

 **Using Pages Router**  
Features available in `/pages`**Getting Started**

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**Building Your Application**

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Pages and Layouts

**Dynamic Routes**

Linking and Navigating

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Custom Document

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Middleware

Rendering

Data Fetching

Styling

Pages Router &gt; ... &gt; Routing &gt; Dynamic Routes

# Dynamic Routes

 ←

When you don't know the exact segment names ahead of time and want to create routes from dynamic data, you can use Dynamic Segments that are filled in at request time or [prerendered](#) at build time.

**On this page**[Convention](#)[Example](#)[Catch-all Segments](#)[Optional Catch-all Segments](#)[Next Steps](#)[Edit this page on GitHub](#)

## Convention

A Dynamic Segment can be created by wrapping a file or folder name in square brackets: `[segmentName]`. For example, `[id]` or `[slug]`.

Dynamic Segments can be accessed from [`useRouter`](#).

## Example

For example, a blog could include the following route `pages/blog/[slug].js` where `[slug]` is the Dynamic Segment for blog posts.

```
1 import { useRouter } from 'next/router'  
2
```



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# Custom Errors

## 404 Page

A 404 page may be accessed very often. Server-rendering an error page for every visit increases the load of the Next.js server. This can result in increased costs and slow experiences.

To avoid the above pitfalls, Next.js provides a static 404 page by default without having to add any additional files.

## Customizing The 404 Page

To create a custom 404 page you can create a `pages/404.js` file. This file is statically generated at build time.

`js pages/404.js`

```
1  export default function Custom404() {  
2    return <h1>404 - Page Not Found</h1>  
3  }
```

Good to know: You can use `getStaticProps` inside this page if you need to fetch data at build time.

## On this page

### 404 Page

Customizing The 404 Page

### 500 Page

Customizing The 500 Page

### More Advanced Error Page

Customizing

Reusing the built-in error page

Caveats

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File Edit Selection View Go ... 🔍 dynamic-routes

EXPLORER DYNAMIC-ROU... page.js ...\\blog JS page.js ...\\[slug] X

app > blogpost > [slug] > JS page.js > Page

```
1 export default function Page({ params }) {  
2     // fetch your blog post by its slug  
3     return <div>My Post: {params.slug}</div>  
4 }  
5 }
```

URL parameter [slug]

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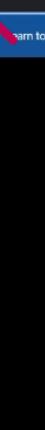
Search

