**Router[23:15]**

>> We can create nested folders.

>> if we need to create nested folders but we don't want to use this folder name run time then we need to follow below instruction to

create folder:

(course)/java

compiler will ignore (course) folder because this is inside brackets.

>> we can create id based nested folder in vs code:

profile/[id]/page.js //we can put any string instead of id

the url will be held: http://localhost:3000/profile/4 //we need to pass any one id or any string

we can check in terminal of vs code by following below instruction:

import React from 'react'

const page = ({params}) => {

    console.log(params);

  return (

    <div>page {params.id}</div>

  )

}

export default page

Note: we can also create catch all folder by …(triple dot) in vs code:

profile/[…id]/page.js

the url will be held anytype:

http://localhost:3000/profile/4

OR

<http://localhost:3000/profile/4/hkhkh>

OR

<http://localhost:3000/profile/4hjhkhkhk>

OR

<http://localhost:3000/profile/8pp/yu/7y>

we can check in terminal of vs code url in array format:

like: { id: [ '8pp', 'yu', '7y' ] }

here <http://localhost:3000/profile> it is mandatory , if we do not want to use **profile** folder name in url,then we need to create folder in vs code by following below instruction:

profile/[[…id]]/page.js

>> Create a folder name of **colorbox** , than create two folders **@left** and **@right** inside colorboxfolder than create page.js file inside @left folder and @right folder . create page.js file and layout.js file inside colorbox folder.

Paste belew code in page.js of @left folder:

import React from 'react'

const page = () => {

  return (

    <div>Left</div>

  )

}

export default page

Paste belew code in page.js of @right folder:

import React from 'react'

const page = () => {

  return (

    <div>Right</div>

  )

}

export default page

Paste belew code in page.js of colorbox folder:

import React from 'react'

const page = () => {

  return (

    <div>colorbox</div>

  )

}

export default page

Paste belew code in layout.js of colorbox folder:

import React from 'react'

const layout = ({children , left , right}) => {

    const isSidebar = true;

  return (

    <>

        <div style={{display:'flex'}}>{children}{left}{right}</div>

        <br/>

        {isSidebar ? left : right}

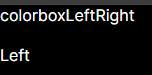
    </>

  )

}

export default layout

than hit the path <http://localhost:3000/colorbox> it will show below output:



\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

>>create a folder name of **components** in side src folder, than create a file **AdminHeader.js** file inside components folder than paste below code inside AdminHeader.js file:

import React from 'react'

const AdminHeader = () => {

  return (

    <div>AdminHeader</div>

  )

}

export default AdminHeader

create a folder name of **admin** insie app folder, inside admin folder create two folder **dashboard** and **profile** and create a file **layout.js** . inside dashboard folder create a file **page.js** and paste below code:

import React from 'react'

const page = () => {

  return (

    <div>dashboard page</div>

  )

}

export default page

similaraly create a file **page.js** inside profile folder and paste below code:

import React from 'react'

const page = () => {

  return (

    <div>Profile page</div>

  )

}

export default page

than open layout.js file and paste below code:

import AdminHeader from '@/components/AdminHeader'

import React from 'react'

const layout = ({children}) => {

  return (<>

    <AdminHeader  />

    <div>Admin {children}</div>

  </>)

}

export default layout

than hit the path <http://localhost:3000/admin/profile> and <http://localhost:3000/admin/dashboard>

actually it will execute layout.js file.

**Navigation(Router)**

Inside components folder create a file **LearnLink.js** and paste below code:

import Link from 'next/link'

import React from 'react'

const LearnLink = () => {

    const id =2;

  return (

    <>

        <div>LearnLink</div>

        <Link href="/admin/dashboard/2">dashboard page</Link>

        <Link href={`/profile/${id}`}>profile page</Link>

    </>

  )

}

export default LearnLink

open page.js file which is inside of app folder and update below code:

import Image from "next/image";

import styles from "./page.module.css";

import LearnLink from "@/components/LearnLink";

export default function Home() {

  return (

   <>

    <h1>Welcome</h1>

    <LearnLink />

   </>

  );

}

than hit the path <http://localhost:3000/> than click on ‘go to next’, it will redirect.

**Programatically Navigation(use Router)**

Create a file **LearnUseRouter.js** inside components folder and paste below code:

"use client"

import React from 'react'

import { useRouter } from 'next/navigation'

const LearnUseRouter = () => {

    const router = useRouter();

    console.log("user router",router)

  return (

    <>

        <div>LearnUseRouter</div>

        <button type="button" onClick={()=>{router.push("/admin/dashboard")}}>Dashboard Button</button>

    </>

  )

}

export default LearnUseRouter

open page.js file which is inside of app folder and update below code:

import Image from "next/image";

import styles from "./page.module.css";

import LearnLink from "@/components/LearnLink";

import LearnUseRouter from "@/components/LearnUseRouter";

export default function Home() {

  return (

   <>

    <h1>Welcome</h1>

    <LearnLink />

    <LearnUseRouter />

   </>

  );

}

than hit the path <http://localhost:3000/> than click on ‘Dashboard Button’, it will redirect.

**Creating server component**

Create a file **LearnServerComponent.js** inside components folder and paste below code:

import React from 'react'

const LearnServerComponent = () => {

  return (

    <div>LearnServerComponent</div>

  )

}

export default LearnServerComponent

open page.js file which is inside of app folder and update below code:

import Image from "next/image";

import styles from "./page.module.css";

import LearnLink from "@/components/LearnLink";

import LearnUseRouter from "@/components/LearnUseRouter";

import LearnServerComponent from "@/components/LearnServerComponent";

export default function Home() {

  return (

   <>

    <h1>Welcome</h1>

    <LearnLink />

    <LearnUseRouter />

    <LearnServerComponent  />

   </>

  );

}

than hit the path <http://localhost:3000/> and get the result.

