

Practica de React

Después de haber instalado nodeman en mi pc, compruebo la versión con el siguiente comando:

```
MINGW64:/c/Users/USUARIO
USUARIO@HP22-DD2005LA MINGW64 ~ (master)
$ nvm --version
1.1.12
```

Ahora uso el comando para ver todas las versiones de nodeman:

```
USUARIO@HP22-DD2005LA MINGW64 ~ (master)
$ nvm list available
```

CURRENT	LTS	OLD STABLE	OLD UNSTABLE
23.3.0	22.11.0	0.12.18	0.11.16
23.2.0	20.18.1	0.12.17	0.11.15
23.1.0	20.18.0	0.12.16	0.11.14
23.0.0	20.17.0	0.12.15	0.11.13
22.10.0	20.16.0	0.12.14	0.11.12
22.9.0	20.15.1	0.12.13	0.11.11
22.8.0	20.15.0	0.12.12	0.11.10
22.7.0	20.14.0	0.12.11	0.11.9
22.6.0	20.13.1	0.12.10	0.11.8
22.5.1	20.13.0	0.12.9	0.11.7
22.5.0	20.12.2	0.12.8	0.11.6
22.4.1	20.12.1	0.12.7	0.11.5
22.4.0	20.12.0	0.12.6	0.11.4
22.3.0	20.11.1	0.12.5	0.11.3
22.2.0	20.11.0	0.12.4	0.11.2
22.1.0	20.10.0	0.12.3	0.11.1
22.0.0	20.9.0	0.12.2	0.11.0

Hago la instalación de la versión 20:

```
USUARIO@HP22-DD2005LA MINGW64 ~ (master)
$ nvm install 20
Downloading node.js version 20.18.1 (64-bit)...
Extracting node and npm...
Complete
npm v10.8.2 installed successfully.

Installation complete. If you want to use this version, type
nvm use 20.18.1

USUARIO@HP22-DD2005LA MINGW64 ~ (master)
$ |
```

Y posteriormente la utilizo.

```
USUARIO@HP22-DD2005LA MINGW64 ~ (master)
$ nvm use 20
Now using node v20.18.1 (64-bit)
```

Ahora realizaremos la práctica de React.

Creemos nuestra carpeta a través de los siguientes comandos:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  [powershell icon] powershell + v
```

```
PS C:\Users\USUARIO\Desktop\Ejercicios> cd ..
PS C:\Users\USUARIO\Desktop> mkdir "Practica"
```

Directorio: C:\Users\USUARIO\Desktop

Mode	LastWriteTime	Length	Name
d-----	2/12/2024 3:35 p. m.		Practica

```
PS C:\Users\USUARIO\Desktop> cd "Practica"
PS C:\Users\USUARIO\Desktop\Practica> 
```

Creemos el proyecto con VITE:

```
PS C:\Users\USUARIO\Desktop\Practica> npm create vite@latest "El Escondite Animal" -- --template react

> npx
> create-vite El Escondite Animal --template react

✓ Package name: ... el-escondite-animal

Scaffolding project in C:\Users\USUARIO\Desktop\Practica\El Escondite Animal...

Done. Now run:

  cd "El Escondite Animal"
  npm install
  npm run dev

PS C:\Users\USUARIO\Desktop\Practica> 
```

Ingresamos a la carpeta creada:

```

PS C:\Users\USUARIO\Desktop\Practica> cd "El Escondite Animal"
PS C:\Users\USUARIO\Desktop\Practica\El Escondite Animal> dir

Directorio: C:\Users\USUARIO\Desktop\Practica\El Escondite Animal

Mode                LastWriteTime         Length Name
----                -
d-----          2/12/2024  3:38 p. m.             public
d-----          2/12/2024  3:38 p. m.             src
-a-----          2/12/2024  3:36 p. m.             253 .gitignore
-a-----          2/12/2024  3:36 p. m.          1003 eslint.config.js
-a-----          2/12/2024  3:36 p. m.             361 index.html
-a-----          2/12/2024  3:38 p. m.             655 package.json
-a-----          2/12/2024  3:36 p. m.             451 README.md
-a-----          2/12/2024  3:36 p. m.             161 vite.config.js

PS C:\Users\USUARIO\Desktop\Practica\El Escondite Animal>

```

Descargamos las dependencias:

```

PS C:\Users\USUARIO\Desktop\Practica\El Escondite Animal> npm install

added 248 packages, and audited 249 packages in 2m

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

found 0 vulnerabilities
PS C:\Users\USUARIO\Desktop\Practica\El Escondite Animal>

```

```
PS C:\Users\USUARIO\Desktop\Practica\El Escondite Animal> npm install @mui/material @emotion/react @emotion/styled
```

```
added 46 packages, and audited 295 packages in 56s
```

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

```
found 0 vulnerabilities
```

```
PS C:\Users\USUARIO\Desktop\Practica\El Escondite Animal>
```

```
PS C:\Users\USUARIO\Desktop\Practica\El Escondite Animal> npm install react-router-dom @mui/styles
```

```
added 19 packages, and audited 314 packages in 14s
```

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

```
found 0 vulnerabilities
```

```
PS C:\Users\USUARIO\Desktop\Practica\El Escondite Animal>
```

```
PS C:\Users\USUARIO\Desktop\Practica\El Escondite Animal> npm install @mui/icons-material
```

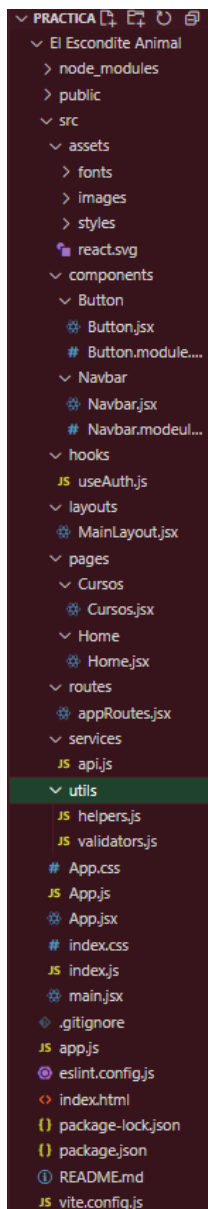
```
added 1 package, and audited 315 packages in 6m
```

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

```
found 0 vulnerabilities
```

```
PS C:\Users\USUARIO\Desktop\Practica\El Escondite Animal>
```

Ahora abrimos visual y copiamos la estructura:



Ahora escribimos el código:

EXPLORER...Navbar.jsxNavbar.module.cssButton.jsxButton.module.cssJS useAuth.js

PRACTICA

El Escondite Animal

node_modules

public

src

assets

components

Button

footer

Navbar

Navbar.jsx

Navbar.module...

hooks

layouts

pages

Cursos

Cursos.jsx

Home

Home.jsx

masinformacion

MasInformacion...

usuarios

Usuarios.jsx

routes

appRoutes.jsx

services

utils

App.css

App.js

App.jsx

index.css

index.js

main.jsx

.gitignore

app.js

eslint.config.js

index.html

package-lock.json

package.json

README.md

vite.config.js

El Escondite Animal > src > components > Navbar > Navbar.jsx > Navbar