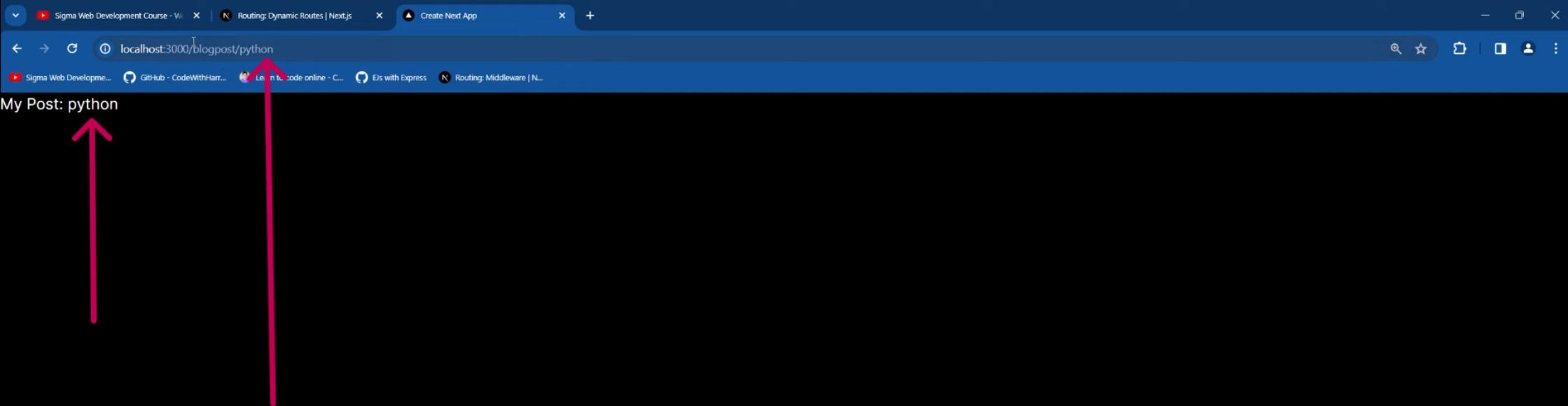
11:18 21:18

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My Post: js





EXPLORER

DYNAMIC-ROUTES

- > .next
- > app
  - blog
    - JS page.js
  - blogpost\[slug]
    - JS page.js
- > favicon.ico
- > globals.css
- > JS layout.js
- > JS page.js
- > node\_modules
- > public
- > .eslintrc.json
- > .gitignore
- > jsconfig.json
- > next.config.mjs
- > package-lock.json
- > package.json
- > postcss.config.js
- > README.md
- > tailwind.config.js

