



DESARROLLO DE APLICACIONES WEB

ING. GEOVANNY BRAVO, MG.

ACTIVIDAD AUTÓNOMA # 2

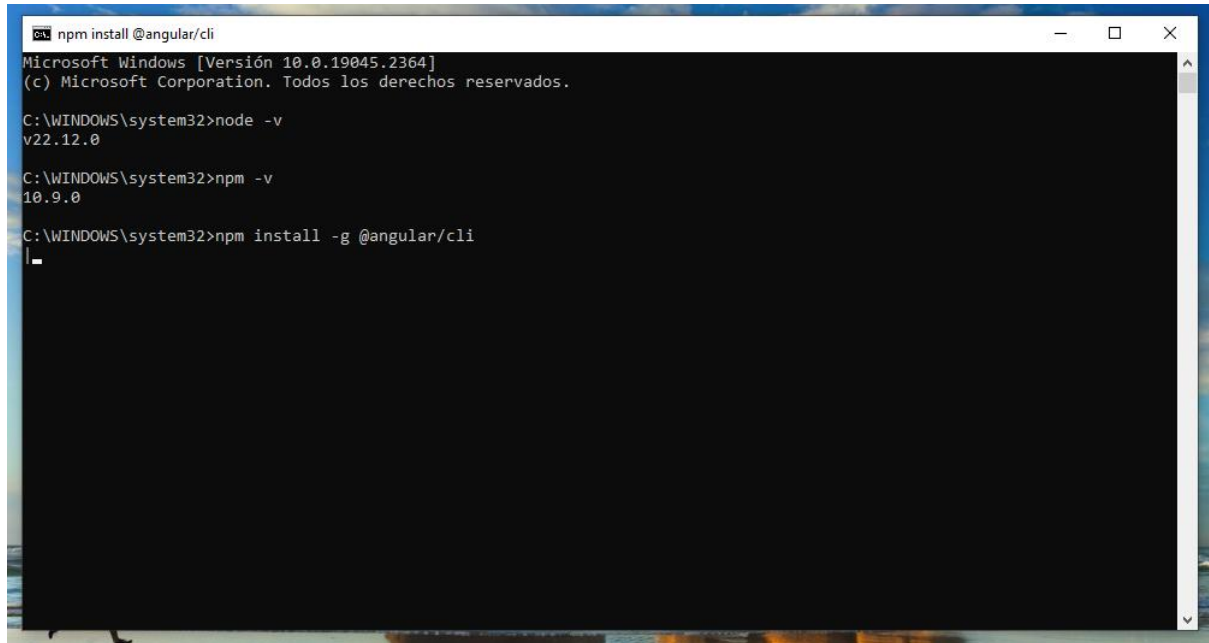
UNIDAD 3: ARQUITECTURA ORIENTADA A MICROSERVICIOS WEB Y
MANEJO DE ESTADOS

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28 DE DICIEMBRE DEL 2024

PROYECTO EN ANGULAR

1. INSTALAR ANGULAR

Se instala Angular mediante el Símbolo del Sistema:

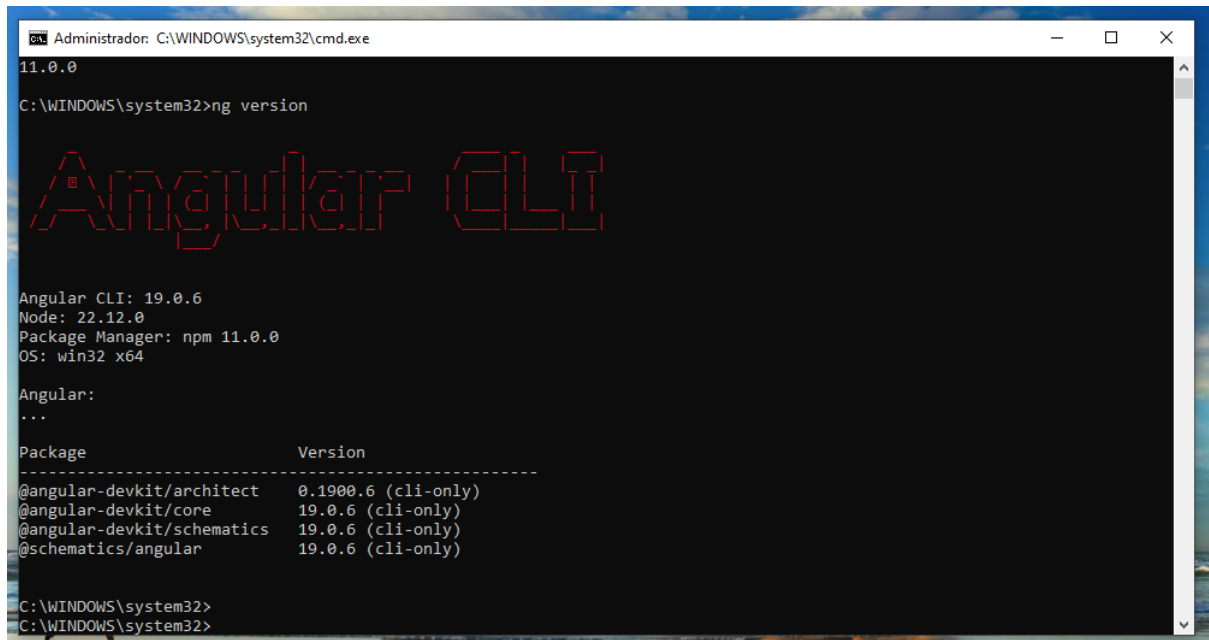


```
npm install @angular/cli
Microsoft Windows [Versión 10.0.19045.2364]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\WINDOWS\system32>node -v
v22.12.0

C:\WINDOWS\system32>npm -v
10.9.0

C:\WINDOWS\system32>npm install -g @angular/cli
|_
```



```
Administrador: C:\WINDOWS\system32\cmd.exe
11.0.0

C:\WINDOWS\system32>ng version

Angular CLI
Angular CLI: 19.0.6
Node: 22.12.0
Package Manager: npm 11.0.0
OS: win32 x64

Angular:
...

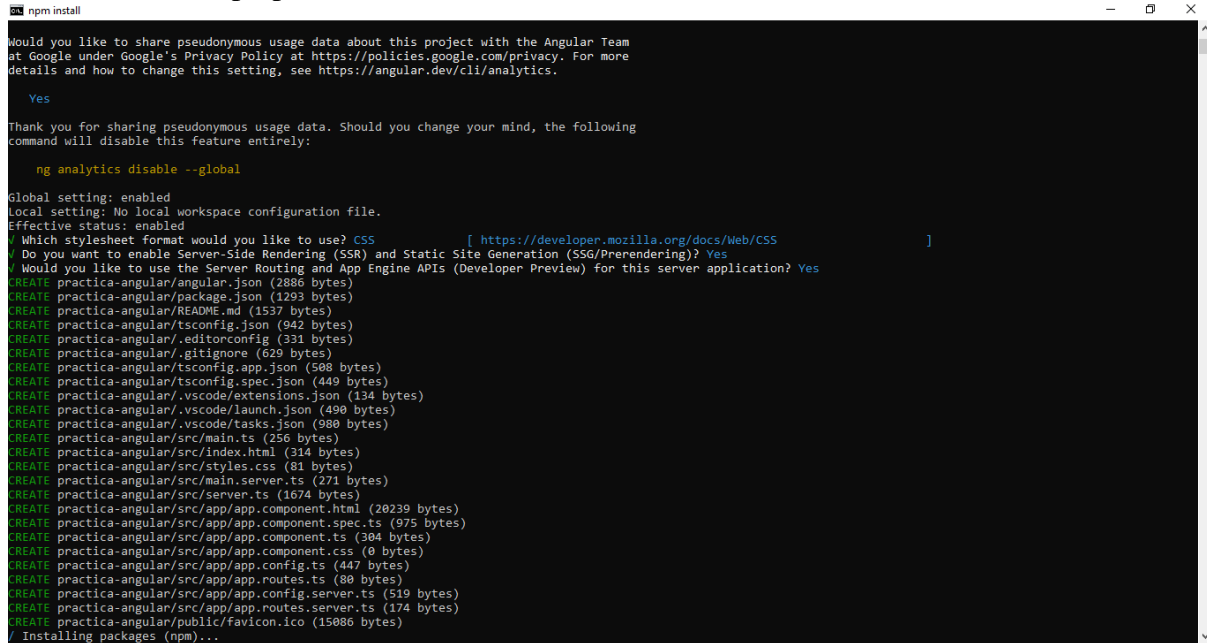
Package      Version
-----
@angular-devkit/architect    0.1900.6 (cli-only)
@angular-devkit/core         19.0.6 (cli-only)
@angular-devkit/schematics    19.0.6 (cli-only)
@schematics/angular          19.0.6 (cli-only)

C:\WINDOWS\system32>
C:\WINDOWS\system32>
```