**Creating client component**

Create a file **LearnClientComponent.js** inside components folder and paste below code:

'use client'      //now we can use state,events,.... in this component

// we can add another component which will treat as a client component.

import React from 'react'

const LearnClientComponent = () => {

  return (

    <div>LearnClientComponent</div>

  )

}

export default LearnClientComponent

open page.js file which is inside of app folder and update below code:

import Image from "next/image";

import styles from "./page.module.css";

import LearnLink from "@/components/LearnLink";

import LearnUseRouter from "@/components/LearnUseRouter";

import LearnServerComponent from "@/components/LearnServerComponent";

import LearnClientComponent from "@/components/LearnClientComponent";

export default function Home() {

  return (

   <>

    <h1>Welcome</h1>

    <LearnLink />

    <LearnUseRouter />

    <LearnServerComponent  />

    <LearnClientComponent />

   </>

  );

}

than hit the path <http://localhost:3000/> and get the result.

**Using Global css**

Create a file **LearnGlobalCss.js** inside components folder and paste below code:

import React from 'react'

const LearnGlobalCss = () => {

  return (

    <div className='test'>LearnGlobalCss</div>

  )

}

export default LearnGlobalCss

where test is the class name which is available inside page.module.css inside app folder.

than hit the path <http://localhost:3000/> and get the result.

**Using Module css**

Create a file **LearnModuleCss.js** inside components folder and paste below code:

import React from 'react'

import styles from '../css/LearnModuleCss.css'

const LearnModuleCss = () => {

  return (

    <div className={styles.authclass}>LearnModuleCss</div>

  )

}

export default LearnModuleCss

Create a folder **css** inside app folder, than create a css file **LearnModuleCss.css** inside css folder and paste below code;

.authclass{

    color:pink;

    font-size: 25px;

}

open page.js file which is inside of app folder and update below code:

import Image from "next/image";

import styles from "./page.module.css";

import LearnLink from "@/components/LearnLink";

import LearnUseRouter from "@/components/LearnUseRouter";

import LearnServerComponent from "@/components/LearnServerComponent";

import LearnClientComponent from "@/components/LearnClientComponent";

import LearnGlobalCss from "@/components/LearnGlobalCss";

import LearnModuleCss from "@/components/LearnModuleCss";

export default function Home() {

  return (

   <>

    <h1>Welcome</h1>

    <LearnLink />

    <LearnUseRouter />

    <LearnServerComponent  />

    <LearnClientComponent />

    <LearnGlobalCss  />

    <LearnModuleCss  />

   </>

  );

}

than hit the path <http://localhost:3000/> and get the result. (it is not working check it)

**Using images**

Create a component **LearnUseImage.js** inside components folder, and paste below code inside this component:

import React from 'react'

import Image from 'next/image'

import myimage from '../../public/next.svg'

const LearnUseImage = () => {

  return (

    <>

        <Image src={myimage} width={200} height={300} alt="img" />

                                {/\* OR \*/}

        <Image src="next.svg" width={200} height={300} alt="img" />

    </>

  )

}

export default LearnUseImage

Open page.js file and import below code:

import LearnUseImage from "@/components/LearnUseImage";

and use below code inside return function:

<LearnUseImage   />

Note: next.svg image must be inside public folder.

**Fetching Data**

**(Not working)**

Create a component **LearnDataFetching.js** inside components folder, and paste below code inside this component:

import React from 'react'

async function getData()

{

    const res = await fetch("https://jsonplaceholder.typicode.com/posts");

    if(res.ok)

    {

        return res.json();

    }

    else{

        alert("Error: data is not fetching")

    }

}

const LearnDataFetching = async () => {

    const data = await getData();

    console.log("Data", data);

  return (

    <>

    {

        data.map((post , id)=>{

            <div key={id}>

                <h3 style={{color:'white'}}>{post.title}</h3>

            </div>

        })

    }

    </>

  )

}

export default LearnDataFetching

Open page.js file and import below code:

import LearnDataFetching from "@/components/LearnDataFetching";

and use below code inside return function:

<LearnDataFetching  />

**Creating API**

Create a folder **api** inside app folder , than create a folder **products** inside api folder, than create a file **route.js** inside products folder.

Open route.js file and paste below code:

import { NextResponse } from "next/server";

import {cookies} from "next/headers";

export async function GET(req)           //Get Method

{

    console.log(req);

    const requestHeaders = new Headers(req.headers);

    console.log(requestHeaders)   // to check header details

    //const {searchParams} = new URL(req.url);    //to get url data

                //OR

    const searchParams = req.nextUrl.searchParams

    console.log(searchParams);

    console.log(searchParams.get("search"));

    //cookie

    const cook1 = req.cookies;

    console.log("cookies1:", cook1);

    const cook2 = cookies();

    console.log("cookies2:", cook2);

    return NextResponse.json({"msg" : "Hello Next Js"})

}

export async function POST(req)           //Post Method

{

    console.log(req);

    const res = await req.json();      //we need to send json data on postman

    console.log("ResJSON",res);

    return NextResponse.json({"msg":"Post success"})

}

Than hit below url on browser:

[**http://localhost:3000/api/products**](http://localhost:3000/api/products)

also we can check in console.

Note:

1. To fetch url data hit below url:

[**http://localhost:3000/api/products?search=”java**](http://localhost:3000/api/products?search=”java)**”**

1. To check post method hit below url on POSTMAN:

[**http://localhost:3000/api/products?search=”java**](http://localhost:3000/api/products?search=”java) **//use POST method**