LAPORAN PRAKTIKUM
PEMROGRAMAN BERBASIS FRAMEWORK

WEEK 2: Setup Project Next.js menggunakan Pages Router

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JURUSAN TEKNOLOGI INFORMASI
POLITEKNIK NEGERI MALANG
2025/2026

A. Langkah Kerja Praktikum

Langkah 1 – Pengecekan Lingkungan

1. Buka terminal / command prompt.

2. Jalankan perintah berikut:

3. node -v

```
E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework>node -v
v24.11.0

E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework>
```

4. npm -v

```
E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework>npm -v
11.6.1

E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework>
```

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

6. Git -V

```
E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework>git -v
git version 2.44.0.windows.1

E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework>
```

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 E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework\week 2> mkdir praktikum

    Directory: E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework\week 2

Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         2/20/2026   1:54 PM                praktikum

PS E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework\week 2>
```

2. Jalankan perintah:

```
PS E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework\week 2\praktikum> npx create-next-app@13.4.7 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 E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework\week 2\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.

4. Masuk ke folder projectnya

```
PS E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework\week 2\praktikum> cd my-app
PS E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework\week 2\praktikum\my-app>
```

5. Tunggu hingga proses instalasi selesai.

Langkah 3 – Menjalankan Server Development

1. Masuk ke folder project:

```
PS E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework\week 2\praktikum> cd my-app
PS E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework\week 2\praktikum\my-app>
```

2. Jalankan aplikasi:

npm run dev

```
PS E:\Kuliah\Kuliah\Matkul_Semester_6\Pemrograman Berbasis Framework\week 2\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://192.168.69.146:3000

✓ 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
```
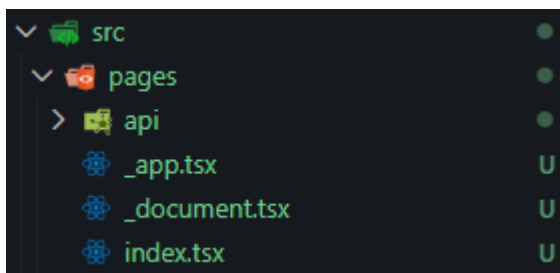
3. Buka browser dan akses: http://localhost:3000
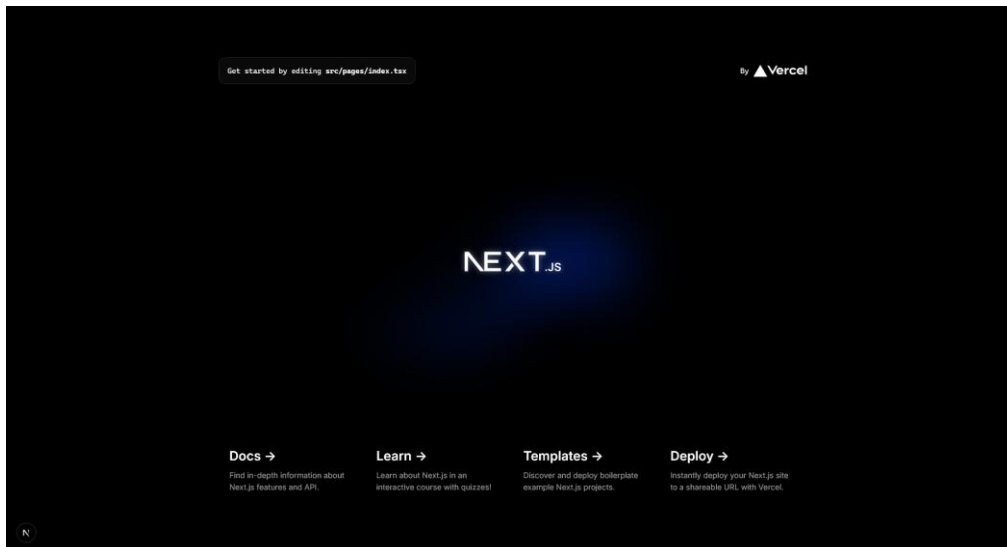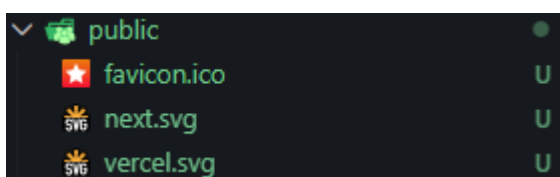
Langkah 4 – Mengenal Struktur Folder
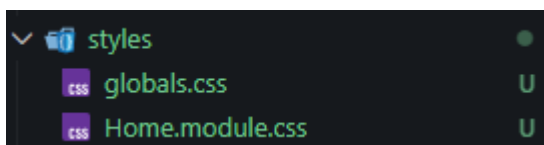
Amati folder utama:

- pages/ → tempat routing halaman

- public/ → aset statis

- styles/ → file CSS

- package.json → konfigurasi project

```
package.json > ...
 1   {
 2     "name": "my-app",
 3     "version": "0.1.0",
 4     "private": true,
       ▷Debug
 5     "scripts": {
 6       "dev": "next dev",
 7       "build": "next build",
 8       "start": "next start",
 9       "lint": "next lint"
10     },
11     "dependencies": {
12       "@types/node": "25.3.0",
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   }
```

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

```
.gitignore
 1   # See https://help.github.com/articles/ignoring-files/ for more about
 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
29
30   # vercel
31   .vercel
32
33   # typescript
34   *.tsbuildinfo
35   next-env.d.ts
```

Langkah 5 – Modifikasi Halaman Utama

1. Buka file:

2. pages/index.js

3. Ubah isi halaman, misalnya:

```
1  import Head from "next/head";      Remove this unus
2  import Image from "next/image";     Remove this un
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>
12       <p>Mahasiswa D4 Teknologi Informasi</p>
13     </div>
14   );
15 }
16
```
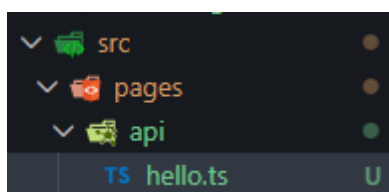
4. Simpan dan lihat perubahan di browser.

Praktikum Next.js Pages Router
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Langkah 6 – Modifikasi API

1. Buka folder api

```
∨ 📁 src
  ∨ 📁 pages
    ∨ 📁 api
        TS hello.ts          U
```

2. Modifikasi hello.ts

```
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      alama: string
7    }
8
9    export default function handler(
10     req: NextApiRequest,
11     res: NextApiResponse<Data>
12   ) {
13     res.status(200).json({ name: 'John Doe', alama: 'Jl. Merdeka No. 123' })
14   }
```

3. Jalankan browser dengan Alamat http://localhost:3000/api/hello
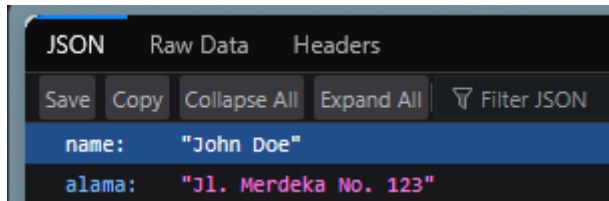
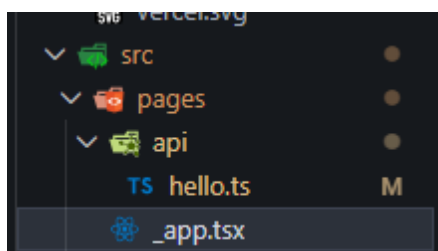4. Tambahkan extensions chrome
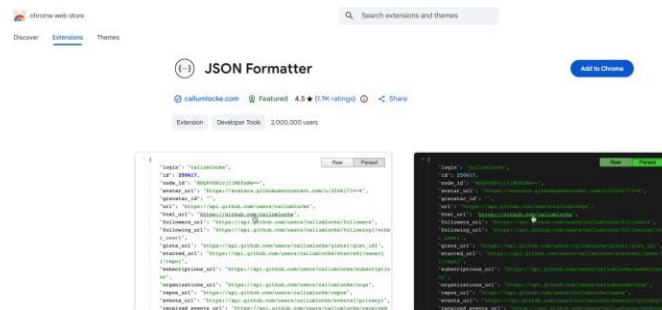
5. Jalankan browser chrome
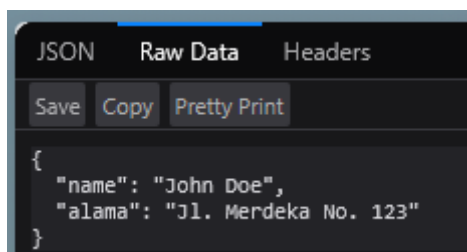
Langkah 7 – Modifikasi Background

