

PARTE 1: Instalación de Angular CLI

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

● PS C:\Users\John> node --version
v22.20.0
● PS C:\Users\John> npm --version
10.9.3
● PS C:\Users\John> npm install -g @angular/cli

added 298 packages in 19s

68 packages are looking for funding
  run `npm fund` for details
● PS C:\Users\John> ng version

Angular CLI      : 21.1.0
Node.js         : 22.20.0
Package Manager : npm 10.9.3
Operating System : win32 x64

○ PS C:\Users\John> 
```

```
PS C:\Users\shiba> ng new todo-angular

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:

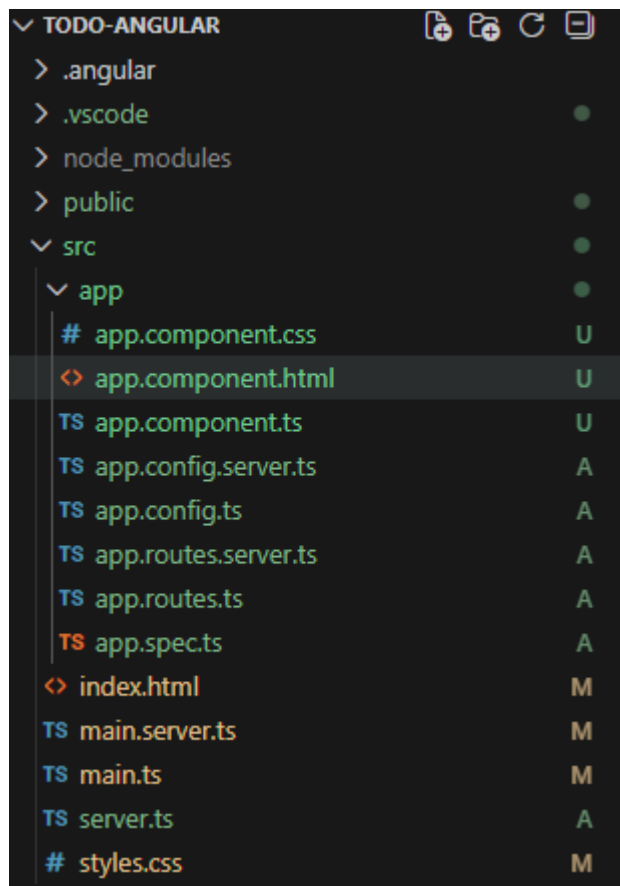
  ng analytics disable --global

Global setting: enabled
Local setting: No local workspace configuration file.
Effective status: enabled
✓ Which stylesheet system 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
✓ Which AI tools do you want to configure with Angular best practices? https://angular.dev/ai/develop-with-ai None
CREATE todo-angular/angular.json (2154 bytes)
CREATE todo-angular/package.json (1196 bytes)
CREATE todo-angular/README.md (1523 bytes)
```

PARTE 2: Crear el Proyecto

- me he olvidado hacer capturas de pantalla durante la creación del proyecto

PARTE 3: Estructura del Proyecto Angular



EJERCICIO 1: Entender el Componente

```
TS app.component.ts U X TS main.server.ts M TS main.ts M # style
src > app > TS app.component.ts > AppComponent > addTodo
1  import { Component } from '@angular/core';
2  import { CommonModule } from '@angular/common';
3  import { FormsModule } from '@angular/forms';
4  interface Todo {
5      id: number;
6      text: string;
7      completed: boolean;
8  }
9  @Component({
10     selector: 'app-root',
11     standalone: true,
12     imports: [CommonModule, FormsModule],
13     templateUrl: './app.component.html',
14     styleUrls: ['./app.component.css']
15 })
16 export class AppComponent {
17     title = 'TODO List Angular';
18     todos: Todo[] = [];
19     nextId = 1;
20     newTodoText = '';
21     currentFilter = 'all';
22     addTodo() {
23         if (this.newTodoText.trim() === '') {
24             return;
25         }
26         this.todos.push({
27             id: this.nextId,
28             text: this.newTodoText.trim(),
29             completed: false
30         });
31         this.nextId = this.nextId + 1;
32         this.newTodoText = '';
```

```
33     }
34     deleteTodo(id: number) {
35       | this.todos = this.todos.filter(t => t.id !== id);
36     }
37     toggleTodo(id: number) {
38       | const todo = this.todos.find(t => t.id === id);
39       | if (todo) {
40       |   | todo.completed = !todo.completed;
41       | }
42     }
43     clearCompleted() {
44       | this.todos = this.todos.filter(t => !t.completed);
45     }
46     getFilteredTodos(): Todo[] {
47       | if (this.currentFilter === 'active') {
48       |   | return this.todos.filter(t => !t.completed);
49       | } else if (this.currentFilter === 'completed') {
50       |   | return this.todos.filter(t => t.completed);
51       | } else {
52       |   | return this.todos;
53       | }
54     }
55     getActiveCount(): number {
56       | return this.todos.filter(t => !t.completed).length;
57     }
58   }
59 }
```

EJERCICIO 2: Crear el Template