OUTLINE

TIMELINE

TASK EXPLORER

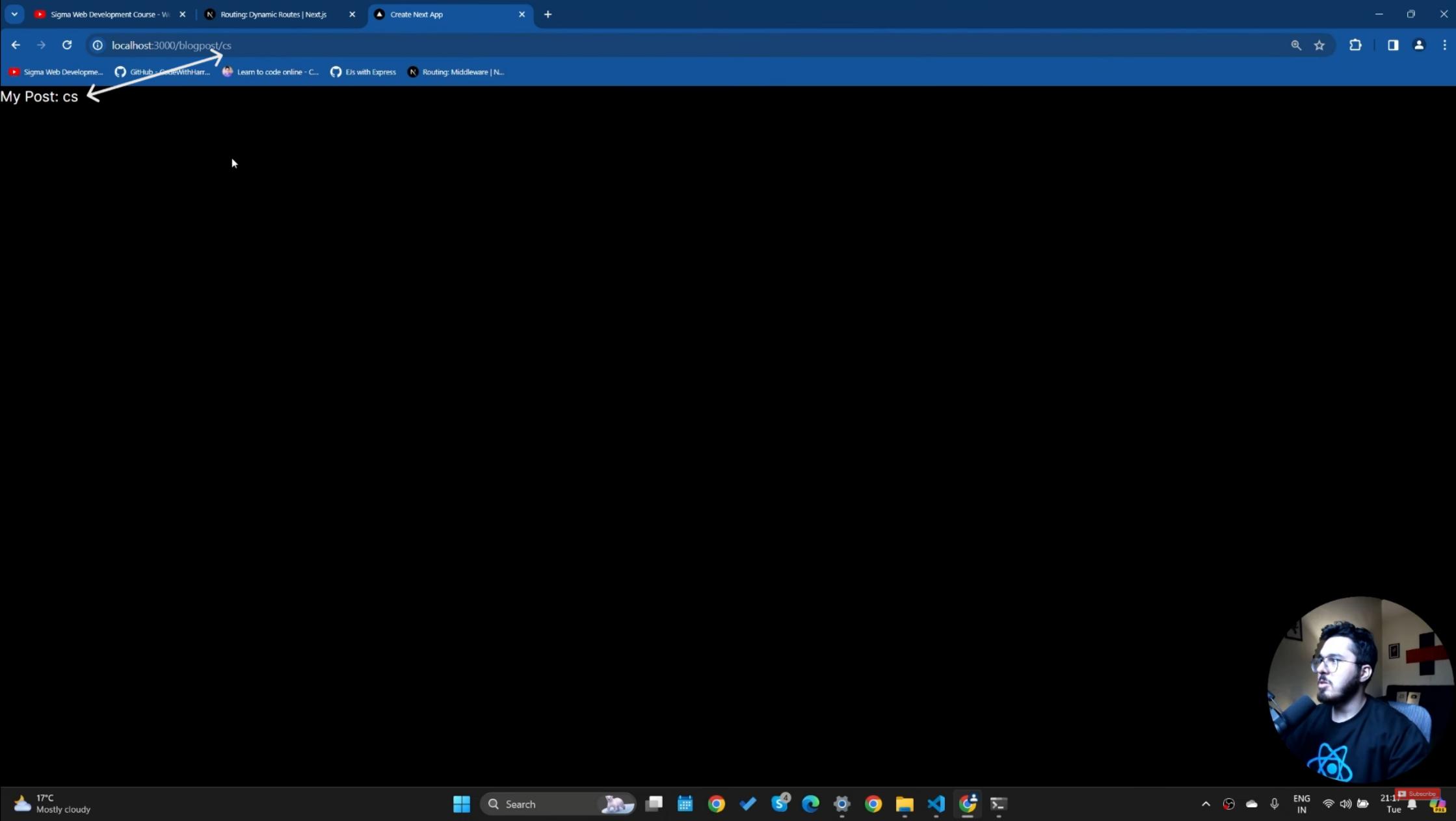