```
1 import React from 'react';
2 import AppBar from '@mui/material/AppBar';
3 import Toolbar from '@mui/material/Toolbar';
4 import Typography from '@mui/material/Typography';
5 import Button from '@mui/material/Button';
6 import { Link } from 'react-router-dom';
7 import { makeStyles } from '@mui/styles';
8
9 const useStyles = makeStyles( (theme) => ({
10   title: {
11     flexGrow: 1,
12   },
13   link: {
14     color: 'white',
15     textDecoration: 'none',
16     margin: theme.spacing(2),
17   },
18   toolbar: {
19     display: 'flex',
20     justifyContent: 'space-between',
21   },
22 }));
23
24 export default function Navbar() {
25   const classes = useStyles();
26   return (
27     <AppBar position="static">
28       <Toolbar className= {classes.toolbar}>
29         <Typography variant="h6" className={classes.title}>
30           SERVICIO NACIONAL DE APRENDIZAJE - SENA
31         </Typography>
32         <div>
33           <Link to="/home" className={ classes.link } >
34             <Button color="inherit">Home</Button>
35           </Link>
36           <Link to="/cursos" className={ classes.link } >
37             <Button color="inherit">Cursos</Button>
38           </Link>
39           <Link to="/usuarios" className={ classes.link } >
40             <Button color="inherit">Usuarios</Button>
41           </Link>
42           <Link to="/masinformacion" className={ classes.link } >
43             <Button color="inherit">Más información</Button>
44           </Link>
45         </div>
46       </Toolbar>
47     </AppBar>
48   );
49
50 }
```

EXPLORER ...

- ✓ PRACTICA [📁] [📁] [🔄] [📄]
- ✓ El Escondite Animal
 - > node_modules
 - > public
 - ✓ src
 - > assets
 - ✓ components
 - > Button
 - > footer
 - ✓ Navbar
 - ⚙️ Navbar.jsx
 - # Navbar.module...
 - > hooks
 - > layouts
 - ✓ pages
 - ✓ Cursos
 - ⚙️ Cursos.jsx
 - ✓ Home
 - ⚙️ Home.jsx

Footer.css ⚙️ Footer.jsx # App.css ⚙️ App.jsx

El Escondite Animal > src > pages > Home > ⚙️ Home.jsx > 🏠 Home

