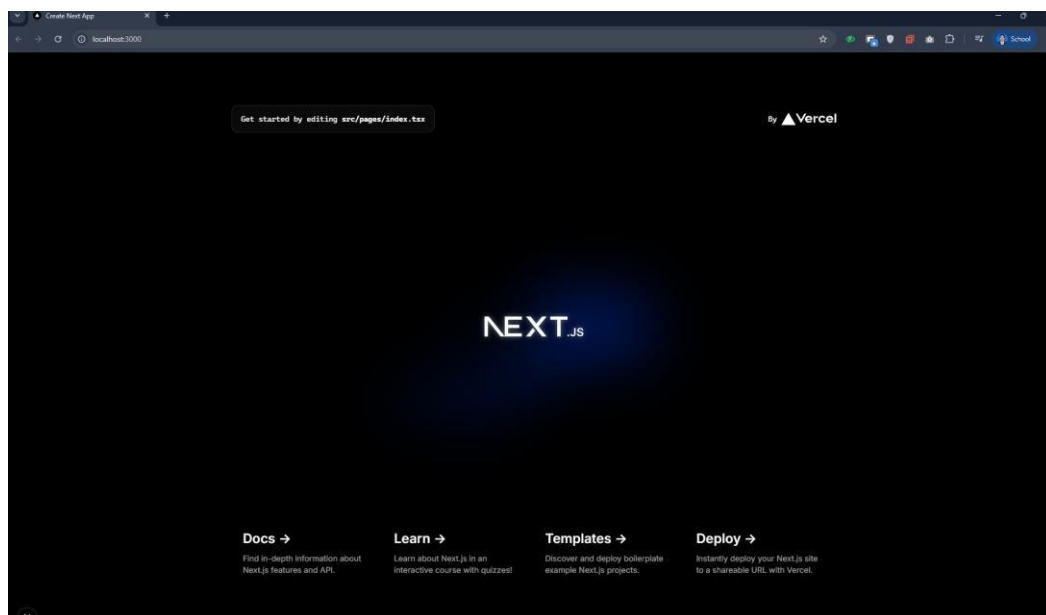
/ Starting...
Attention: Next.js now collects completely anonymous telemetry regarding usage.
This information is used to shape Next.js' roadmap and prioritize features.
You can learn more, including how to opt-out if you'd not like to participate in this anonymous program, by visiting the following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

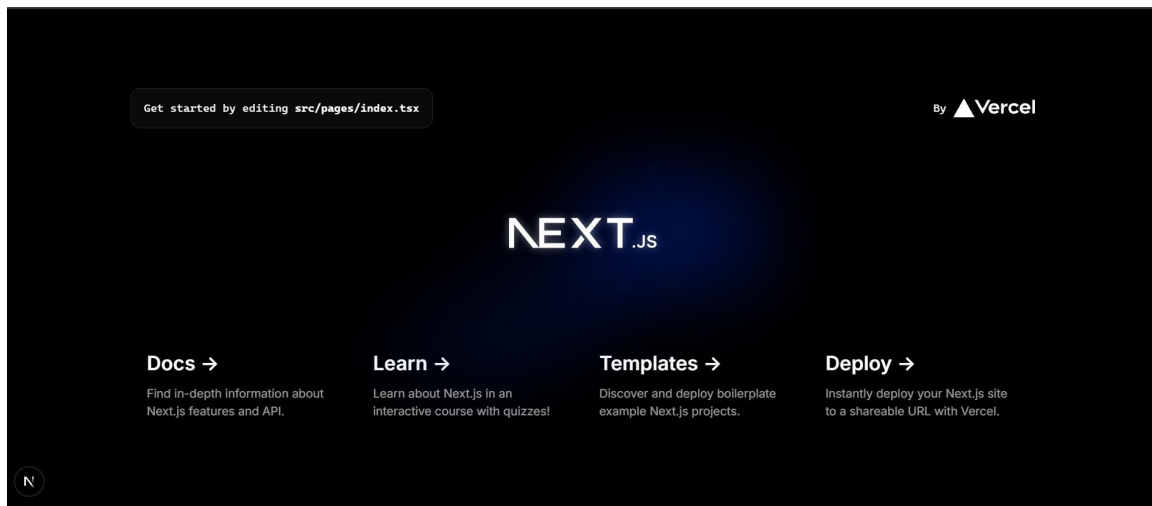
We detected TypeScript in your project and reconfigured your tsconfig.json file for you.
The following mandatory changes were made to your tsconfig.json:

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

/ Ready in 1060ms
```

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

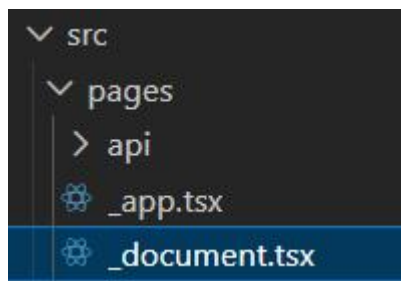
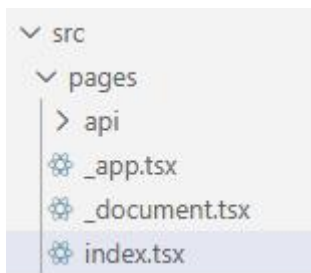




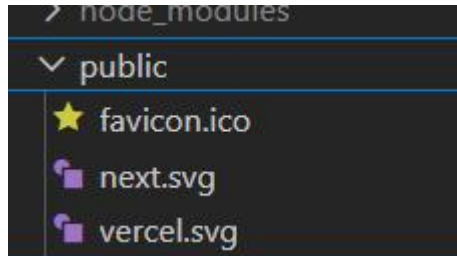
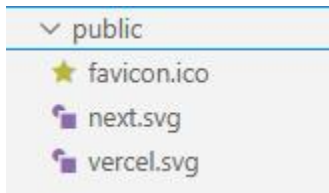
Langkah 4 – Mengenal Struktur Folder

Amati folder utama:

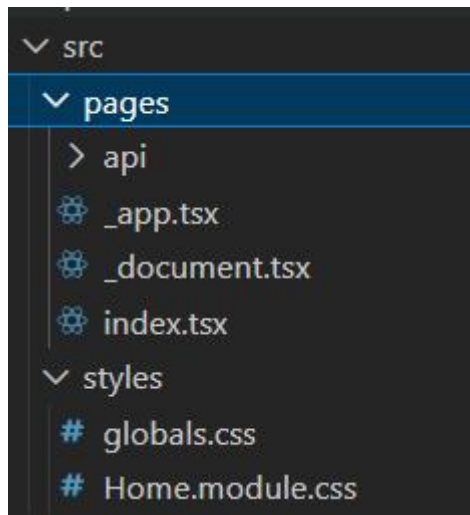
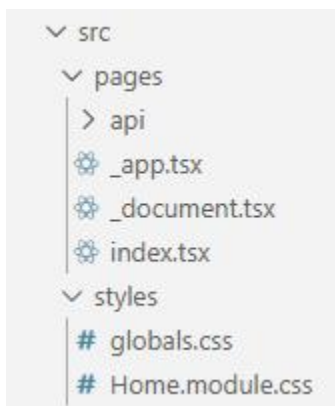
- pages/ → tempat routing halaman



- public/ → aset statis



- styles/ → file CSS



- package.json → konfigurasi project

```
praktikum > my-app > {} 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 }
23
```