1. Buka file _app.tsx

2. Modifikasi menjadi berikut

```
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    }
```
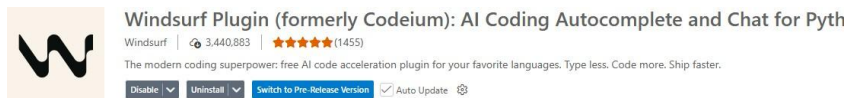
3. Jalankan localhost

Praktikum Next.js Pages Router

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Langkah 8 – Setup ext pada VSCode (opsional)

1. Auto rename

Auto Rename Tag

Jun Han | 24,253,352 | ★★★½☆(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 | ★★★★★(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 ⚙

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

ES7+ React/Redux/React-Native snippets

dsznajder | 16,608,833 | ★★★★½(84)

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

Disable ⌄ | Uninstall ⌄ | ✓ Auto Update ⚙

5. VS Code ESLint extension

ESLint

Microsoft ✔ microsoft.com | 48,064,791 | ★★★★½(247)

Integrates ESLint JavaScript into VS Code.

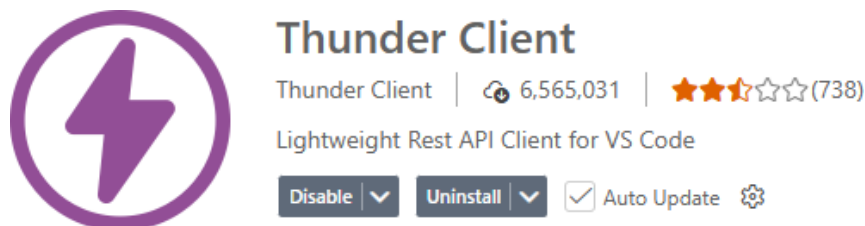Disable ⌄ | Uninstall ⌄ | Switch to Pre-Release Version | ✓ Auto Update ⚙

6. Git Graph extension for Visual Studio Code
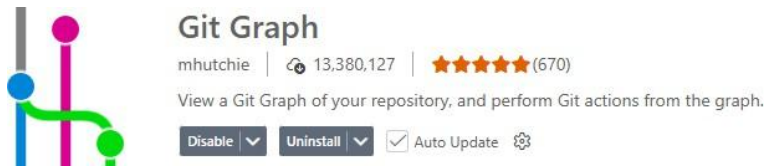
7. Prettier

8. Asa

B. Tugas Praktikum

Tugas 1 (Wajib)

- Buat halaman baru about.js di folder pages.

- Tampilkan:

    o Nama Mahasiswa

    o NIM

    o Program Studi

```
export default function About() {
  return (
    <div>
      <h1>About Me</h1>
      <table>    Add a valid header row or column to this "<table>".
        <tr>
          <td>Nama Mahasiswa</td>
          <td>:</td>
          <td>Ghoffar Abdul Ja&apos;far</td>
        </tr>
        <tr>
          <td>NIM</td>
          <td>:</td>
          <td>2341720035</td>
        </tr>
        <tr>
          <td>Program Studi</td>
          <td>:</td>
          <td>D4 Teknik Informatika</td>
        </tr>
      </table>
    </div>
  );
}
```

Tugas 2 (Pengayaan)

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

Praktikum Next.js Pages Router

Mahasiswa D4 Teknologi Informasi

Tentang Saya

Tentang Saya

Nama Mahasiswa : Ghoffar Abdul Ja'far
NIM   : 2341720035
Program Studi   : D4 Teknik Informatika

```
<Link
  href="/about"
>
  Tentang Saya
</Link>
```

C. Pertanyaan Refleksi

1. Mengapa Pages Router disebut sebagai routing berbasis file?

   = Pages Router disebut routing berbasis file karena setiap file di folder pages/ otomatis menjadi route sesuai nama filenya.

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

   = Next.js berbeda dari React standar seperti Create React App karena sudah menyediakan routing, SSR/SSG, dan optimasi bawaan tanpa konfigurasi tambahan.

3. Apa fungsi perintah npm run dev?

   = Perintah npm run dev berfungsi untuk menjalankan server development agar aplikasi bisa diakses dan diuji secara lokal.

4. Apa perbedaan npm run dev dan run build ?

   = npm run dev digunakan untuk menjalankan aplikasi dalam mode pengembangan, sedangkan npm run build digunakan untuk membuat versi produksi yang sudah dioptimalkan.