



**UNIVERSIDAD POLITECNICA  
DE PACHUCA**

## **Práctica 4**

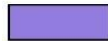
**Carrera: Ingeniería en Tecnologías de la  
información e innovación**

**Materia: Aplicaciones Web**

**Catedrático: Diana Xochilt Ruano Vargaz**

**Alumno: Santiago Rivera Tetetla**

**Fecha: 25/01/2026**



## Sección; Crear el Proyecto de angular



### Hello, Practica01

Congratulations! Your app is running. 🎉

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## Sección de Instalacion de Bootstrap

```
PS C:\> ng serve
server.js | server | 1.81 kB
polyfills.server.js | polyfills.server | 243 bytes

Application bundle generation complete. [2.250 seconds] - 2026-01-22T19:33:40.994Z

Watch mode enabled. Watching for file changes...
NOTE: Raw file sizes do not reflect development server per-request transformations.
  → local: http://localhost:4200/
  → press h + enter to show help

npm install bootstrap
h

Shortcuts
press r + enter to force reload browser
press u + enter to show server url
press o + enter to open in browser
press c + enter to clear console
press q + enter to quit

PS C:\Users\Alex\B\l\OneDrive\Documentos\Github\Practicas_web_AlejandroVargasIazca\practica04-angular> npm install bootstrap

added 2 packages, and audited 495 packages in 4s

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

found 0 vulnerabilities
PS C:\Users\Alex\B\l\OneDrive\Documentos\Github\Practicas_web_AlejandroVargasIazca\practica04-angular>
```

```
PS C:\Users\Alejo\OneDrive\Documents\GitHub\Practicas_Web_AlejandroVargasIazca\practica04-angular> ng serve
Application bundle generation complete. [1.670 seconds] - 2020-01-27T10:55:11.313Z

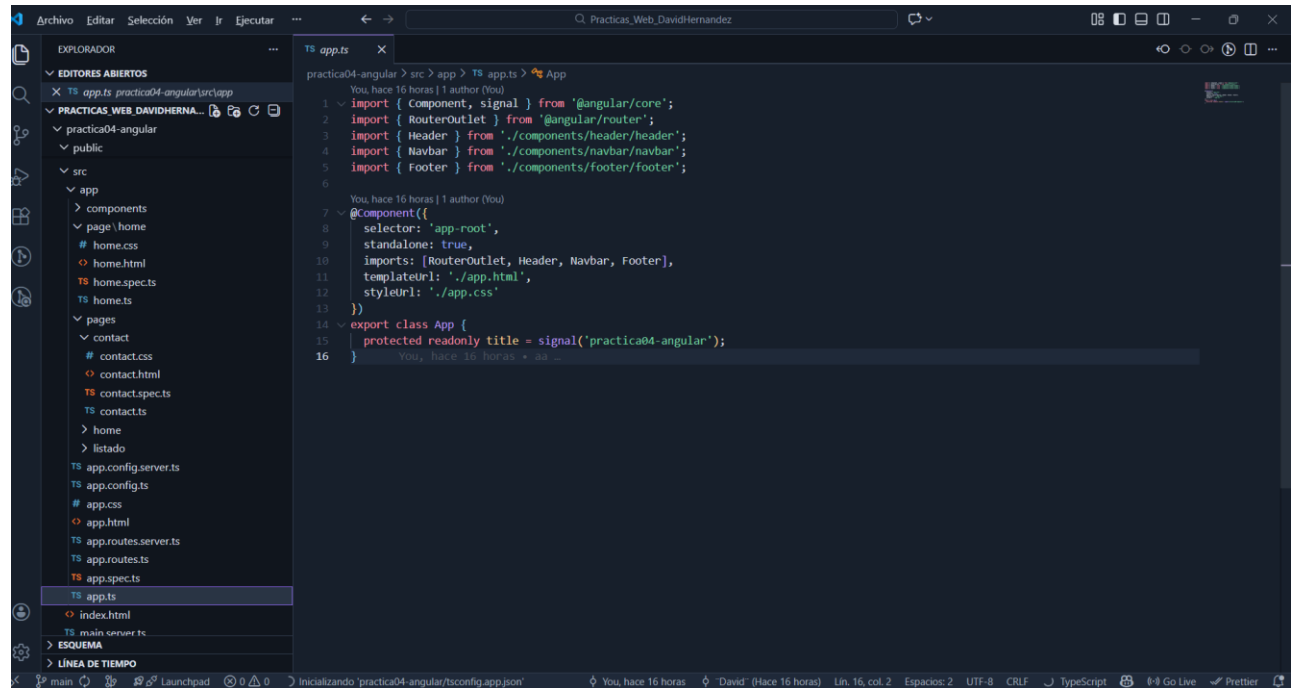
Watch mode enabled. Watching for file changes...
NOTE: Raw file sizes do not reflect development server per-request transformations.
1:55:11 PM [vite] [client] Re-optimizing dependencies because lockfile has changed
1:55:11 PM [vite] [server] Re-optimizing dependencies because lockfile has changed (x2)