```

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

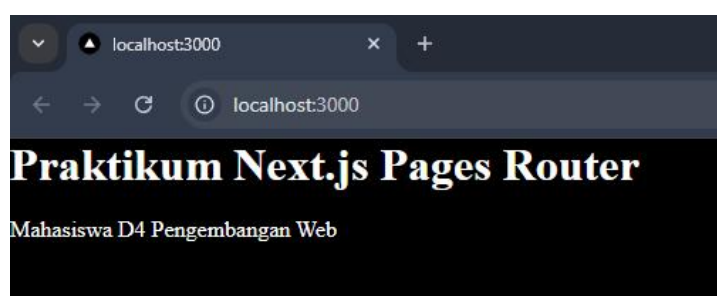
Langkah 5 – Modifikasi Halaman Utama

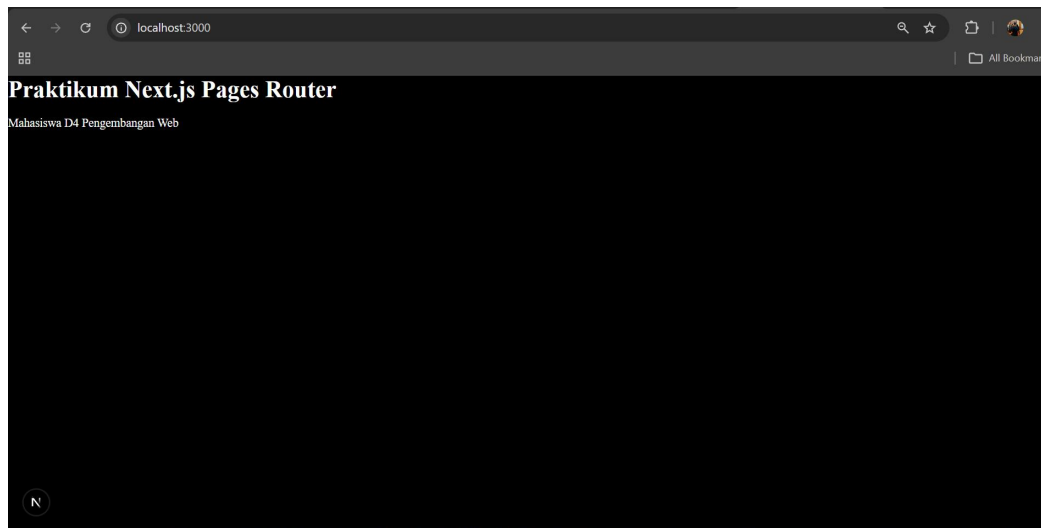
1. Buka file:
2. pages/index.js
3. Ubah isi halaman, misalnya:

```
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
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
```

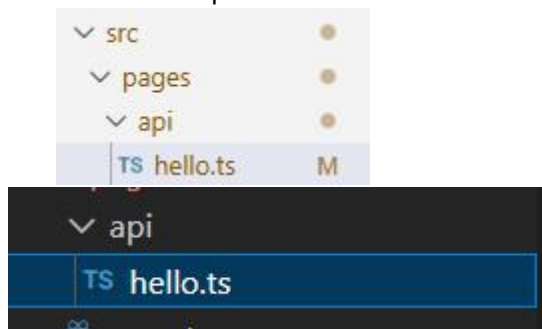
4. Simpan dan lihat perubahan di browser.





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 { NextApiResponse } from 'next'
3
4 type Data = {
5   name: string
6   alamat: string
7 }
8
9 export default function handler(
10   req: NextApiResponse,
11   res: NextApiResponse<Data>
12 ) {
13   res.status(200).json({ name: 'John Doe', alamat: 'Jl.suka suka no 1' })
14 }
15
```

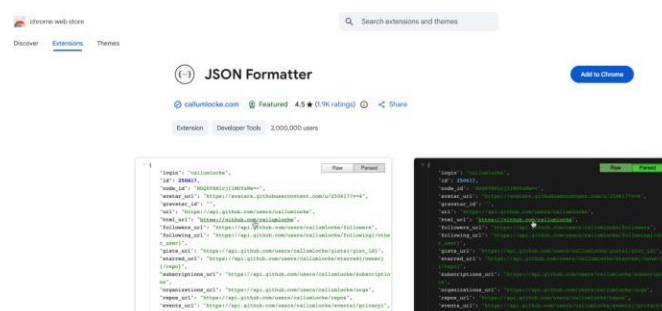
```
1 // Next.js API route support: https://nextjs.org/docs/api-routes
2 import type { NextApiResponse } from 'next'
3
4 type Data = {
5   name: string
6 }
7
8 export default function handler(
9   req: NextApiResponse,
10   res: NextApiResponse<Data>
11 ) {
12   res.status(200).json({ name: 'Yan Daffa',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