2. EJECUCIÓN DEL FRAMEWORK

Creamos un nuevo proyecto Angular:

- En la terminal, ejecuta: *ng new practica-angular*
- Respondemos a las preguntas del CLI y elegimos las opciones con routing y CSS como preprocesador.



```
npm install

Would you like to share pseudonymous usage data about this project with the Angular Team
at Google under Google's Privacy Policy at https://policies.google.com/privacy. For more
details and how to change this setting, see https://angular.dev/cli/analytics.

Yes

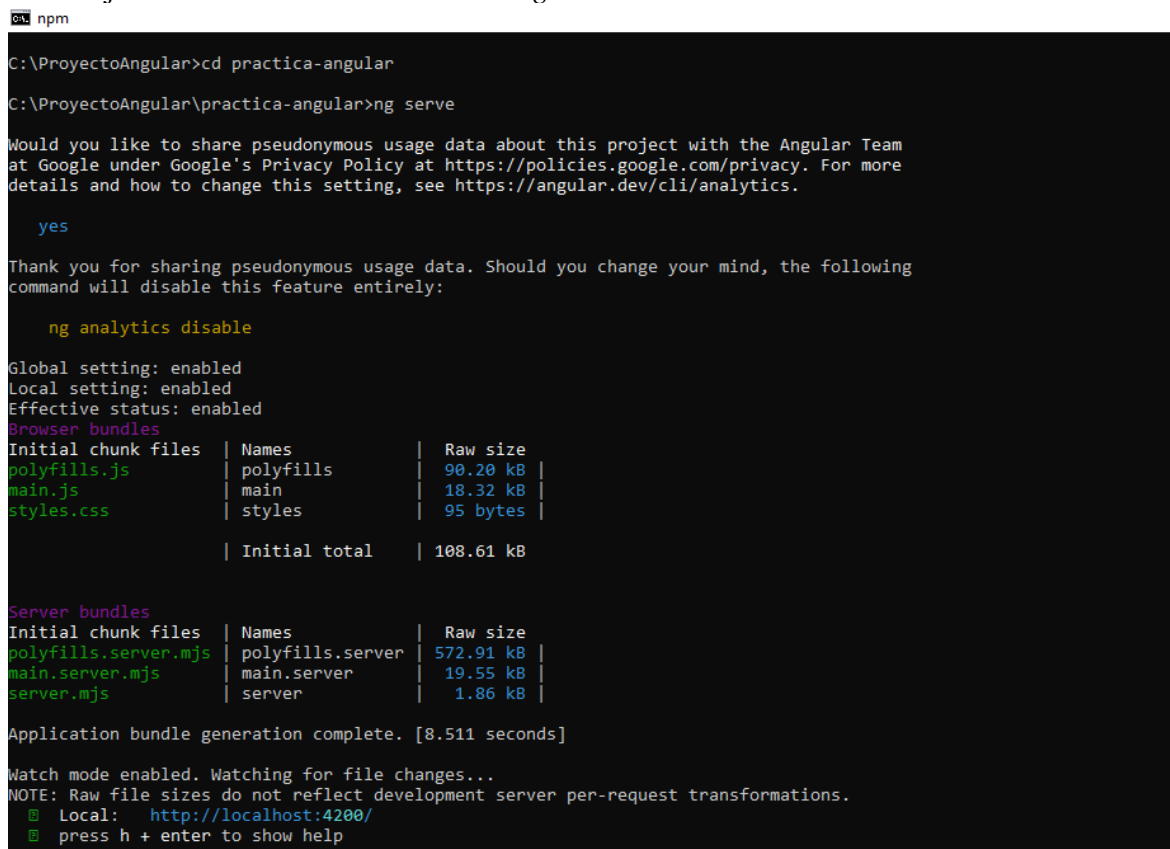
Thank you for sharing pseudonymous usage data. Should you change your mind, the following
command will disable this feature entirely:

  ng analytics disable --global

Global setting: enabled
Local setting: No local workspace configuration file.
Effective status: enabled
Which stylesheet format would you like to use? CSS [ https://developer.mozilla.org/docs/Web/CSS ]
Do you want to enable Server-Side Rendering (SSR) and Static Site Generation (SSG/Prerendering)? Yes
Would you like to use the Server Routing and App Engine APIs (Developer Preview) for this server application? Yes
CREATE practica-angular/angular.json (2886 bytes)
CREATE practica-angular/package.json (1293 bytes)
CREATE practica-angular/README.md (1537 bytes)
CREATE practica-angular/tsconfig.json (942 bytes)
CREATE practica-angular/.editorconfig (331 bytes)
CREATE practica-angular/.gitignore (629 bytes)
CREATE practica-angular/tsconfig.app.json (508 bytes)
CREATE practica-angular/tsconfig.spec.json (449 bytes)
CREATE practica-angular/.vscode/extensions.json (134 bytes)
CREATE practica-angular/.vscode/launch.json (490 bytes)
CREATE practica-angular/.vscode/tasks.json (980 bytes)
CREATE practica-angular/src/main.ts (256 bytes)
CREATE practica-angular/src/index.html (314 bytes)
CREATE practica-angular/src/styles.css (81 bytes)
CREATE practica-angular/src/main.server.ts (271 bytes)
CREATE practica-angular/src/server.ts (1674 bytes)
CREATE practica-angular/src/app/app.component.html (20239 bytes)
CREATE practica-angular/src/app/app.component.spec.ts (975 bytes)
CREATE practica-angular/src/app/app.component.ts (304 bytes)
CREATE practica-angular/src/app/app.component.css (0 bytes)
CREATE practica-angular/src/app/app.config.ts (447 bytes)
CREATE practica-angular/src/app/app.routes.ts (80 bytes)
CREATE practica-angular/src/app/app.config.server.ts (519 bytes)
CREATE practica-angular/src/app/app.routes.server.ts (174 bytes)
CREATE practica-angular/public/favicon.ico (15086 bytes)
/ Installing packages (npm)...
```