```
1 import React from 'react';
2
3 export default function Home() {
4   return <h1>Welcome to Home...</h1>;
5 }
```

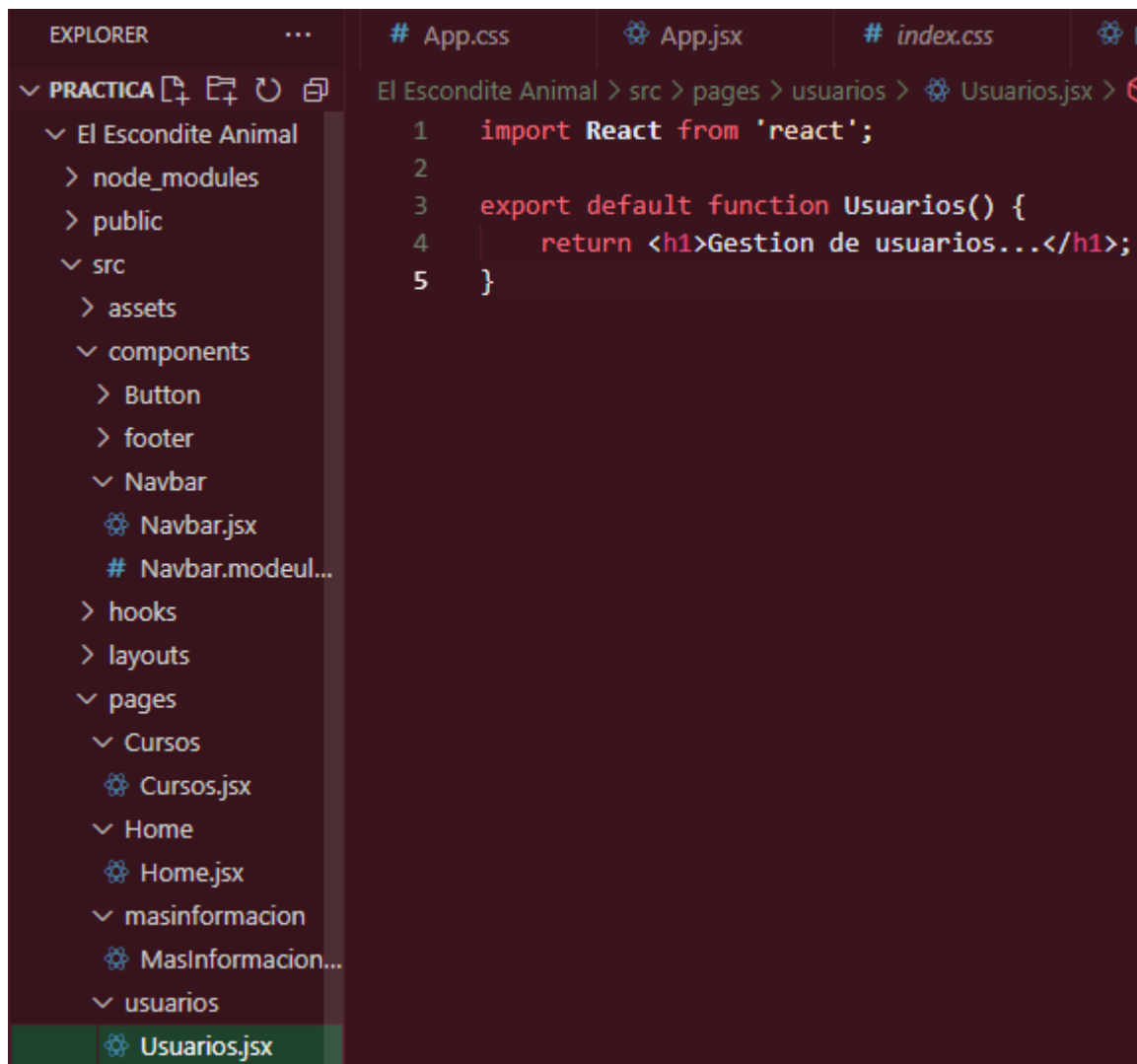
EXPLORER ...

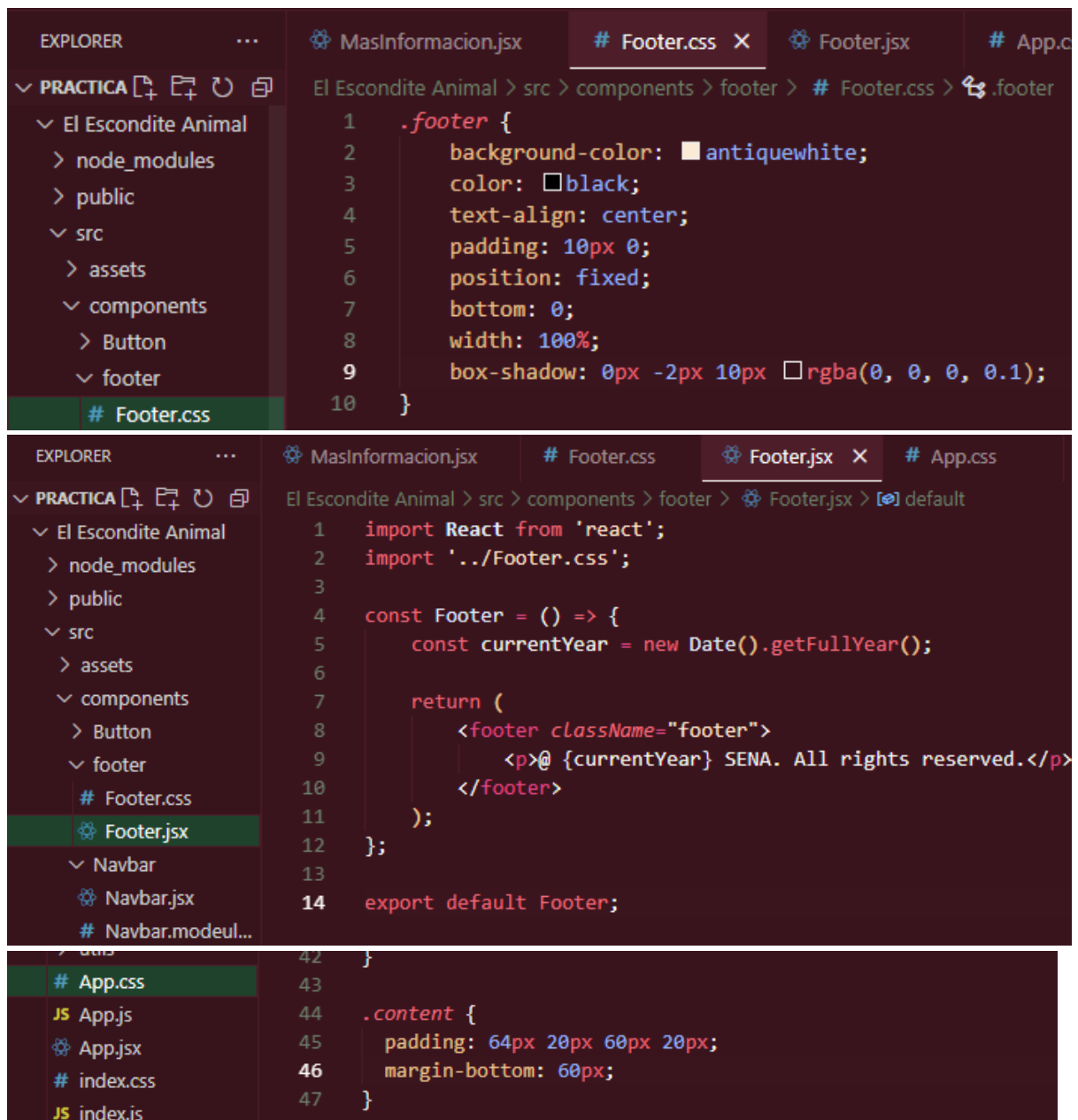
- ✓ PRACTICA [📁] [📁] [🔄] [📄]
- ✓ El Escondite Animal
 - > node_modules
 - > public
 - ✓ src
 - > assets
 - ✓ components
 - > Button
 - > footer
 - ✓ Navbar
 - ⚙️ Navbar.jsx
 - # Navbar.module...
 - > hooks
 - > layouts
 - ✓ pages
 - ✓ Cursos
 - ⚙️ Cursos.jsx

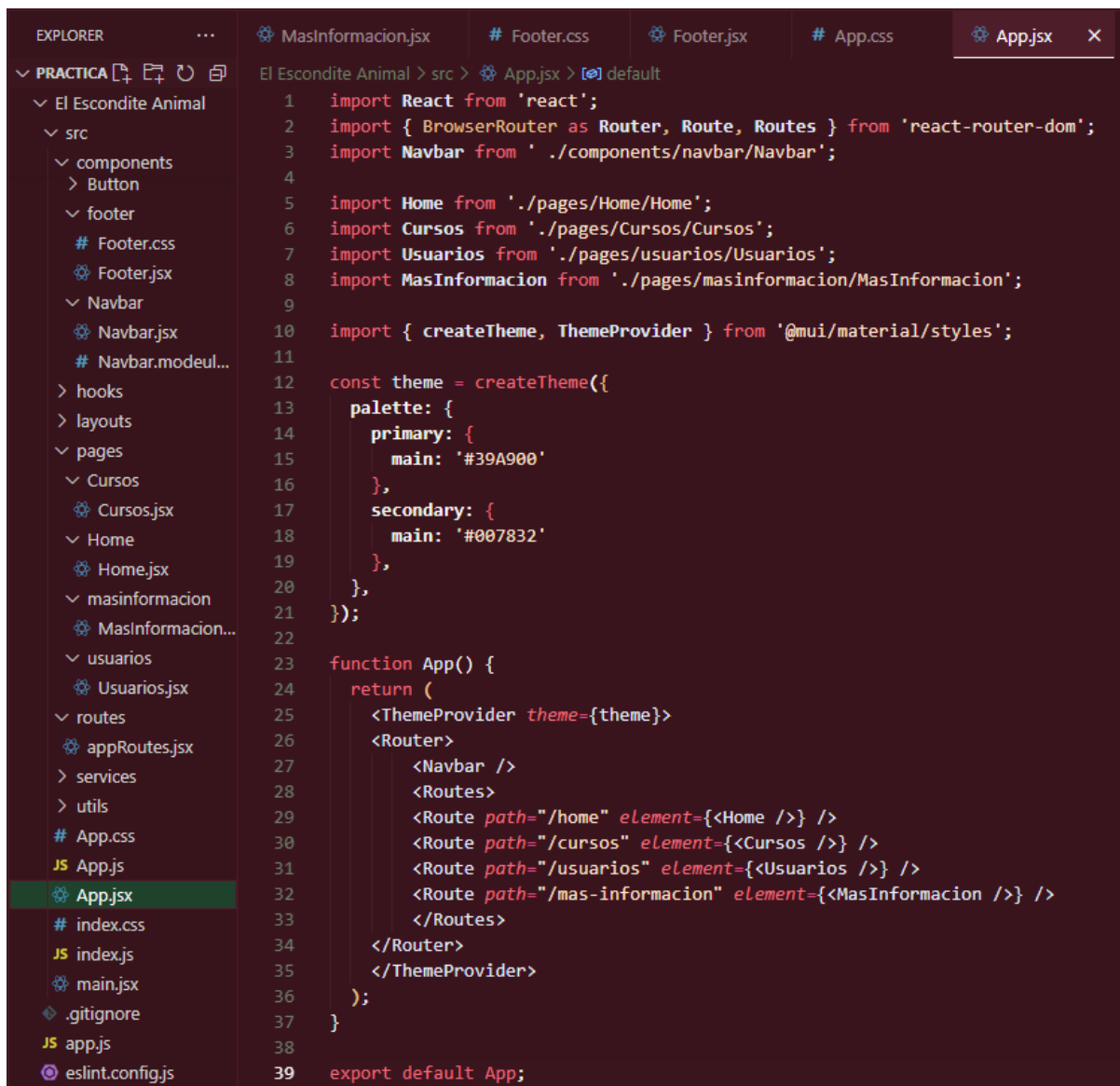
⚙️ Footer.jsx # App.css ⚙️ App.jsx

El Escondite Animal > src > pages > Cursos > ⚙️ Cursos.jsx > 🏠 Cursos