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

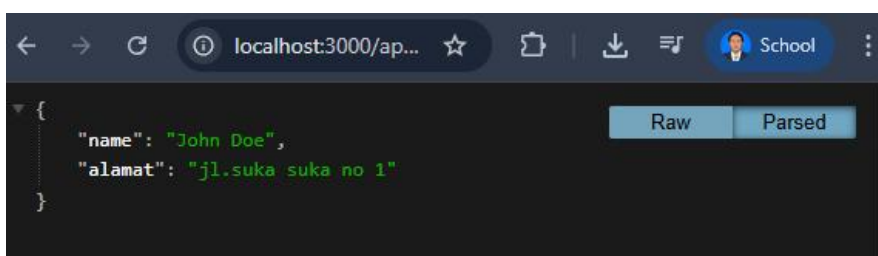
```
localhost:3000/api/hello
Pretty-print [x]
{
  "name": "John Doe",
  "alamat": "Jl.suka suka no 1"
}
```

```
localhost:3000/api/hello
Pretty-print [x]
{
  "name": "Yan Daffa",
  "alamat": "Jl.Kembang turi Lowokwaru"
}
```

4. Tambahkan extensions chrome



5. Jalankan browser chrome



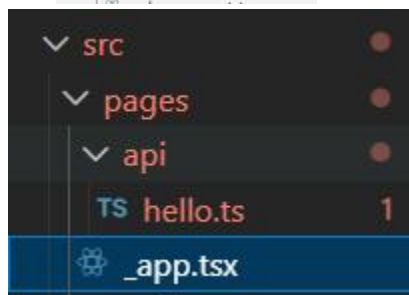
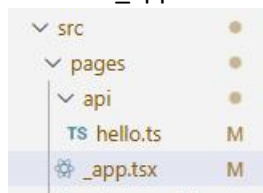
```
{
  "name": "John Doe",
  "alamat": "Jl.suka suka no 1"
}
```