1:55:11 PM [vite] [server] Re-optimizing dependencies because lockfile has changed (x2)
  => Local: http://localhost:4200/
  => press h + enter to show help
1:55:11 PM [vite] [server] Re-optimizing dependencies because lockfile has changed (x2)
  => Local: http://localhost:4200/
  => press h + enter to show help
1:55:11 PM [vite] [server] Re-optimizing dependencies because lockfile has changed (x2)
  => Local: http://localhost:4200/
  => press h + enter to show help
1:55:11 PM [vite] [server] Re-optimizing dependencies because lockfile has changed (x2)
  => Local: http://localhost:4200/
  => press h + enter to show help

PS C:\Users\Alejo\OneDrive\Documents\GitHub\Practicas_Web_AlejandroVargasIazca\practica04-angular> ng generate component components/header
CREATE src/app/components/header/header.spec.ts (554 bytes)
CREATE src/app/components/header/header.ts (197 bytes)
CREATE src/app/components/header/header.css (0 bytes)
CREATE src/app/components/header/header.html (22 bytes)
PS C:\Users\Alejo\OneDrive\Documents\GitHub\Practicas_Web_AlejandroVargasIazca\practica04-angular> ng generate component components/navbar
CREATE src/app/components/navbar/navbar.spec.ts (554 bytes)
CREATE src/app/components/navbar/navbar.ts (197 bytes)
CREATE src/app/components/navbar/navbar.css (0 bytes)
CREATE src/app/components/navbar/navbar.html (22 bytes)
PS C:\Users\Alejo\OneDrive\Documents\GitHub\Practicas_Web_AlejandroVargasIazca\practica04-angular> ng generate component components/footer
CREATE src/app/components/footer/footer.spec.ts (554 bytes)
CREATE src/app/components/footer/footer.ts (197 bytes)
CREATE src/app/components/footer/footer.css (0 bytes)
CREATE src/app/components/footer/footer.html (22 bytes)
PS C:\Users\Alejo\OneDrive\Documents\GitHub\Practicas_Web_AlejandroVargasIazca\practica04-angular> ng serve
error: schema validation failed with the following errors:
  data path "/styles/0" must be object.
  data path "/styles/0" must match pattern "\.?(css|scss|sass|less)$".
  data path "/styles/0" must match exactly one schema in oneOf.
```