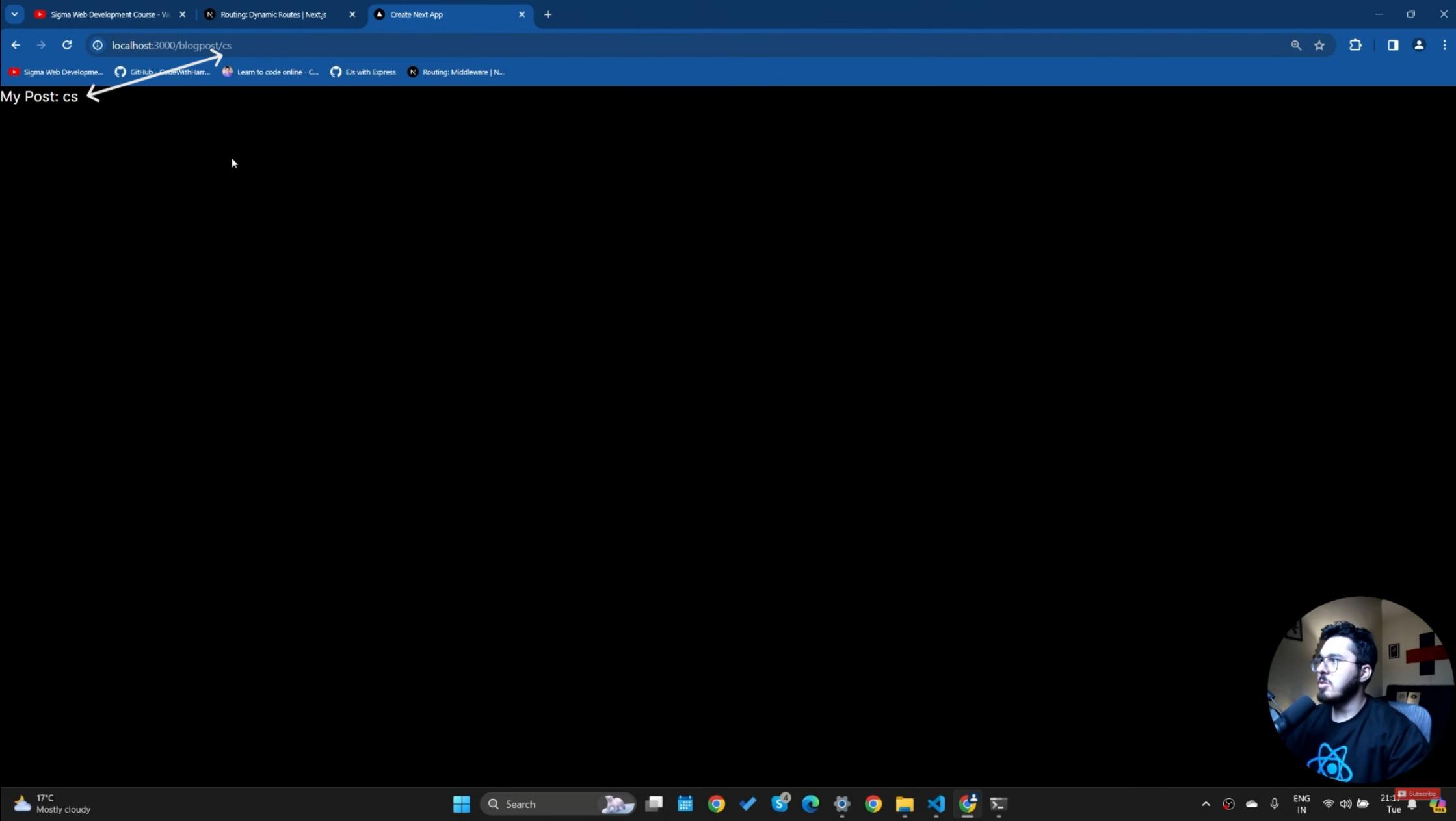
JS page.js ...\\blog