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

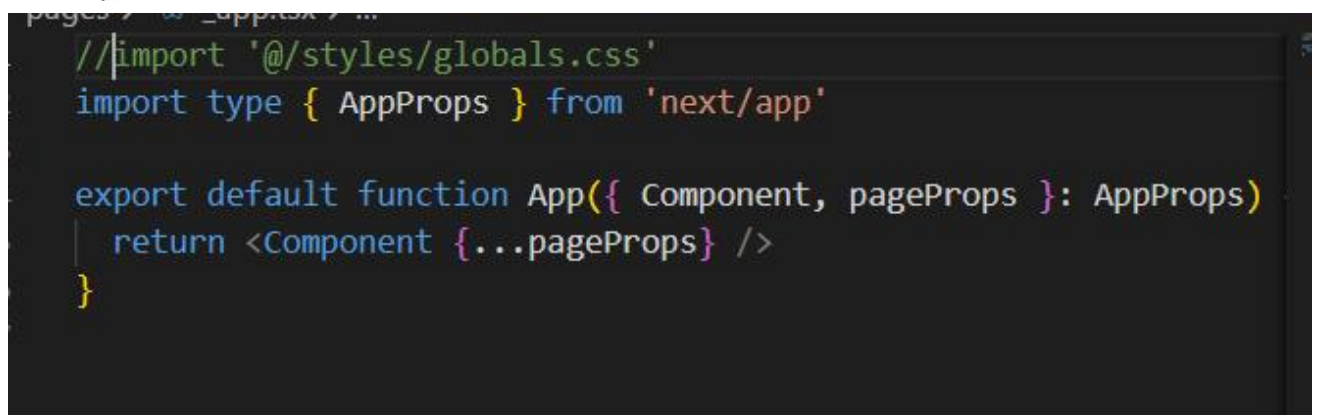
Langkah 7 – Modifikasi Background

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
```



3. Jalankan localhost



Praktikum Next.js Pages Router

Mahasiswa D4 Pengembangan Web



Praktikum Next.js Pages Router

Mahasiswa D4 Pengembangan Web

Langkah 8 – Setup ext pada VSCode (opsional)

1. Auto rename

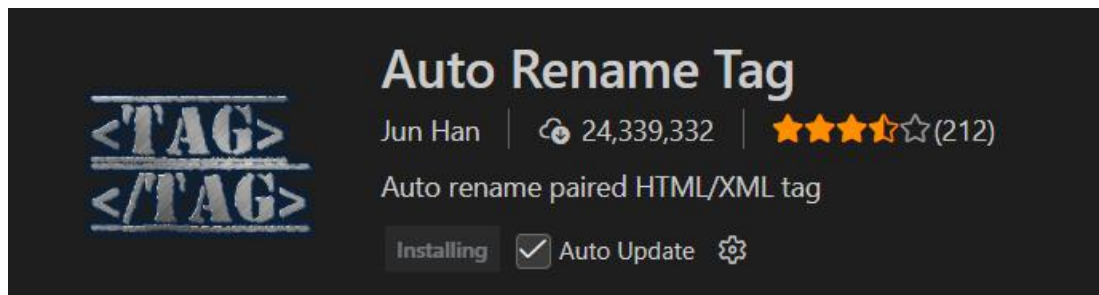


Auto Rename Tag

Jun Han | 24,253,352 | 4.5 (211)

Auto rename paired HTML/XML tag

Disable Uninstall ☒ Auto Update



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

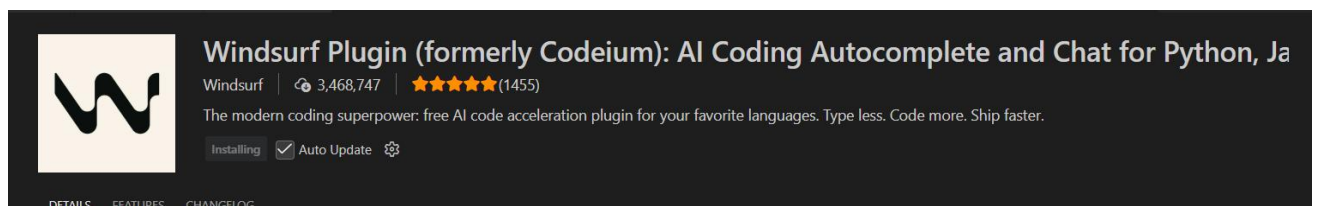


Windsurf Plugin (formerly Codeium): AI Coding Autocomplete and Chat for Pyth


Windsurf | 3,440,883 | 4.5 (1455)

The modern coding superpower: free AI code acceleration plugin for your favorite languages. Type less. Code more. Ship faster.

Disable Uninstall [Switch to Pre-Release Version](#) ☒ Auto Update




3. Console Ninja




Console Ninja

Wallaby.js wallabyjs.com | 1,364,447 | ★★★★★ (92)

JavaScript console.log output and runtime errors right next to your code.


[Disable](#) [Uninstall](#) ☒ Auto Update 



Console Ninja