```
1 import React from 'react';
2
3 export default function Cursos() {
4   return <h1>Gestión de Cursos...</h1>;
5 }
```

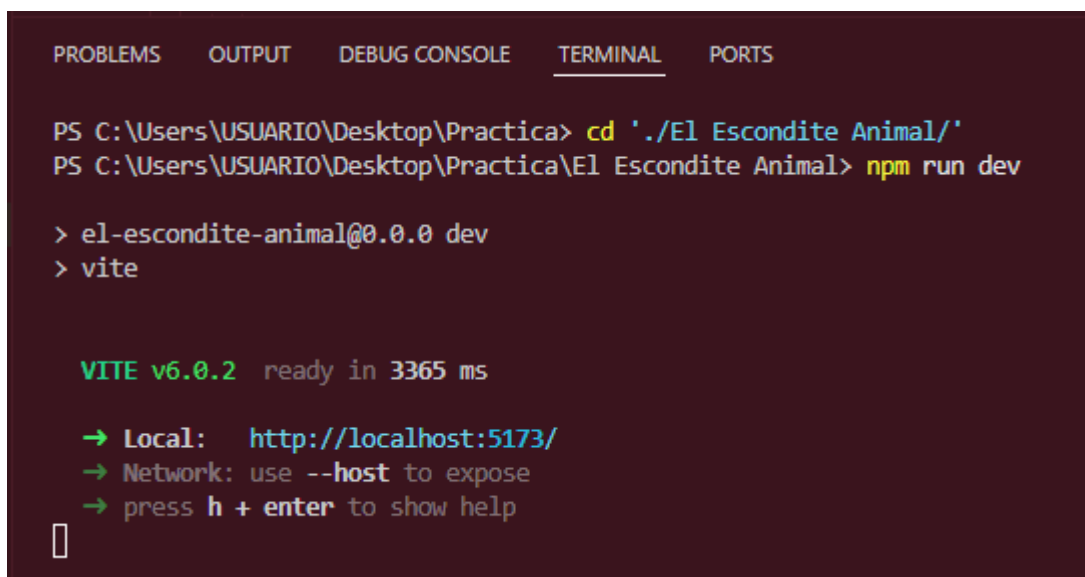




The image shows a VS Code editor window with the Explorer sidebar on the left and the App.jsx file open in the main editor. The Explorer sidebar shows a project structure for 'El Escondite Animal' with folders like components, footer, navbar, hooks, layouts, pages, cursors, home, masinformacion, usuarios, routes, services, and utils. The App.jsx file is selected and its content is displayed in the main editor. The code defines a theme, a Router, and a ThemeProvider, and exports the App function.

```
1 import React from 'react';
2 import { BrowserRouter as Router, Route, Routes } from 'react-router-dom';
3 import Navbar from './components/navbar/Navbar';
4
5 import Home from './pages/Home/Home';
6 import Cursos from './pages/Cursos/Cursos';
7 import Usuarios from './pages/usuarios/Usuarios';
8 import MasInformacion from './pages/masinformacion/MasInformacion';
9
10 import { createTheme, ThemeProvider } from '@mui/material/styles';
11
12 const theme = createTheme({
13   palette: {
14     primary: {
15       main: '#39A900'
16     },
17     secondary: {
18       main: '#007832'
19     },
20   },
21 });
22
23 function App() {
24   return (
25     <ThemeProvider theme={theme}>
26       <Router>
27         <Navbar />
28         <Routes>
29           <Route path="/home" element={<Home />} />
30           <Route path="/cursos" element={<Cursos />} />
31           <Route path="/usuarios" element={<Usuarios />} />
32           <Route path="/mas-informacion" element={<MasInformacion />} />
33         </Routes>
34       </Router>
35     </ThemeProvider>
36   );
37 }
38
39 export default App;
```

Ejecutamos el proyecto en la terminal:



The image shows a terminal window with the following commands and output:

```
PS C:\Users\USUARIO\Desktop\Practica> cd './El Escondite Animal/'
PS C:\Users\USUARIO\Desktop\Practica\El Escondite Animal> npm run dev