Ejecutar el proyecto:

- Navega al directorio del proyecto: *cd practica-angular*
- Ejecuta el servidor de desarrollo: *ng serve*



```
npm

C:\ProyectoAngular>cd practica-angular

C:\ProyectoAngular\practica-angular>ng serve

Would you like to share pseudonymous usage data about this project with the Angular Team
at Google under Google's Privacy Policy at https://policies.google.com/privacy. For more
details and how to change this setting, see https://angular.dev/cli/analytics.

yes

Thank you for sharing pseudonymous usage data. Should you change your mind, the following
command will disable this feature entirely:

  ng analytics disable

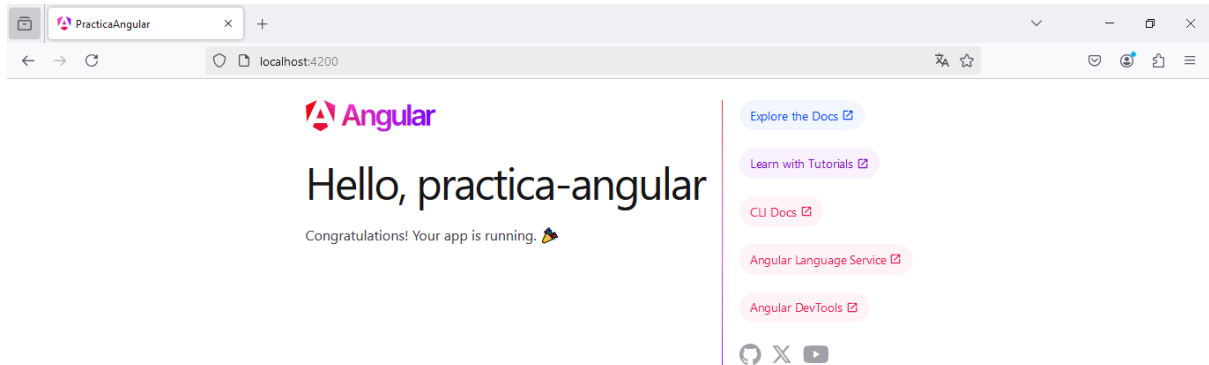
Global setting: enabled
Local setting: enabled
Effective status: enabled
Browser bundles
Initial chunk files | Names | Raw size |
polyfills.js | polyfills | 90.20 kB |
main.js | main | 18.32 kB |
styles.css | styles | 95 bytes |
| Initial total | 108.61 kB

Server bundles
Initial chunk files | Names | Raw size |
polyfills.server.mjs | polyfills.server | 572.91 kB |
main.server.mjs | main.server | 19.55 kB |
server.mjs | server | 1.86 kB |

Application bundle generation complete. [8.511 seconds]

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
```

- Abre un navegador y visita <http://localhost:4200> para ver tu aplicación Angular funcionando.