Wallaby.js wallabyjs.com | 1,372,872 | ★★★★★ (93)

JavaScript console.log output and runtime errors right next to your code.

[Installing](#) ☒ Auto Update 

[DETAILS](#) [FEATURES](#)

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




ES7+ React/Redux/React-Native snippets

dssznajder | 16,608,833 | ★★★★★ (84)

Extensions for React, React-Native and Redux in JS/TS with ES7+ syntax. Customizable. Built-in integration with prettier.


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ES7 React/Redux/GraphQL/React-Native snippets

rodrigovalles | 3,254,348 | ★★★★★ (10)

Simple extensions for React, Redux and GraphQL in JS/TS with ES7 syntax (forked from dssznajder)

[Installing](#) ☒ Auto Update 

5. VS Code ESLint extension




ESLint

Microsoft microsoft.com | 48,064,791 | ★★★★★ (247)

Integrates ESLint JavaScript into VS Code.

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ESLint


Microsoft microsoft.com | 48,304,759 | ★★★★★ (248)

Integrates ESLint JavaScript into VS Code.

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[DETAILS](#)
[FEATURES](#)
[CHANGELOG](#)

6. Git Graph extension for Visual Studio Code




Git Graph

mhutchie | 13,380,127 | ★★★★★ (670)

View a Git Graph of your repository, and perform Git actions from the graph.