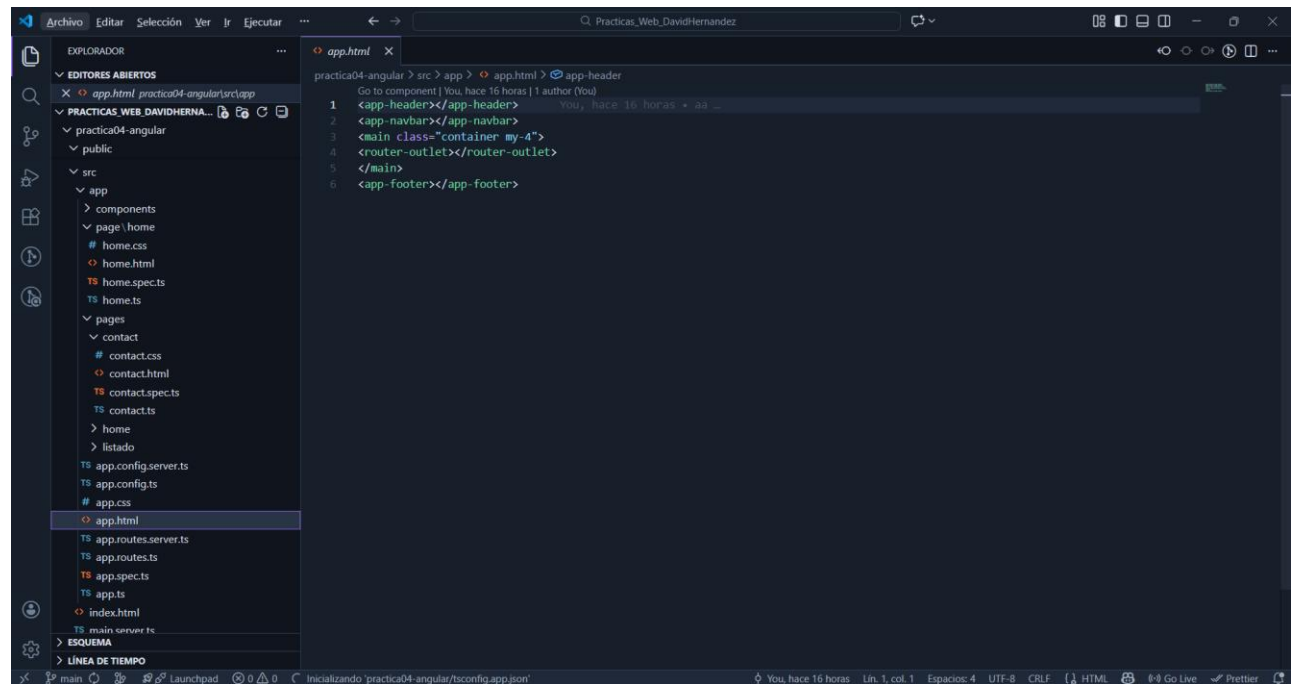
## Crea las Paginas del sitio

```
practica04-angular > src > app > page > home > home.html > <section>.container</section> > <div>.row > <div>.col-md-6 mb-3 > <div>.card shadow > <img>.card-img-top >
1 <section class="container mt-4">
2
3
4 <div class="row">
5
6 <div class="col-md-6 mb-3">
7 <div class="card shadow">
8 
9 <div class="card-body">
10 <p class="card-text">Mexico en su maxima Expresion.</p>
11 </div>
12 </div>
13
14 <div class="col-md-6 mb-3">
15 <div class="card shadow">
16 
17 <div class="card-body">
18 <p class="card-text">La ciudad de Mexico iluminada.</p>
19 </div>
20 </div>
21 </div>
22 </div>
23 </section>
```