3. REALIZAR 3 VISTAS CON SUS RUTAS CONFIGURADAS

Creamos tres componentes para las vistas: **Inicio**, **Lista de Pokémon**, y **Detalles del Pokémon**.

```

C:\ProyectoAngular\practica-angular>
C:\ProyectoAngular\practica-angular>ng generate component inicio
CREATE src/app/inicio/inicio.component.html (22 bytes)
CREATE src/app/inicio/inicio.component.spec.ts (615 bytes)
CREATE src/app/inicio/inicio.component.ts (225 bytes)
CREATE src/app/inicio/inicio.component.css (0 bytes)

C:\ProyectoAngular\practica-angular>ng generate component lista
CREATE src/app/lista/lista.component.html (21 bytes)
CREATE src/app/lista/lista.component.spec.ts (608 bytes)
CREATE src/app/lista/lista.component.ts (221 bytes)
CREATE src/app/lista/lista.component.css (0 bytes)

C:\ProyectoAngular\practica-angular>ng generate component detalles
CREATE src/app/detalles/detalles.component.html (24 bytes)
CREATE src/app/detalles/detalles.component.spec.ts (629 bytes)
CREATE src/app/detalles/detalles.component.ts (233 bytes)
CREATE src/app/detalles/detalles.component.css (0 bytes)

C:\ProyectoAngular\practica-angular>

```

Para las configuraciones, utilizaremos Visual Studio Code.

Se configura las rutas correspondientes:

```

TS app.routes.ts X
src > app > TS app.routes.ts > ...
1  import { Routes } from '@angular/router';
2  import { InicioComponent } from './components/inicio/inicio.component';
3
4  export const routes: Routes = [
5    {
6      path: '',
7      component: InicioComponent
8    },
9    {
10     path: 'inicio',
11     component: InicioComponent

```

```

12   },
13   {
14     path: 'lista',
15     loadComponent: () => import('./components/lista/lista.component').then(m => m.ListaComponent)
16   },
17   {
18     path: 'detalles/:id',
19     loadComponent: () => import('./components/detalles/detalles.component').then(m => m.DetallesComponent)
20   },
21   {
22     path: '**',
23     redirectTo: ''
24   }
25 ];

```

4. CONECTAR CON UN API REST PUBLICO

Se configura el servicio:

```

TS pokemon.service.ts X
src > app > services > TS pokemon.service.ts > PokemonService
1  import { Injectable } from '@angular/core';
2  import { HttpClient } from '@angular/common/http';
3  import { Observable } from 'rxjs';
4
5  @Injectable({
6    providedIn: 'root'
7  })
8  export class PokemonService {
9    private apiUrl = 'https://pokeapi.co/api/v2';
10
11    constructor(private http: HttpClient) { }
12
13    getPokemons(limit: number = 20, offset: number = 0): Observable<any> {
14      return this.http.get(`${this.apiUrl}/pokemon?limit=${limit}&offset=${offset}`);
15    }
16
17    getPokemonDetails(id: number): Observable<any> {
18      return this.http.get(`${this.apiUrl}/pokemon/${id}`);
19    }
20  }

```

Se adjunta capturas del código utilizado para la creación de este proyecto:

```

TS inicio.component.ts X
src > app > components > inicio > TS inicio.component.ts > InicioComponent
1  import { Component } from '@angular/core';
2  import { CommonModule } from '@angular/common';
3  import { RouterModule } from '@angular/router';
4
5  @Component({
6    selector: 'app-inicio',
7    standalone: true,
8    imports: [CommonModule, RouterModule],
9    template: `
10      <div class="inicio-container">
11        <div class="welcome-section">
12          <h1>¡Bienvenido a PokeApp!</h1>