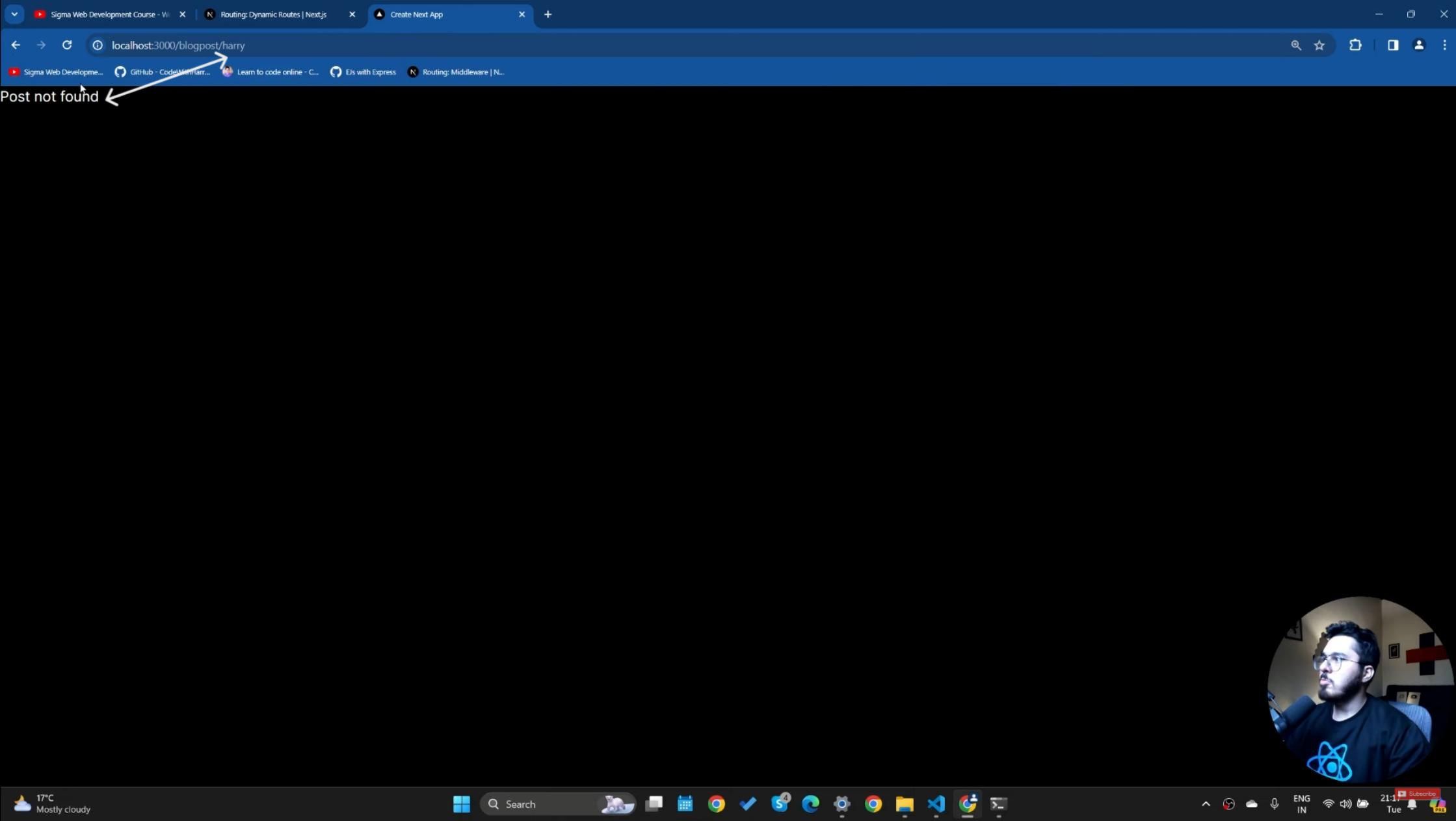
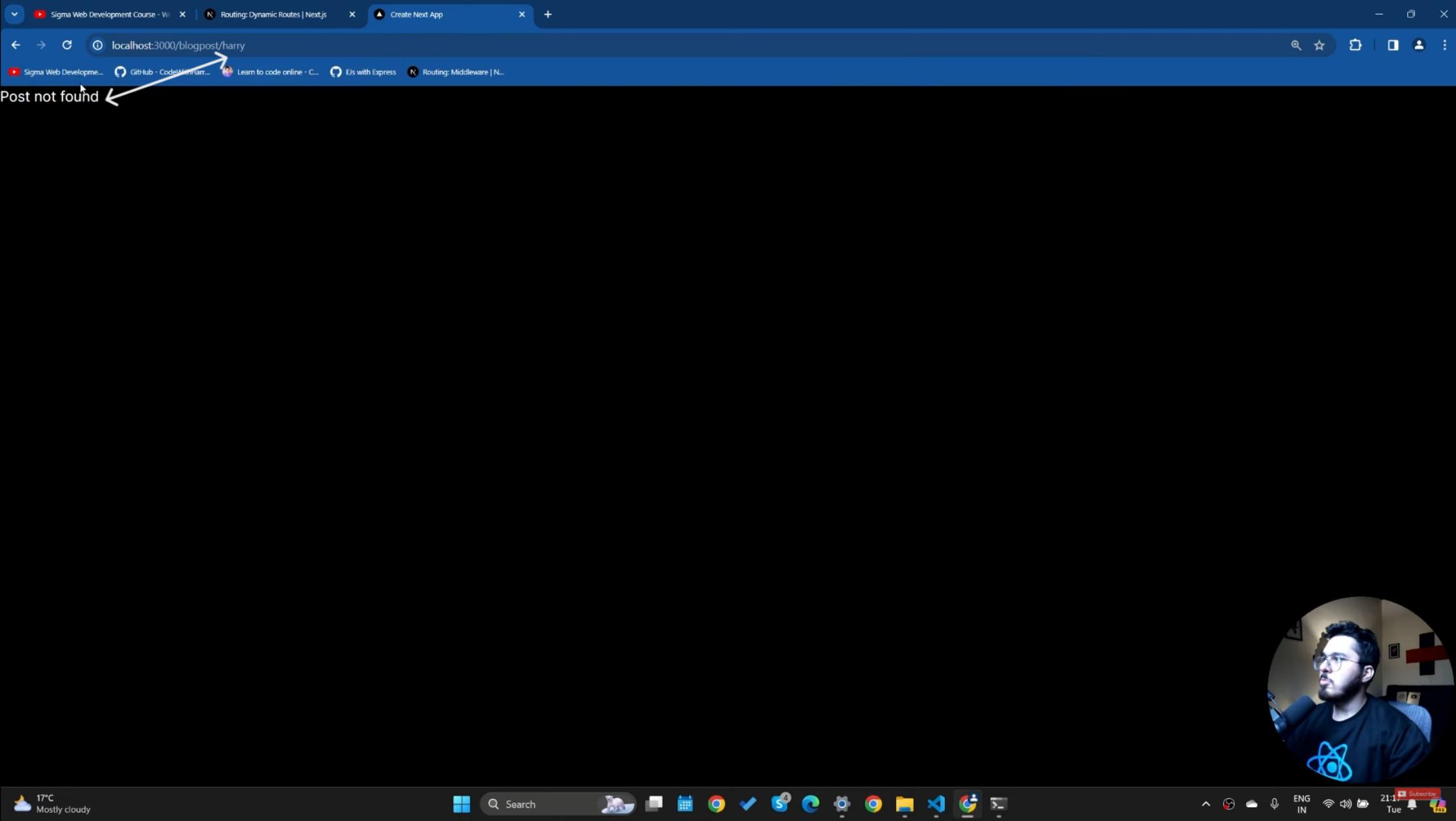
JS page.js ...\\[slug] X