## SECCIÓN F: Armar el layout principal (práctica anterior)

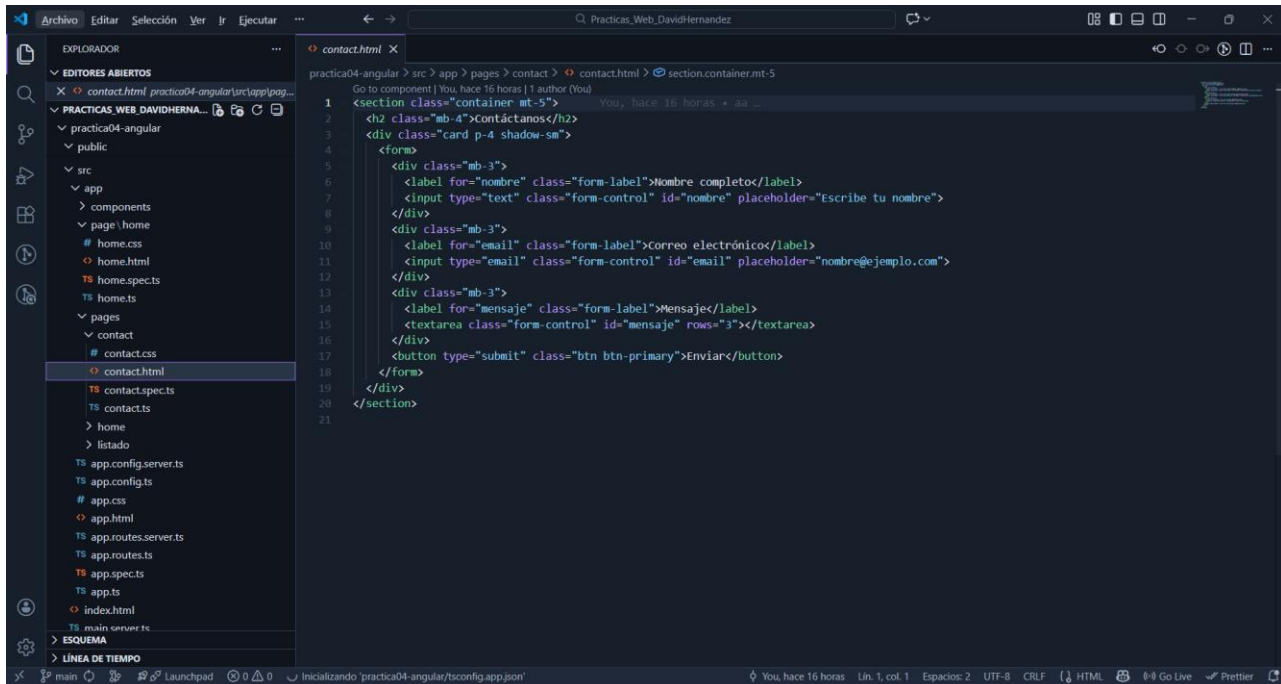


```
practica04-angular > src > app > Ts app.ts > App
You, hace 16 horas | 1 author (You)
1 import { Component, signal } from '@angular/core';
2 import { RouterOutlet } from '@angular/router';
3 import { Header } from '../components/header/header';
4 import { Navbar } from '../components/navbar/navbar';
5 import { Footer } from '../components/footer/footer';
6
7 @Component({
8   selector: 'app-root',
9   standalone: true,
10  imports: [RouterOutlet, Header, Navbar, Footer],
11  templateUrl: './app.html',
12  styleUrls: ['./app.css']
13 })
14 export class App {
15   protected readonly title = signal('practica04-angular');
16 }
```