```

```

13     <p>Explora el mundo Pokémon y descubre información sobre tus Pokémon favoritos.</p>
14 </div>
15
16     <div class="features-grid">
17         <div class="feature-card">
18             <h3>Lista Pokémon</h3>
19             <p>Explora nuestra extensa lista de Pokémon</p>
20             <a routerLink="/lista" class="feature-button">Ver Lista</a>
21         </div>
22
23         <div class="feature-card">
24             <h3>Detalles</h3>
25             <p>Conoce los detalles de cada Pokémon</p>
26             <a routerLink="/lista" class="feature-button">Explorar</a>
27         </div>
28     </div>
29 </div>
30 `
31 styles: [`
32     .inicio-container {
33         max-width: 1200px;
34         margin: 0 auto;
35         padding: 2rem;
36     }

```

```

TS lista.component.ts X
src > app > components > lista > TS lista.component.ts > ListaComponent
1  import { Component, OnInit } from '@angular/core';
2  import { CommonModule } from '@angular/common';
3  import { RouterModule } from '@angular/router';
4  import { PokemonService } from '../services/pokemon.service';
5
6  @Component({
7      selector: 'app-lista',
8      standalone: true,
9      imports: [CommonModule, RouterModule],
10     templateUrl: './lista.component.html',
11     styleUrls: ['./lista.component.css']
12 })
13 export class ListaComponent implements OnInit {
14     pokemons: any[] = [];
15     loading: boolean = false;
16
17     constructor(private pokemonService: PokemonService) { }
18
19     ngOnInit(): void {
20         this.loading = true;
21         this.pokemonService.getPokemons(20, 0).subscribe(
22             (response: any) => {
23                 response.results.forEach((pokemon: any) => {
24                     const id = pokemon.url.split('/')[6];
25                     this.pokemonService.getPokemonDetails(id).subscribe(
26                         (details: any) => {
27                             this.pokemons.push({
28                                 id: details.id,
29                                 name: details.name,
30                                 image: details.sprites.front_default,
31                                 types: details.types
32                             });
33                         }
34                     );
35                 });
36                 this.loading = false;
37             }
38         );
39     }

```

```

inicio.component.html X
src > app > components > inicio > inicio.component.html > div.inicio-container > div.features-grid > div.feature-card > img
1 <div class="inicio-container">
2   <div class="welcome-section">
3     <h1>¡Bienvenido a PokeApp!</h1>
4     <p>Explora el mundo Pokémon y descubre información sobre tus Pokémon favoritos.</p>
5   </div>
6
7   <div class="features-grid">
8     <div class="feature-card">
9       
10      <h3>Lista Pokémon</h3>
11      <p>Explora nuestra extensa lista de Pokémon</p>
12      <a routerLink="/lista" class="feature-button">Ver Lista</a>
13    </div>
14
15    <div class="feature-card">
16      
17      <h3>Detalles</h3>
18      <p>Conoce los detalles de cada Pokémon</p>
19      <a routerLink="/lista" class="feature-button">Explorar</a>
20    </div>
21  </div>
22 </div>

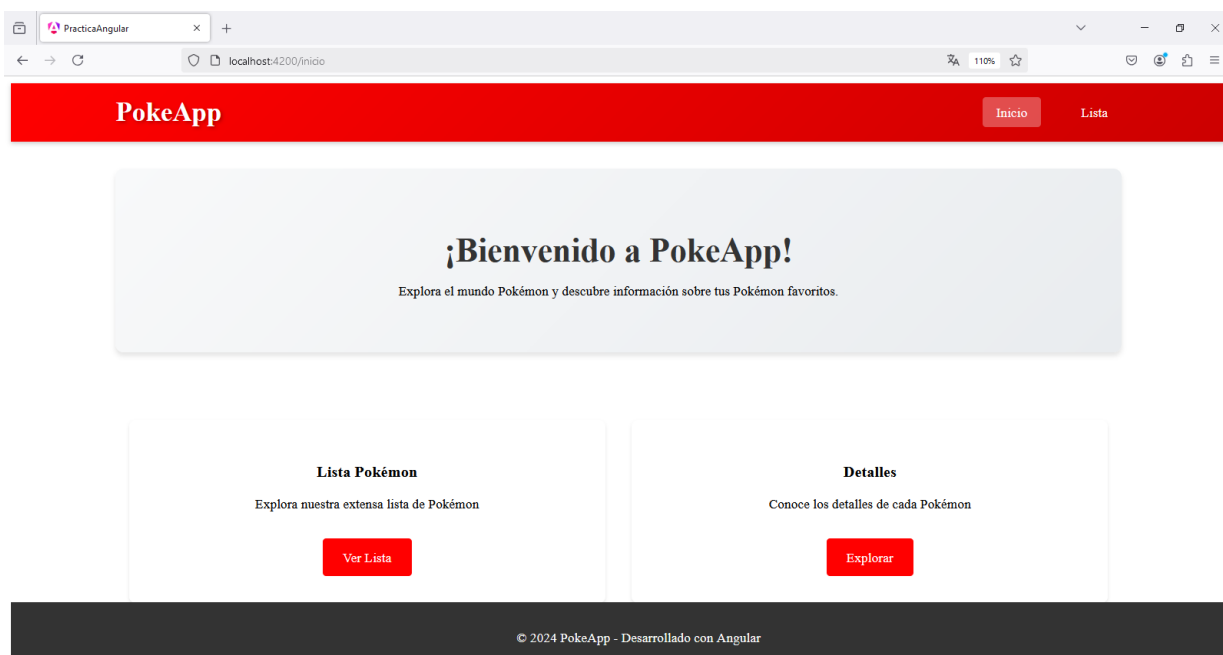
```