app > blogpost > [slug] > JS page.js > Page > languages

```
1 export default function Page({ params }) {  
2     // fetch your blog post by its slug  
3     let languages = ["python", "javascript", "java", "cpp", "cs"]  
4     if(languages.includes(params.slug)){  
5         return <div>My Post: {params.slug}</div>  
6     }  
7     else{  
8         return <div>Post not found</div>  
9     }  
10    return <div>My Post: {params.slug}</div>  
11}
```







Sigma Web Development Course - W File Conventions: not-found.js | Next.js Create Next App

nextjs.org/docs/app/api-reference/file-conventions/not-found

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Using App Router Features available in /app

App Router > ... > File Conventions > not-found.js

On this page

Props Data Fetching Version History

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Getting Started

Installation Project Structure

Building Your Application

Routing

- Defining Routes
- Pages and Layouts
- Linking and Navigating
- Loading UI and Streaming
- Error Handling
- Redirecting
- Route Groups
- Project Organization
- Dynamic Routes
- Parallel Routes
- Intercepting Routes
- Route Handlers
- Middleware
- Internationalization

Data Fetching

Rendering

Caching

Styling

Optimizing

Configuring

Testing

not-found.js

The `not-found` file is used to render UI when the `notFound` function is thrown within a route segment. Along with serving a custom UI, Next.js will return a `200` HTTP status code for streamed responses, and `404` for non-streamed responses.

```
app/blog/not-found.js
```

```
1 import Link from 'next/link'
2
3 export default function NotFound() {
4   return (
5     <div>
6       <h2>Not Found</h2>
7       <p>Could not find requested resource</p>
8       <Link href="/">Return Home</Link>
9     </div>
10  )
11 }
```

Good to Know: In addition to catching expected `notFound()` errors, the root `app/not-found.js` file also handles any unmatched URLs for your whole application. This means users that visit a URL that is not handled by your app will be shown the UI exported by the `app/not-found.js` file.

## Props

`not-found.js` components do not accept any props.

## Data Fetching



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Search

21:1 ENG IN

A screenshot of a code editor interface, likely VS Code, showing a file named `not-found.js` in the `app` directory of a Next.js project. The code defines a custom not-found page component.

```
import Link from 'next/link'

export default function NotFound() {
  return (
    <div>
      <h2>Not Found</h2>
      <p>Could not find requested resource</p>
      <Link href="/">Return Home</Link>
    </div>
  )
}
```

A large green handwritten annotation "Custom not-found" is overlaid on the bottom right of the code editor. A red arrow points from the word "not-found" in the annotation to the file name `not-found.js` in the Explorer sidebar.

The Explorer sidebar shows the following file structure:

- `.next`
- `app`
  - `blog`
    - `page.js`
  - `blogpost\[slug]`
    - `page.js`
    - `favicon.ico`
    - `globals.css`
    - `layout.js`
    - `not-found.js` (highlighted)
    - `page.js`
- `node_modules`
- `public`
- `.eslintrc.json`
- `.gitignore`
- `jsconfig.json`
- `next.config.mjs`
- `package-lock.json`
- `package.json`
- `postcss.config.js`
- `README.md`

Bottom status bar: L11, Col 2 | Spaces: 4 | UTF-8 | CRLF | Java | 17°C Mostly cloudy | Search | Taskbar icons | ENG IN | 21:15 | Subscriptions

# Not Found

Could not find requested resource

[Return Home](#)



Sigma Web Development Course - W... X Routing: Error Handling | Next.js X Create Next App X +

nextjs.org/docs/app/building-your-application/routing/error-handling

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**Using App Router** Features available in /app

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  - Internationalization
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- Caching
- Styling
- Optimizing
- Configuring
- Testing

**On this page**

- How `error.js` Works
- Recovering From Errors
- Nested Routes
- Handling Errors in Layouts
- Handling Errors in Root Layouts
- Handling Server Errors
- Securing Sensitive Error Information

Next Steps

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Scroll to top ⏹

**How `error.js` Works**

1 'use client' // Error components must be Client Components  
2  
3 import { useEffect } from 'react'  
4  
5 export default function Error({ error, reset }) {  
6 useEffect(() => {  
7 // Log the error to an error reporting service  
8 console.error(error)  
9 }, [error])  
10  
11 return (  
12 <div>  
13 <h2>Something went wrong!</h2>  
14 <button  
15 onClick={  
16 // Attempt to recover by trying to re-render the segment  
17 () => reset()  
18 }  
19 >  
20 Try again  
21 </button>  
22 </div>  
23 )  
24 }

A screenshot of a Microsoft Visual Studio Code (VS Code) interface showing an error page component. The sidebar on the left displays the file structure of a Next.js application, including files like `page.js`, `not-found.js`, and `error.js` under the `app` directory. The main editor area shows the code for `error.js`:

```
app > JS error.js > Error
1  'use client' // Error components must be Client Components
2
3  import { useEffect } from 'react'
4
5  export default function Error({ error, reset }) {
6    useEffect(() => {
7      // Log the error to an error reporting service
8      console.error(error)
9    }, [error])
10
11  return (
12    <div>
13      <h2>Something went wrong!</h2>
14      <button
15        onClick={
16          () => reset()
17        }
18      >
19        Try again
20      </button>
21      </div>
22  )
23}
24
```

The code uses the 'use client' directive at the top. It imports the `useEffect` hook from React. The component takes two props: `error` and `reset`. It logs the error to the console and provides a button to attempt a re-render by calling the `reset` function.