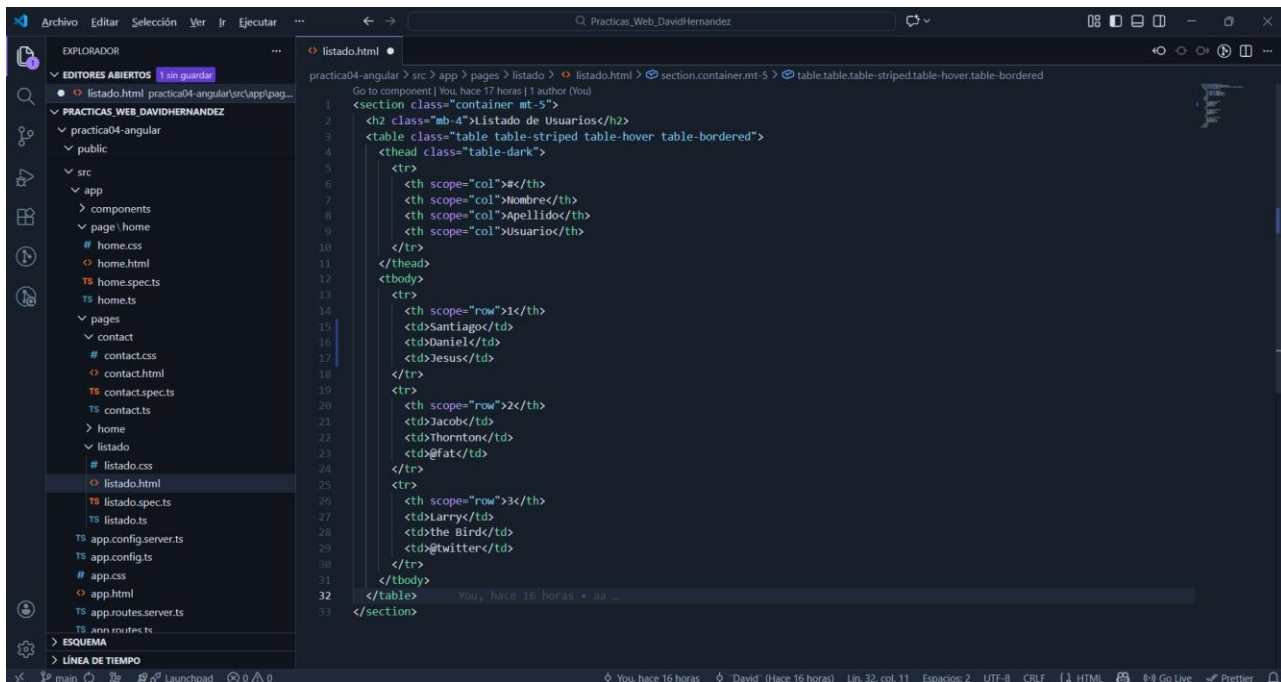
```
practica04-angular > src > app > app.html > app-header
Go to component | You, hace 16 horas | 1 author (You)
1 <app-header></app-header>
2 <app-navbar></app-navbar>
3 <main class="container my-4">
4 <router-outlet></router-outlet>
5 </main>
6 <app-footer></app-footer>
```