> el-escondite-animal@0.0.0 dev
> vite

VITE v6.0.2 ready in 3365 ms

→ Local: http://localhost:5173/
→ Network: use --host to expose
→ press h + enter to show help
```

Welcome to Home...

(Versión no responsiva)

Implementamos el codigo:

EXPLORER... Home.jsx Cursos.jsx Usuarios.jsx appRoutes.jsx NavbarRoutes.jsx X

▼ PRACTICA

▼ El Escondite Animal

> node_modules

> public

▼ src

> assets

▼ components

> Button

▼ footer

Footer.css

Footer.jsx

▼ Navbar

Navbar.jsx

Navbar.module...

> hooks

> layouts

▼ pages

▼ Cursos

Cursos.jsx

▼ Home

Home.jsx

▼ masinformacion

MasInformacion...

▼ usuarios

Usuarios.jsx

▼ routes

appRoutes.jsx

NavbarRoutes.jsx

El Escondite Animal > src > routes > NavbarRoutes.jsx > [e] default

1 import React from 'react';

2 import { Route, Routes } from 'react-router-dom';

3

4 import Home from '../pages/Home/Home';

5 import Cursos from '../pages/Cursos/Cursos';

6 import Usuarios from '../pages/usuarios/Usuarios';

7 import MasInformacion from '../pages/masinformacion/MasInformacion';

8

9 const NavbarRoutes = () => {

10 return (

11 <Routes>

12 <Route path="/" element={<Home />} />

13 <Route path="/home" element={<Home />} />

14 <Route path="/cursos" element={<Cursos />} />

15 <Route path="/usuarios" element={<Usuarios />} />

16 <Route path="/masinformacion" element={<MasInformacion />} />

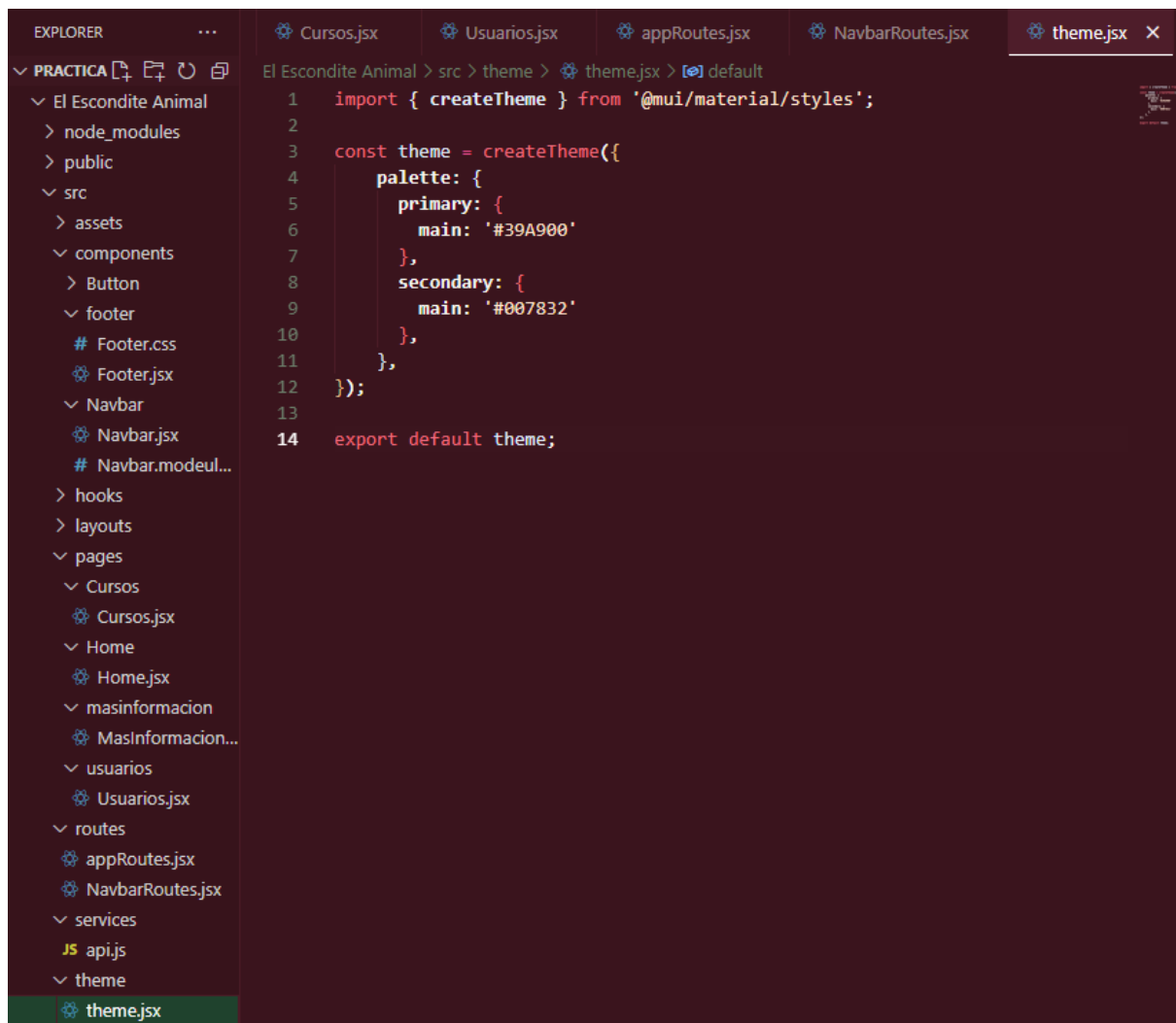
17 </Routes>

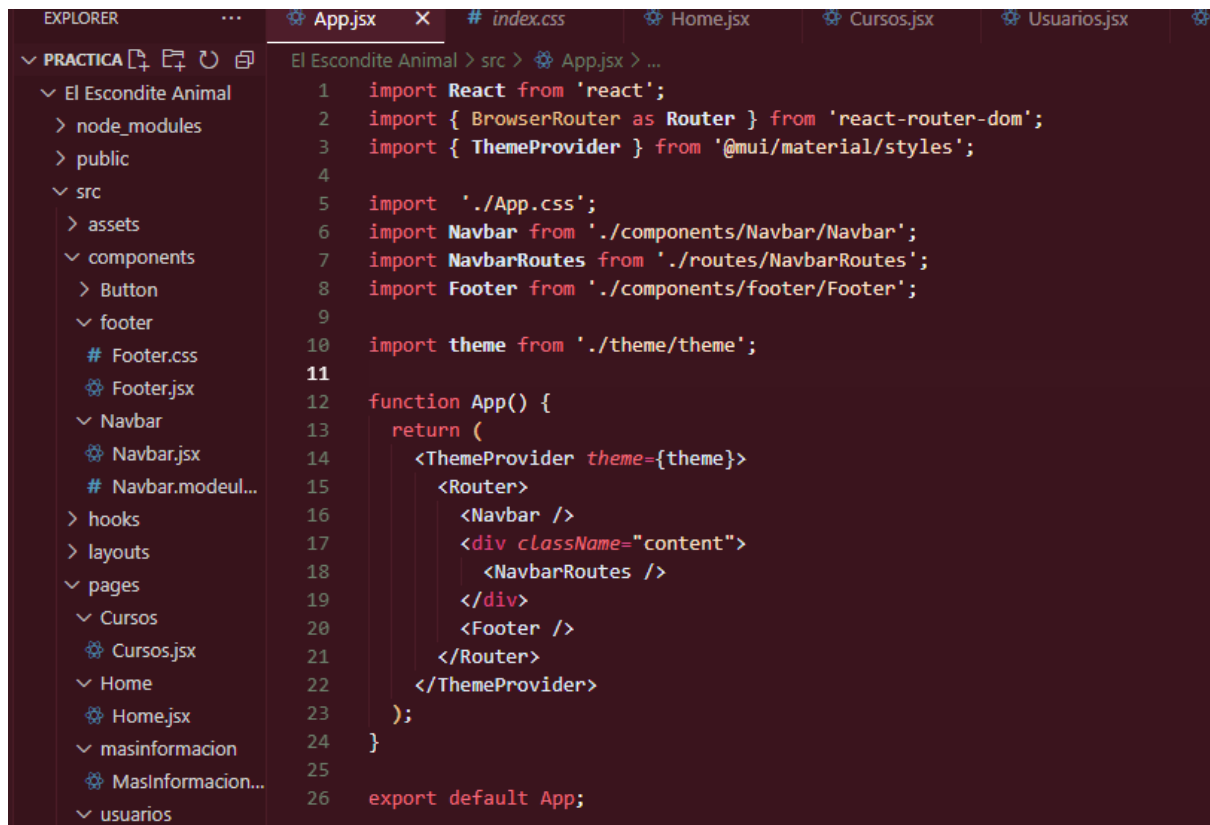
18);

19 };

20

21 export default NavbarRoutes;





The image shows a VS Code editor interface. On the left, the Explorer sidebar displays a project structure for 'El Escondite Animal'. The main editor area shows the content of 'App.js'.

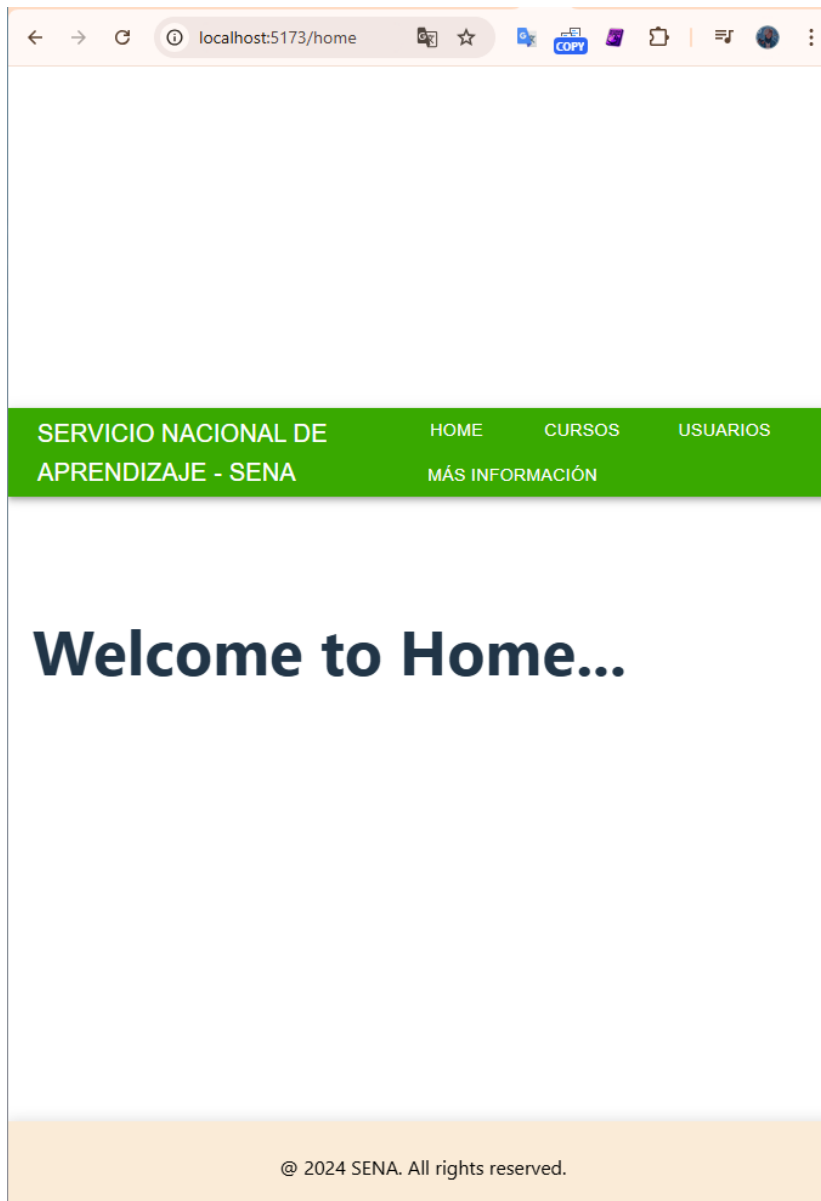
Project Structure (Explorer):

- PRACTICA
 - El Escondite Animal
 - node_modules
 - public
 - src
 - assets
 - components
 - Button
 - footer
 - Footer.css
 - Footer.jsx
 - Navbar
 - Navbar.jsx
 - Navbar.module.css
 - hooks
 - layouts
 - pages
 - Cursos
 - Cursos.jsx
 - Home
 - Home.jsx
 - masinformacion
 - MasInformacion.jsx
 - usuarios

App.js Content:

```
1  import React from 'react';
2  import { BrowserRouter as Router } from 'react-router-dom';
3  import { ThemeProvider } from '@mui/material/styles';
4
5  import './App.css';
6  import Navbar from './components/Navbar/Navbar';
7  import NavbarRoutes from './routes/NavbarRoutes';
8  import Footer from './components/footer/Footer';
9
10 import theme from './theme/theme';
11
12 function App() {
13   return (
14     <ThemeProvider theme={theme}>
15       <Router>
16         <Navbar />
17         <div className="content">
18           <NavbarRoutes />
19         </div>
20         <Footer />
21       </Router>
22     </ThemeProvider>
23   );
24 }
25
26 export default App;
```

Ejecutamos el código:



Podemos ver en las rutas como se dirige a la dirección de cada sección.

Hacemos las modificaciones en el código:

EXPLORER... Home.jsx Cursos.jsx Usuarios.jsx appRoutes.jsx NavbarRoutes.jsx X

PRACTICA

El Escondite Animal

node_modules

public

src

assets

fonts

images

logoSena.png

styles

react.svg

components

Button

footer

Navbar

LinkBehavior.jsx

Navbar.jsx

Navbar.moduleul...

hooks

layouts

El Escondite Animal > src > routes > NavbarRoutes.jsx > default

1 import React from 'react';

2 import { Route, Routes } from 'react-router-dom';

3

4 import Home from '../pages/Home/Home';

5 import Cursos from '../pages/Cursos/Cursos';

6 import Usuarios from '../pages/usuarios/Usuarios';

7 import MasInformacion from '../pages/masinformacion/MasInformacion';

8

9 const NavbarRoutes = () => {

10 return (

11 <Routes>

12 <Route path="/" element={<Home />} />

13 <Route path="/home" element={<Home />} />

14 <Route path="/cursos" element={<Cursos />} />

15 <Route path="/usuarios" element={<Usuarios />} />

16 <Route path="/masinformacion" element={<MasInformacion />} />

17 </Routes>

18);

19 };

20

21 export default NavbarRoutes;

EXPLORER

El Escondite Animal > src > theme > theme.jsx > theme > components > MuiButton > styleOverri

El Escondite Animal

src

assets

styles

react.svg

components

Button

footer

Navbar

LinkBehavior.jsx

Navbar.jsx

Navbar.module...

hooks

layouts

pages

Cursos

Cursos.jsx

Home

Home.jsx

masinformacion

MasInformacion...

usuarios

Usuarios.jsx

routes

appRoutes.jsx

NavbarRoutes.jsx

services

api.js

theme

theme.jsx

utils

helpers.js

textUtils.js

validators.js

App.css

App.js

App.jsx

index.css

index.js

main.jsx

.gitignore

app.js

eslint.config.js

index.html

Cursos.jsx

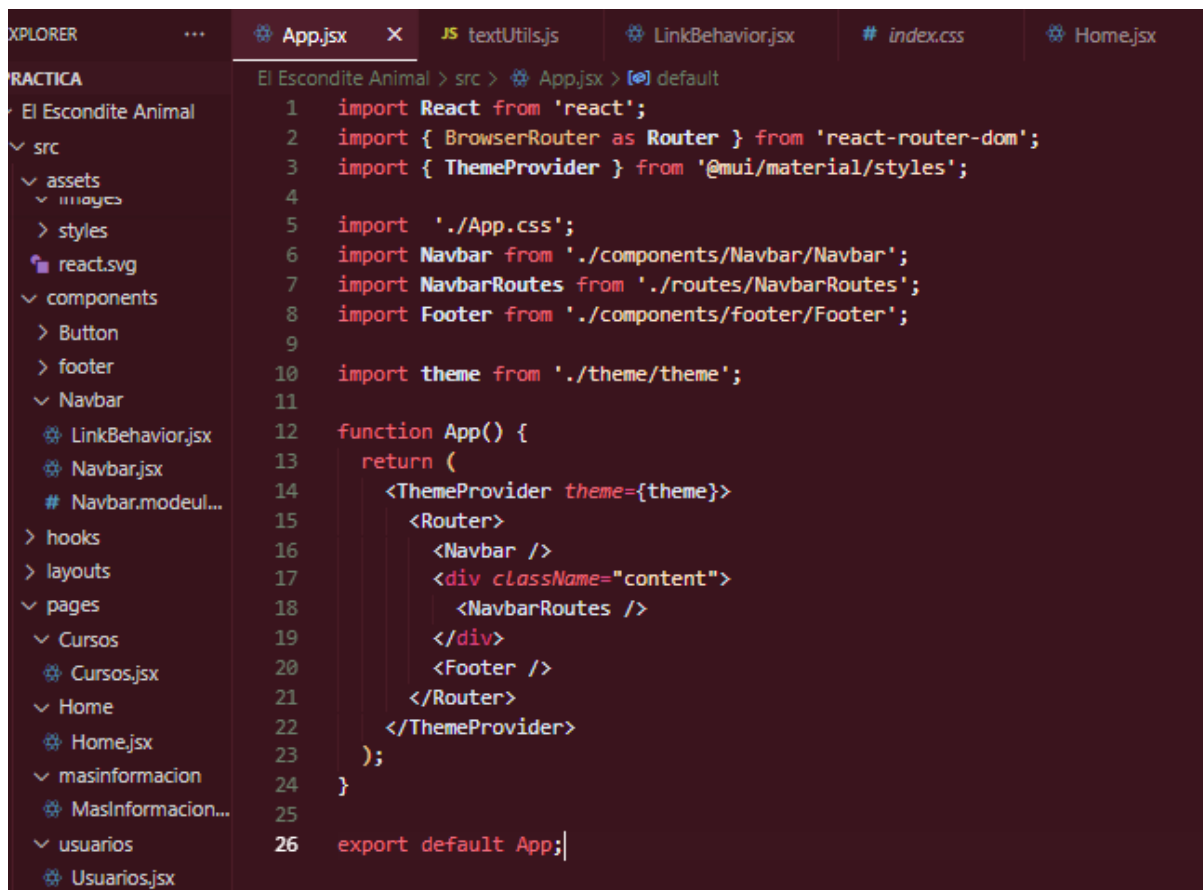
Usuarios.jsx

appRoutes.jsx

NavbarRoutes.jsx

theme.jsx

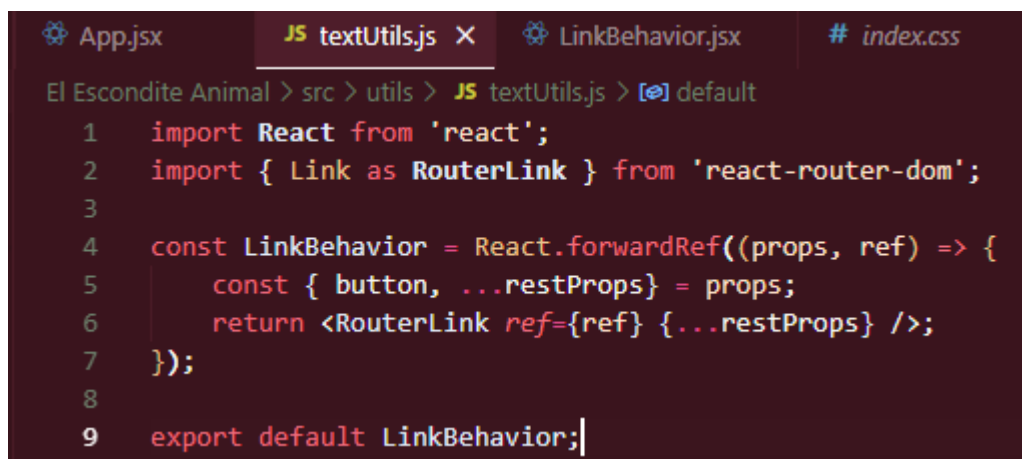
```
1 import { createTheme } from '@mui/material/styles';
2
3 const theme = createTheme({
4   palette: {
5     primary: {
6       main: '#39A900',
7     },
8     secondary: {
9       main: '#007832',
10    },
11    error: {
12      main: '#F44336',
13    },
14    background: {
15      default: '#FFFFFF',
16    },
17  },
18  typography: {
19    fontFamily: 'Roboto, sans-serif',
20    h1: {
21      fontSize: '2rem',
22    },
23    body1: {
24      fontSize: '1rem',
25    },
26  },
27  spacing: 8,
28  shape: {
29    borderRadius: 4,
30  },
31  breakpoints: {
32    values: {
33      xs: 0,
34      sm: 600,
35      md: 960,
36      lg: 1280,
37      xl: 1920,
38    },
39  },
40  components: {
41    MuiButton: {
42      styleOverrides: {
43        root: {
44          textTransform: 'none',
45        },
46      },
47    },
48  },
49 });
50
51 export default theme;
```



The screenshot shows the VS Code editor with the 'App.jsx' file open. The file explorer on the left shows the project structure, including 'src', 'assets', 'styles', 'react.svg', 'components', 'hooks', 'layouts', 'pages', 'Cursos', 'Home', 'masinformacion', 'MasInformacion...', 'usuarios', and 'Usuarios.jsx'. The code in 'App.jsx' is as follows:

```
1 import React from 'react';
2 import { BrowserRouter as Router } from 'react-router-dom';
3 import { ThemeProvider } from '@mui/material/styles';
4
5 import './App.css';
6 import Navbar from './components/Navbar/Navbar';
7 import NavbarRoutes from './routes/NavbarRoutes';
8 import Footer from './components/footer/Footer';
9
10 import theme from './theme/theme';
11
12 function App() {
13   return (
14     <ThemeProvider theme={theme}>
15       <Router>
16         <Navbar />
17         <div className="content">
18           <NavbarRoutes />
19         </div>
20         <Footer />
21       </Router>
22     </ThemeProvider>
23   );
24 }
25
26 export default App;
```

Creamos el archivo textUtils.js y escribimos el código:



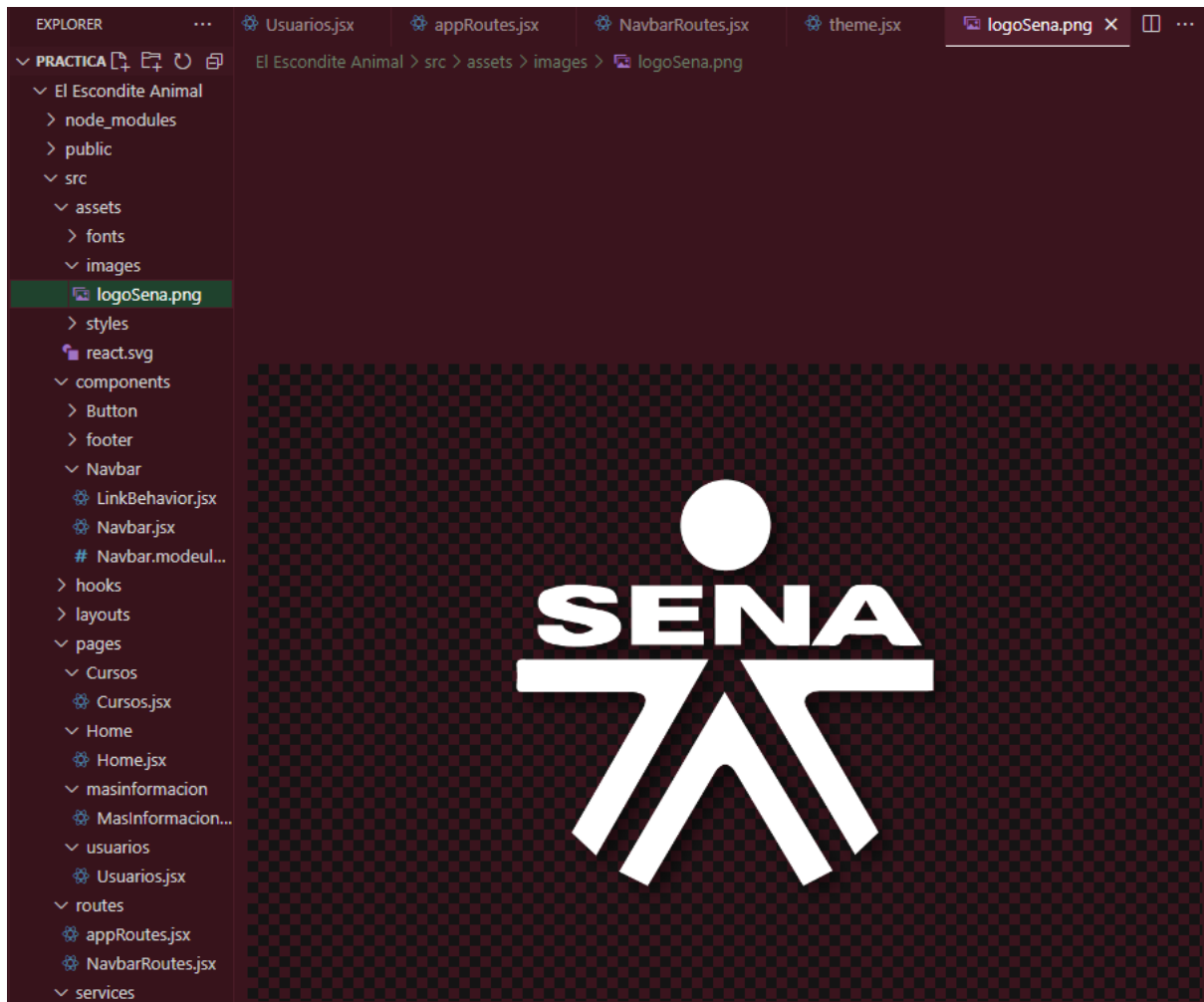
The screenshot shows the VS Code editor with the 'textUtils.js' file open. The file explorer on the left shows the project structure, including 'src', 'utils', and 'textUtils.js'. The code in 'textUtils.js' is as follows:

```
1 import React from 'react';
2 import { Link as RouterLink } from 'react-router-dom';
3
4 const LinkBehavior = React.forwardRef((props, ref) => {
5   const { button, ...restProps } = props;
6   return <RouterLink ref={ref} {...restProps} />;
7 });
8
9 export default LinkBehavior;
```

Ahora creamos el de LinkBehavior.jsx:

```
App.jsx JS textUtils.js LinkBehavior.jsx X # index.css
El Escondite Animal > src > components > Navbar > LinkBehavior.jsx > ...
1 import React from 'react';
2 import { Link as RouterLink } from 'react-router-dom';
3
4 const LinkBehavior = React.forwardRef((props, ref) => {
5   const { button, ...restProps } = props;
6   return <RouterLink ref={ref} {...restProps} />;
7 });
8
9 export default LinkBehavior;
```

Ahora agregamos la imagen del logo del SENA:



```
EXPLORER  ...  @ Navbar.jsx  # Navbar.module.css  @ Button.jsx  # Button.module.css  useAuth.js  MainLayout.jsx  MasInform...

v PRACTICA  E Escondite Animal
  > node_modules
  > public
  v src
    v assets
      > fonts
      v images
        logoSena.png
      > styles
      react.svg
    v components
      > Button
      > footer
      v Navbar
        @ LinkBehavior.jsx
        @ Navbar.jsx
        # Navbar.module...
      > hooks
      > layouts
      > pages
      v Cursos
        @ Cursos.jsx
      v Home
        @ Home.jsx
      v masinformacion...
        @ MasInformacion...
      v usuarios
        @ Usuarios.jsx
      v routes
        @ appRoutes.jsx
        @ NavbarRoutes.jsx
      v services
      .api.js
      v theme
        @ theme.jsx
      v utils
        .helpers.js
        .textUtils.js
        .validators.js
      # App.css
      .App.js
      @ App.jsx
      # index.css
      .index.js
      @ main.jsx
      .gitignore
      .app.js
      @ eslint.config.js
      index.html
      {} package-lock.json
      {} package.json
      @ README.md
      .vite.config.js

1 import React, { useState } from 'react';
2 import AppBar from '@mui/material/AppBar';
3 import Toolbar from '@mui/material/Toolbar';
4 import Typography from '@mui/material/Typography';
5 import Button from '@mui/material/Button';
6 import IconButton from '@mui/material/IconButton';
7 import Box from '@mui/material/Box';
8 import Drawer from '@mui/material/Drawer';
9 import List from '@mui/material/List';
10 import ListItem from '@mui/material/ListItem';
11 import ListItemText from '@mui/material/ListItemText';
12 import MenuIcon from '@mui/icons-material/Menu';
13 import { makeStyles } from '@mui/styles';
14 import LinkBehavior from './LinkBehavior';
15 import logoSena from '../../../../assets/images/logoSena.png';
16
17 const useStyles = makeStyles((theme) => ({
18   title: {
19     flexGrow: 1,
20   },
21   link: {
22     color: 'white',
23     textDecoration: 'none',
24     margin: theme.spacing(2),
25   },
26   toolbar: {
27     display: 'flex',
28     justifyContent: 'space-between',
29   },
30 }));
31
32 export default function Navbar() {
33   const classes = useStyles();
34   const [drawerOpen, setDrawerOpen] = useState(false);
35
36   const handleDrawerToggle = () => {
37     setDrawerOpen(!drawerOpen);
38   };
39
40   const normalizeText = (text) => text.toLowerCase().replace(/ /g, '');
41
42   const drawer = (
43     <div className={classes.drawer}>
44       <List>
45         {[ 'Home', 'Cursos', 'Usuarios', 'Más información' ].map((text) => (
46           <ListItem button component={LinkBehavior} to={`/${normalizeText(text)}`} key={text}>
47             <ListItemText primary={text} />
48           </ListItem>
49         ))}
50       </List>
51     </div>
52   );
53
54   return (
55     <>
56       <AppBar position="fixed">
57         <Toolbar className={classes.toolbar}>
58           <img src={logoSena} alt="SENA Logo" style={{ height: 50, marginRight: 16 }} className={classes.logo} />
59           <Typography variant="h6" className={classes.title}>
60             SERVICIO NACIONAL DE APRENDIZAJE - SENA
61           </Typography>
62           <IconButton
63             edge="start"
64             color="inherit"
65             aria-label="menu"
66             onClick={handleDrawerToggle}
67             sx={{ display: { xs: 'block', md: 'none' } }}
68           >
69             <MenuIcon />
70           </IconButton>
71           <Box sx={{ display: { xs: 'none', md: 'block' } }}>
72             {[ 'Home', 'Cursos', 'Usuarios', 'Más información' ].map((text) => (
73               <Button color="inherit" component={LinkBehavior} to={`/${normalizeText(text)}`} key={text}>
74                 {text}
75               </Button>
76             ))}
77           </Box>
78         </Toolbar>
79       </AppBar>
80       <Drawer anchor="left" open={drawerOpen} onClose={handleDrawerToggle}>
81         {drawer}
82       </Drawer>
83     </>
84   );
85 }
86
```

Se realizaron cambios en las importaciones faltantes de componentes de Material-UI (IconButton, Box, Drawer, entre otros) porque causaban errores al intentar usarlos sin estar definidos. Se agregó la función normalizeText ya que era importante para generar rutas válidas dinámicamente desde los textos del menú. Finalmente, se añadieron las importaciones de LinkBehavior y logoSena, ya que eran fundamentales para enlazar las rutas y mostrar correctamente el logotipo en el Navbar.

Resultado final:



Welcome to Home...