Annotations in the image include a red arrow pointing to the `error.js` file in the Explorer sidebar, another red arrow pointing to the `console.error(error)` line in the code, and a large green handwritten-style annotation "On console" with an arrow pointing to the same line. A circular video overlay in the bottom right corner shows a person speaking.

Sigma Web Development Course - W | Routing: Error Handling | Next.js | Create Next App

localhost:3000/blogpost/harry

Something went wrong!

Try again

1 error

268079 400 (Bad Request)

- ▶ GET http://localhost:3000/\_nextjs\_original-stack-frame?isServer=false&is stack-frame.js:38  
EdgeSe...p-page.runtime.dev.js&methodName=eZ&arguments=&lineNumber=35&column=268158 400 (Bad Request)
- ▶ GET http://localhost:3000/\_nextjs\_original-stack-frame?isServer=false&is stack-frame.js:38  
EdgeSe...p-page.runtime.dev.js&methodName=eH&arguments=&lineNumber=35&column=268559 400 (Bad Request)
- ▶ GET http://localhost:3000/\_nextjs\_original-stack-frame?isServer=false&is stack-frame.js:38  
EdgeSe...ev.js&methodName=Timeout.\_onTimeout&arguments=&lineNumber=35&column=265057 400 (Bad Request)
- ▶ GET http://localhost:3000/\_nextjs\_original-stack-frame?isServer=false&is stack-frame.js:38  
EdgeSe...p-page.runtime.dev.js&methodName=eJ&arguments=&lineNumber=35&column=264151 400 (Bad Request)
- ▶ GET http://localhost:3000/\_nextjs\_original-stack-frame?isServer=false&is stack-frame.js:38  
EdgeSe...ime.dev.js&methodName=%3Cunknon%3E&arguments=&lineNumber=35&column=276953 400 (Bad Request)
- ▶ GET http://localhost:3000/\_nextjs\_original-stack-frame?isServer=false&is stack-frame.js:38  
EdgeSe...ime.dev.js&methodName=Array\_toJSON&arguments=&lineNumber=35&column=281723 400 (Bad Request)
- ▶ GET http://localhost:3000/\_nextjs\_original-stack-frame?isServer=false&is stack-frame.js:38  
EdgeSe...ime.dev.js&methodName=%3Cunknon%3E&arguments=&lineNumber=35&column=268079 400 (Bad Request)
- ▶ GET http://localhost:3000/\_nextjs\_original-stack-frame?isServer=false&is stack-frame.js:38  
EdgeSe...p-page.runtime.dev.js&methodName=eZ&arguments=&lineNumber=35&column=268158 400 (Bad Request)
- ▶ GET http://localhost:3000/\_nextjs\_original-stack-frame?isServer=false&is stack-frame.js:38  
EdgeSe...p-page.runtime.dev.js&methodName=eH&arguments=&lineNumber=35&column=268559 400 (Bad Request)
- ▶ GET http://localhost:3000/\_nextjs\_original-stack-frame?isServer=false&is stack-frame.js:38  
EdgeSe...ev.js&methodName=Timeout.\_onTimeout&arguments=&lineNumber=35&column=265057 400 (Bad Request)

Uncaught

Uncaught

react-server-dom-web

redis

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File Edit Selection View Go ... ⏪ ⏩ dynamic-routes

EXPLORER DYNAMIC-ROU... page.js ...\\blog page.js ...\\[slug] not-found.js error.js page.js ...\\[...val] X

app > about > [...val] > JS page.js > Page

```
1 export default function Page({ params }) {  
2   console.log(params) ←  
3   // fetch your blog post by its slug  
4   return <div>I am about page check console</div>  
5 }
```

Multiple parameters in a URL [...var]