## SECCIÓN G: Crear páginas adicionales



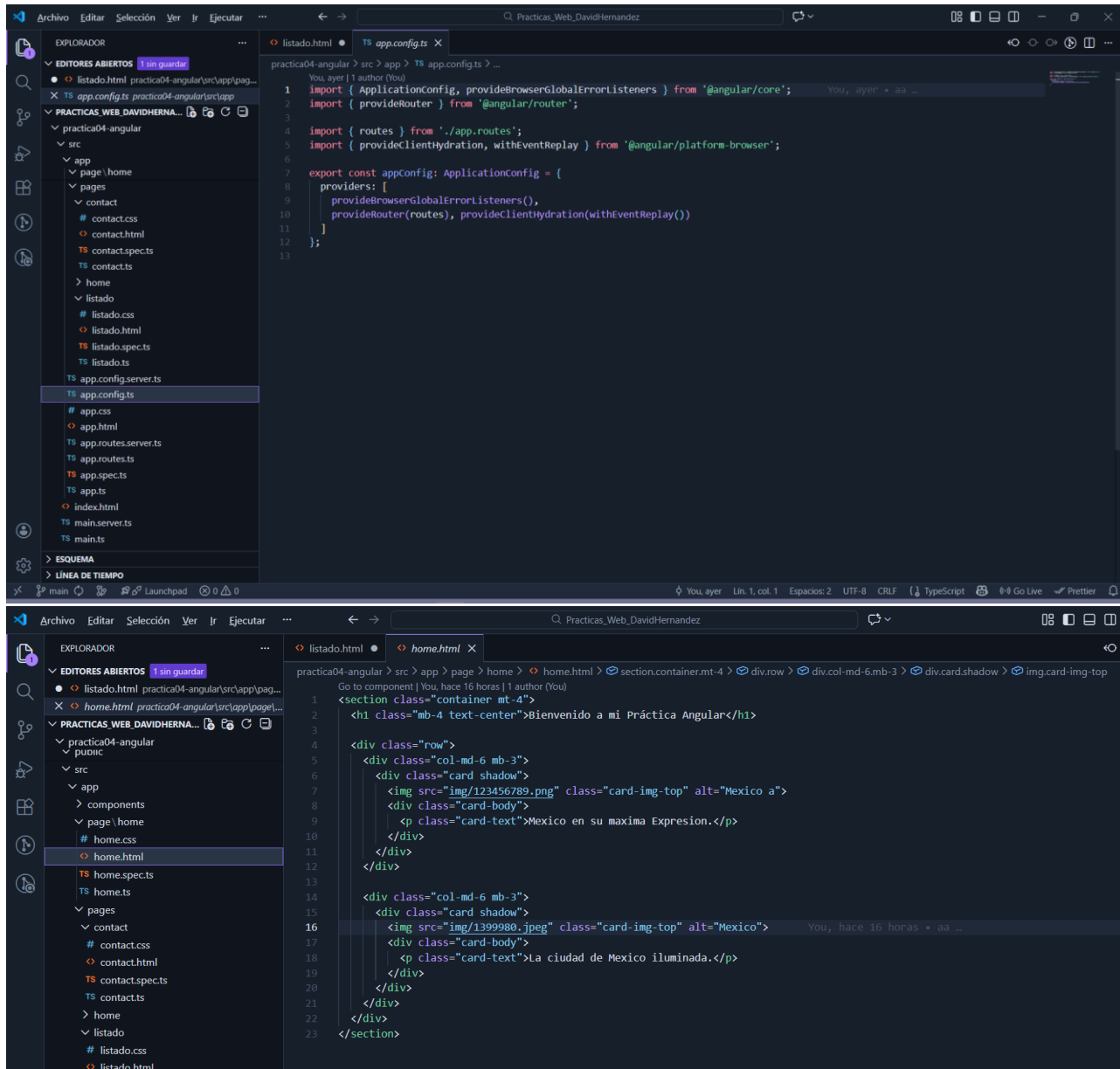
```
practica04-angular > src > app > pages > contact > contact.html > section.container.mt-5
Go to component | You, hace 16 horas | 1 author (You)
1 <section class="container mt-5">
2   <h2 class="mb-4">Contáctanos</h2>
3   <div class="card p-4 shadow-sm">
4     <form>
5       <div class="mb-3">
6         <label for="nombre" class="form-label">Nombre completo</label>
7         <input type="text" class="form-control" id="nombre" placeholder="Escribe tu nombre">
8       </div>
9       <div class="mb-3">
10        <label for="email" class="form-label">Correo electrónico</label>
11        <input type="email" class="form-control" id="email" placeholder="nombre@ejemplo.com">
12      </div>
13      <div class="mb-3">
14        <label for="mensaje" class="form-label">Mensaje</label>
15        <textarea class="form-control" id="mensaje" rows="3"></textarea>
16      </div>
17      <button type="submit" class="btn btn-primary">Enviar</button>
18    </form>
19  </div>
20 </section>
21
```