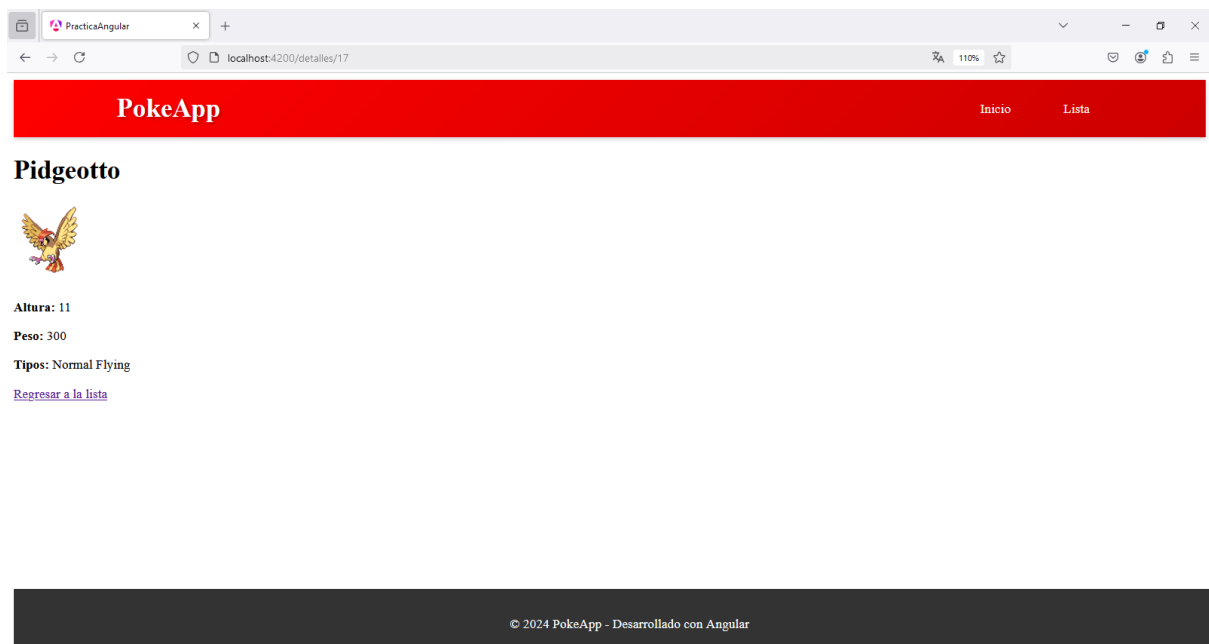
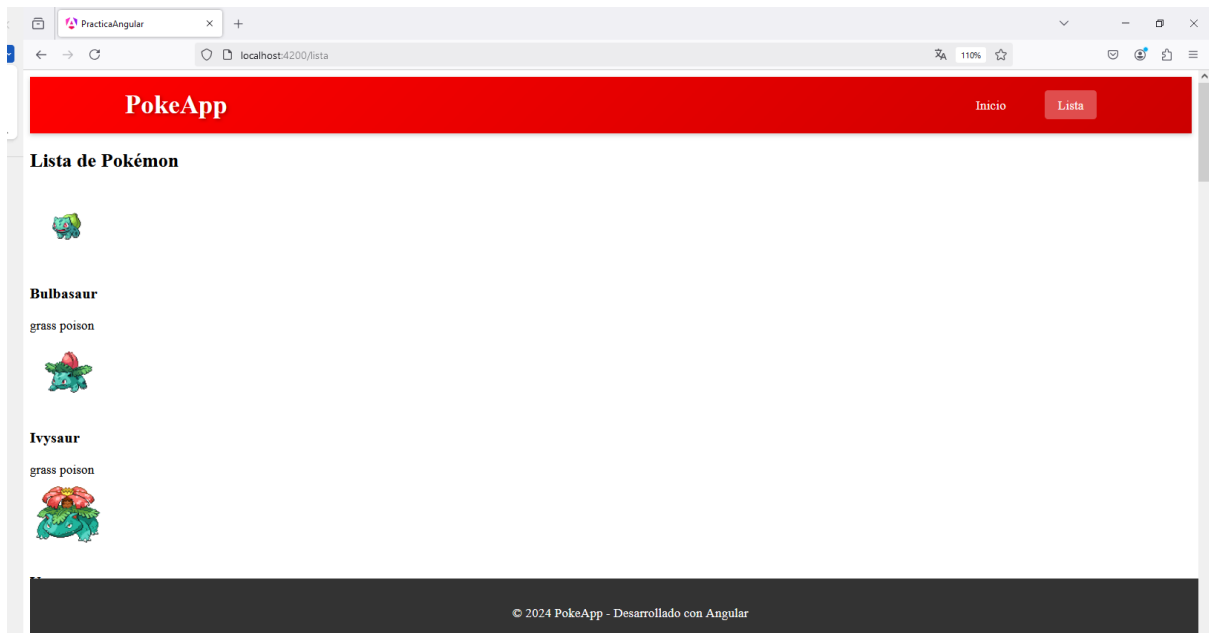
```

TS detalles.component.ts X
src > app > components > detalles > TS detalles.component.ts > DetallesComponent
1 import { Component, OnInit } from '@angular/core';
2 import { CommonModule } from '@angular/common';
3 import { RouterModule, ActivatedRoute } from '@angular/router';
4 import { PokemonService } from '../services/pokemon.service';
5
6 @Component({
7   selector: 'app-detalles',
8   standalone: true,
9   imports: [CommonModule, RouterModule],
10  templateUrl: './detalles.component.html',
11  styleUrls: ['./detalles.component.css']
12 })
13 export class DetallesComponent implements OnInit {
14   pokemon: any;
15
16   constructor(
17     private route: ActivatedRoute,
18     private pokemonService: PokemonService
19   ) { }
20
21   ngOnInit(): void {
22     const id = this.route.snapshot.paramMap.get('id');
23     if (id) {
24       this.pokemonService.getPokemonDetails(Number(id)).subscribe(
25         data => this.pokemon = data
26       );
27     }
28   }
29 }

```

```
# app.component.css X
src > app > # app.component.css > .footer
1  .navbar {
2      background: linear-gradient(135deg, #ff0000 0%, #cc0000 100%);
3      padding: 1rem 0;
4      box-shadow: 0 2px 5px #000000;
5  }
6
7  .nav-container {
8      max-width: 1200px;
9      margin: 0 auto;
10     padding: 0 1rem;
11     display: flex;
12     justify-content: space-between;
13     align-items: center;
14 }
15
16 .app-title {
17     color: white;
18     font-size: 2rem;
19     margin: 0;
20     text-shadow: 2px 2px 4px #000000;
21 }
22
23 .nav-links {
24     display: flex;
25     gap: 2rem;
26 }
27
28 .nav-links a {
29     color: white;
30     text-decoration: none;
31     padding: 0.5rem 1rem;
32     border-radius: 4px;
33     transition: all 0.3s ease;
34 }
35
36 .nav-links a:hover {
37     background-color: #000000;
38 }
39
```





TAREA SUBIDA A UN GIT Y ENLACE DEL REPOSITORIO

<https://github.com/AntonioVillon/ProyectoAngular.git>