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS node + ▾

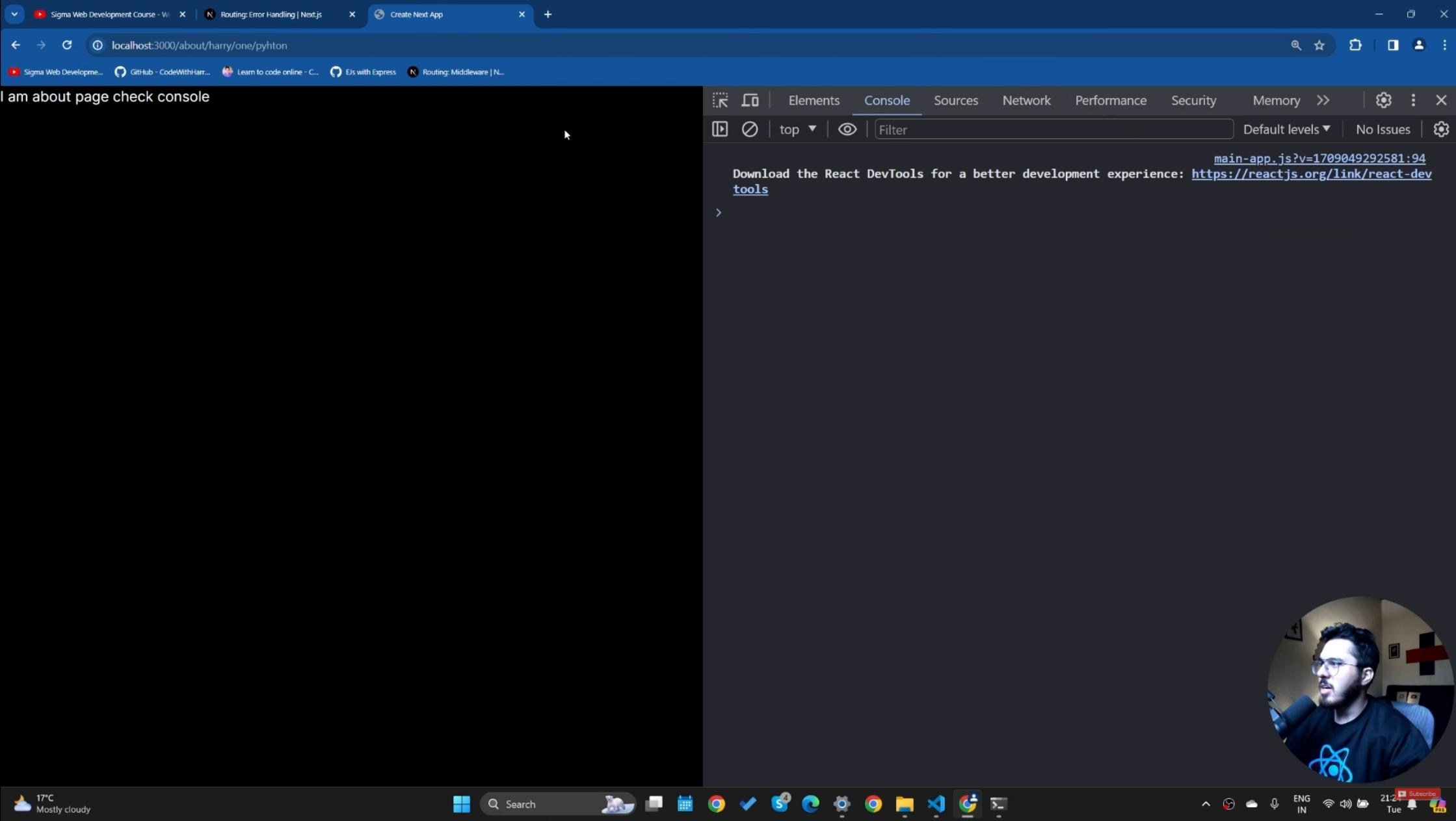
```
{ val: [ 'harry' ] }  
✓ Compiled in 147ms (671 modules)  
{ val: [ 'harry' ] }  
✓ Compiled in 170ms (671 modules)  
{ val: [ 'harry' ] }  
{ val: [ 'harry', 'one', 'python' ] } ← Output of next screenshot
```

Ln 4, Col 46 Spaces: 4 UTF-8 CRLF {} Java 17°C Mostly cloudy 21:22 ENG IN Subscrib...

17°C Mostly cloudy 21:22 ENG IN Subscrib...

Search

Windows Taskbar icons



I am about page check console

```
Elements Console Sources Network Performance Security Memory > | ⚙️ : X
| top ▾ | ⚡ | Filter | Default levels ▾ | No Issues | ⚙️

main-app.js?v=1709049292581:94
Download the React DevTools for a better development experience: https://reactjs.org/link/react-dev-tools
>
```