## Página 2: Tabla (Listado)



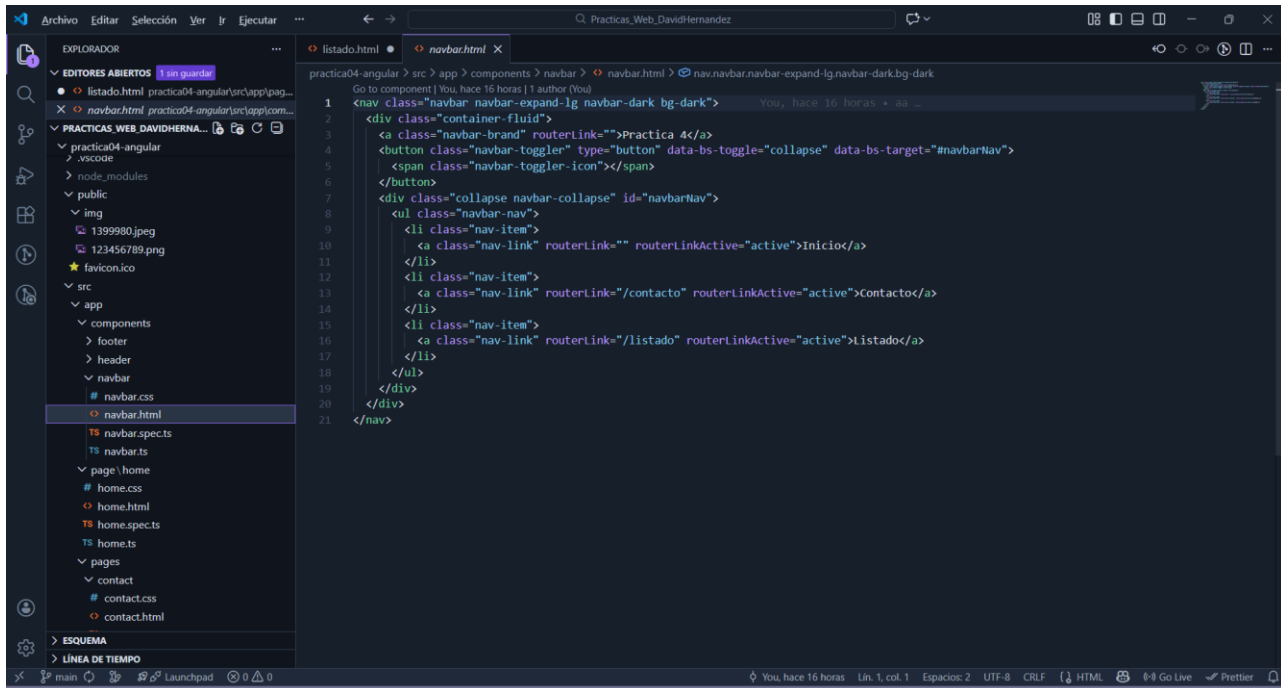
```
practica04-angular > src > app > pages > listado > listado.html > section.container.mt-5 > table.table.table-striped.table-hover.table-bordered
Go to component | You, hace 17 horas | 1 author (You)
1 <section class="container mt-5">
2   <h2 class="mb-4">Listado de Usuarios</h2>
3   <table class="table table-striped table-hover table-bordered">
4     <thead class="table-dark">
5       <tr>
6         <th scope="col"></th>
7         <th scope="col">Nombre</th>
8         <th scope="col">Apellidos</th>
9         <th scope="col">Usuario</th>
10      </tr>
11    </thead>
12    <tbody>
13      <tr>
14        <th scope="row">1</th>
15        <td>Santiago</td>
16        <td>Daniel</td>
17        <td>Jesus</td>
18      </tr>
19      <tr>
20        <th scope="row">2</th>
21        <td>Jacob</td>
22        <td>Thornton</td>
23        <td>@fat</td>
24      </tr>
25      <tr>
26        <th scope="row">3</th>
27        <td>Larry</td>
28        <td>the Bird</td>
29        <td>@twitter</td>
30      </tr>
31    </tbody>
32  </table>
33 </section>
```