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Git Graph

mhutchie | 13,468,185 | ★★★★★ (670)

View a Git Graph of your repository, and perform Git actions from the graph.

[Installing](#)
☒ Auto Update

7. Prettier




Prettier - Code formatter

Prettier prettier.io | 65,292,722 | ★★★★★ (488) | ❤ Sponsor

Code formatter using prettier

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Prettier - Code formatter


Prettier prettier.io | 65,654,239 | ★★★★★ (488) | ❤ Sponsor

Code formatter using prettier

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8. Asa

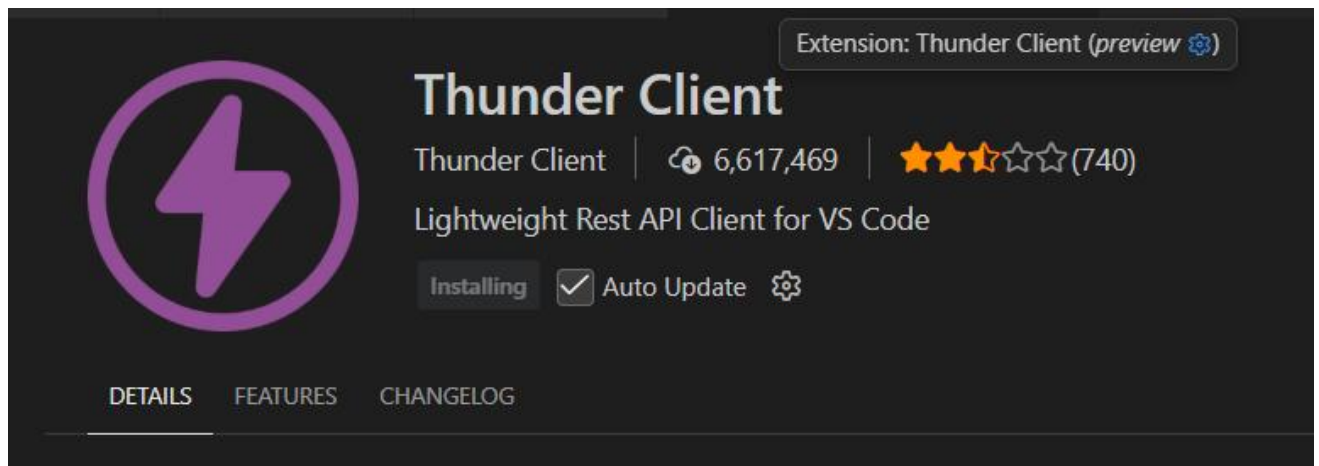


Thunder Client

Thunder Client | 6,565,031 | ★★★★★ (738)

Lightweight Rest API Client for VS Code

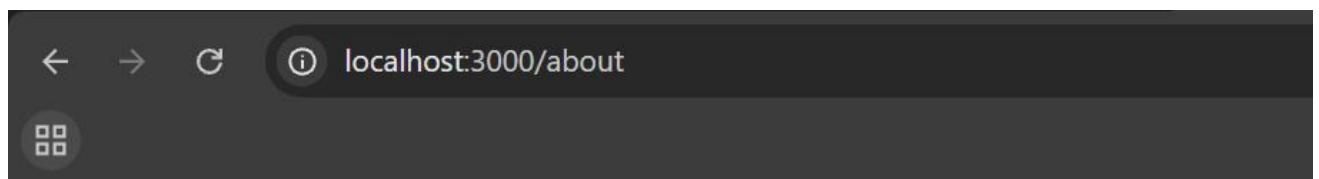
[Disable](#)
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E. Tugas Praktikum

Tugas 1 (Wajib)

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

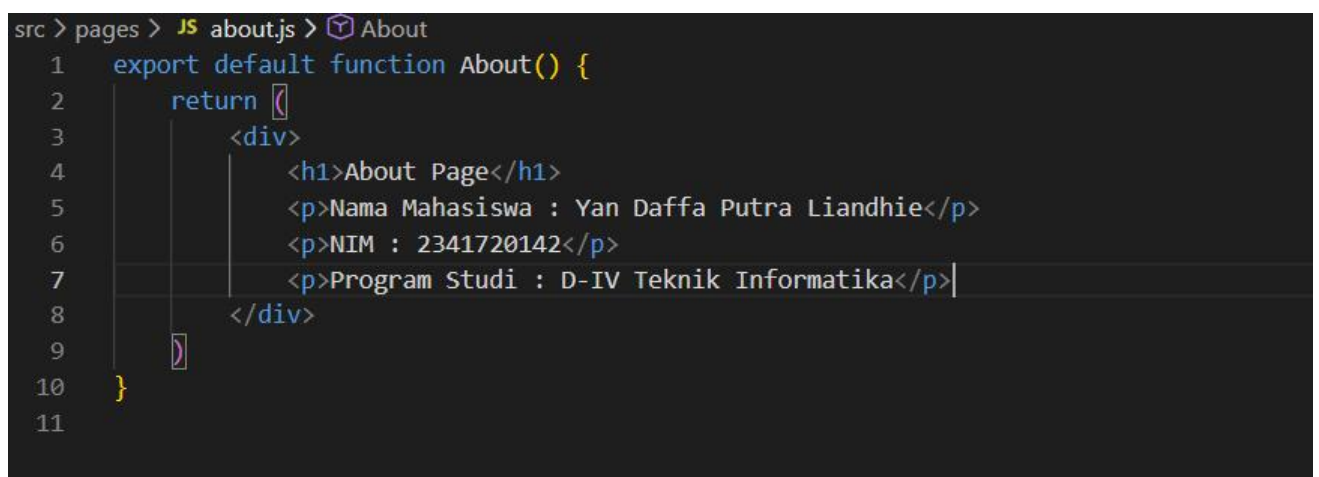


About Page

Nama Mahasiswa : Yan Daffa Putra Liandhie

NIM : 2341720142

Program Studi : D-IV Teknik Informatika



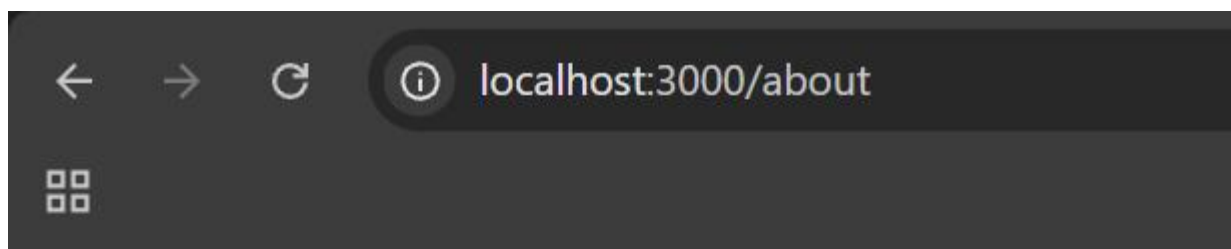
Tugas 2 (Pengayaan)

- 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