## SECCIÓN H: Configurar rutas

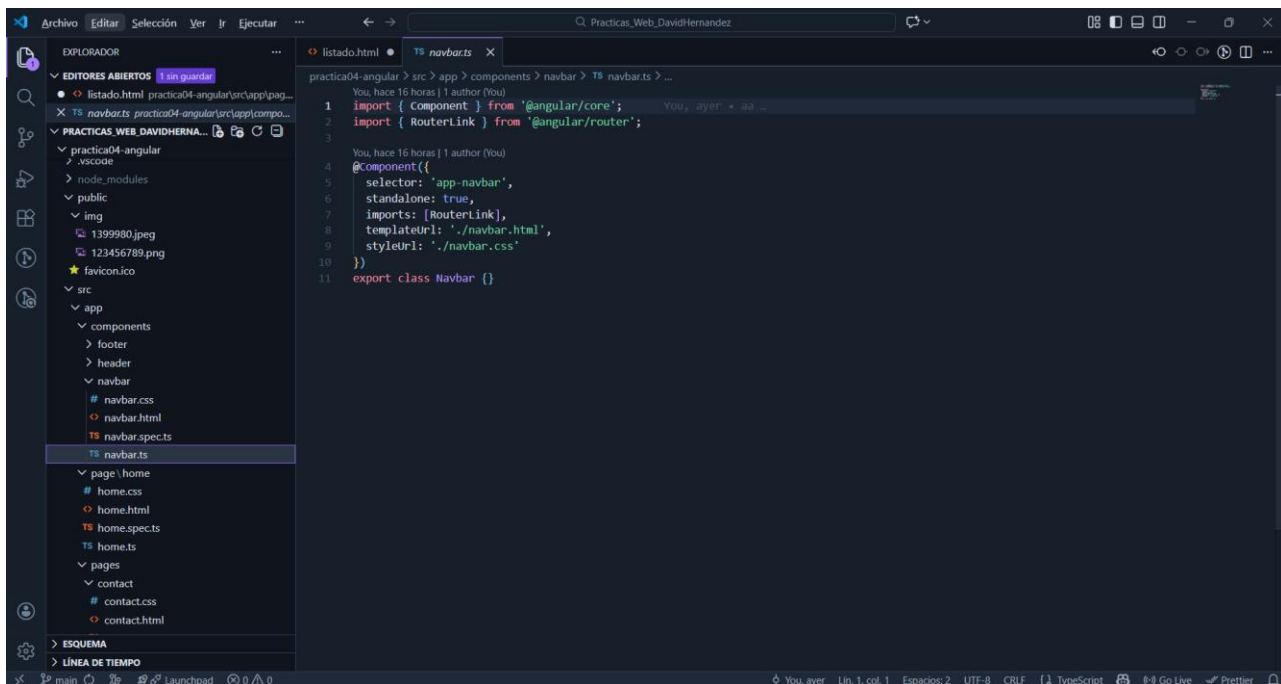




## SECCIÓN I: Navegación con RouterLink



```
1 <div class="container-fluid">
2   <div class="navbar navbar-expand-lg navbar-dark bg-dark">
3     <a class="navbar-brand" routerLink="/">Practica 4</a>
4     <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNav">
5       <span class="navbar-toggler-icon"></span>
6     </button>
7     <div class="collapse navbar-collapse" id="navbarNav">
8       <ul class="navbar-nav">
9         <li class="nav-item">
10           <a class="nav-link" routerLink="/" routerLinkActive="active">Inicio</a>
11         </li>
12         <li class="nav-item">
13           <a class="nav-link" routerLink="/contacto" routerLinkActive="active">Contacto</a>
14         </li>
15         <li class="nav-item">
16           <a class="nav-link" routerLink="/listado" routerLinkActive="active">Listado</a>
17         </li>
18       </ul>
19     </div>
20   </div>
21 </div>
```



```
1 import { Component } from '@angular/core';
2 import { RouterLink } from '@angular/router';
3
4 @Component({
5   selector: 'app-navbar',
6   standalone: true,
7   imports: [RouterLink],
8   templateUrl: './navbar.html',
9   styleUrls: ['./navbar.css']
10 })
11 export class Navbar {}
```

## SECCIÓN J: Visualización de imágenes