```
src > app > <> app.component.html > ...
1  <div class="container">
2    <h1>{{ title }}</h1>
3    <div class="input-section">
4      <input type="text" [(ngModel)]="newTodoText" (keyup.enter)="addTodo()" placeholder="Nueva tarea...">
5      <button (click)="addTodo()">Añadir</button>
6    </div>
7    <div class="filters">
8      <button [class.active]="currentFilter === 'all'" (click)="currentFilter = 'all'">
9        Todas
10     </button>
11     <button [class.active]="currentFilter === 'active'" (click)="currentFilter = 'active'">
12       Activas
13     </button>
14     <button [class.active]="currentFilter === 'completed'" (click)="currentFilter = 'completed'">
15       Completadas
16     </button>
17   </div>
18   <ul class="todo-list">
19     <li *ngFor="let todo of getFilteredTodos()" [class.completed]="todo.completed" class="todo-item">
20       <input type="checkbox" [checked]="todo.completed" (change)="toggleTodo(todo.id)" class="todo-checkbox">
21       <span class="todo-text">{{ todo.text }}</span>
22       <button (click)="deleteTodo(todo.id)" class="delete-btn">
23         Eliminar
24       </button>
25     </li>
26   </ul>
27   <div class="footer">
28     <span>{{ getActiveCount() }} tareas pendientes</span>
29     <button (click)="clearCompleted()">Limpiar completadas</button>
30   </div>
31 </div>
32
```

EJERCICIO 3:

```
src > app > # app.component.css > .container
1  .container {
2    max-width: 600px;
3    margin: 50px auto;
4    padding: 20px;
5    background: white;
6    border-radius: 8px;
7    box-shadow: 0 2px 10px rgba(0, 0, 0, 0.1);
8  }
9
10 h1 {
11   text-align: center;
12   color: #333;
13 }
14
15 .input-section {
16   display: flex;
17   gap: 10px;
18   margin: 20px 0;
19 }
20
21 input[type="text"] {
22   flex: 1;
23   padding: 10px;
24   border: 2px solid #ddd;
25   border-radius: 4px;
26   font-size: 16px;
27 }
28
29 button {
30   padding: 10px 20px;
31   border: none;
32   border-radius: 4px;
33   cursor: pointer;
34   font-size: 16px;
35 }
36
37 .input-section button {
38   background: #4CAF50;
39   color: white;
40 }
```

```
src > app > # app.component.css > .container
40 }
41
42 .filters {
43   display: flex;
44   gap: 10px;
45   margin: 20px 0;
46 }
47
48 .filters button {
49   flex: 1;
50   background: #f0f0f0;
51   color: #333;
52 }
53
54 .filters button.active {
55   background: #2196F3;
56   color: white;
57 }
58
59 .todo-list {
60   list-style: none;
61   padding: 0;
62   margin: 20px 0;
63 }
64
65 .todo-item {
66   display: flex;
67   align-items: center;
68   gap: 10px;
69   padding: 12px;
70   border-bottom: 1px solid #eee;
71 }
72
73 .todo-item.completed .todo-text {
74   text-decoration: line-through;
75   color: #999;
76 }
77
78 .todo-checkbox {
79   width: 20px;
80   height: 20px;
```

```
81 }
82
83 .todo-text {
84 |   flex: 1;
85 }
86
87 .delete-btn {
88 |   background:  #f44336;
89 |   color:  white;
90 }
91
92 footer {
93 |   display: flex;
94 |   justify-content: space-between;
95 |   align-items: center;
96 |   margin-top: 20px;
97 }
98
99 .footer button {
100 |   background:  #ff9800;
101 |   color:  white;
102 }
```

EJERCICIO 4: Probar la Aplicación

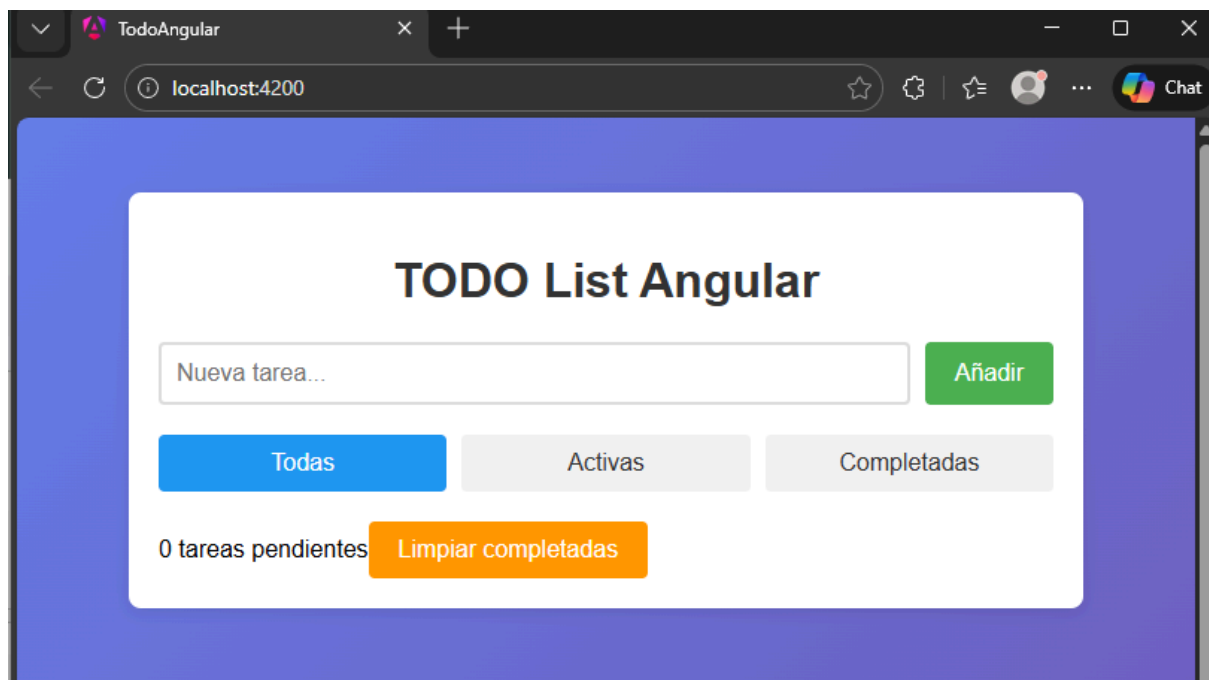
```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

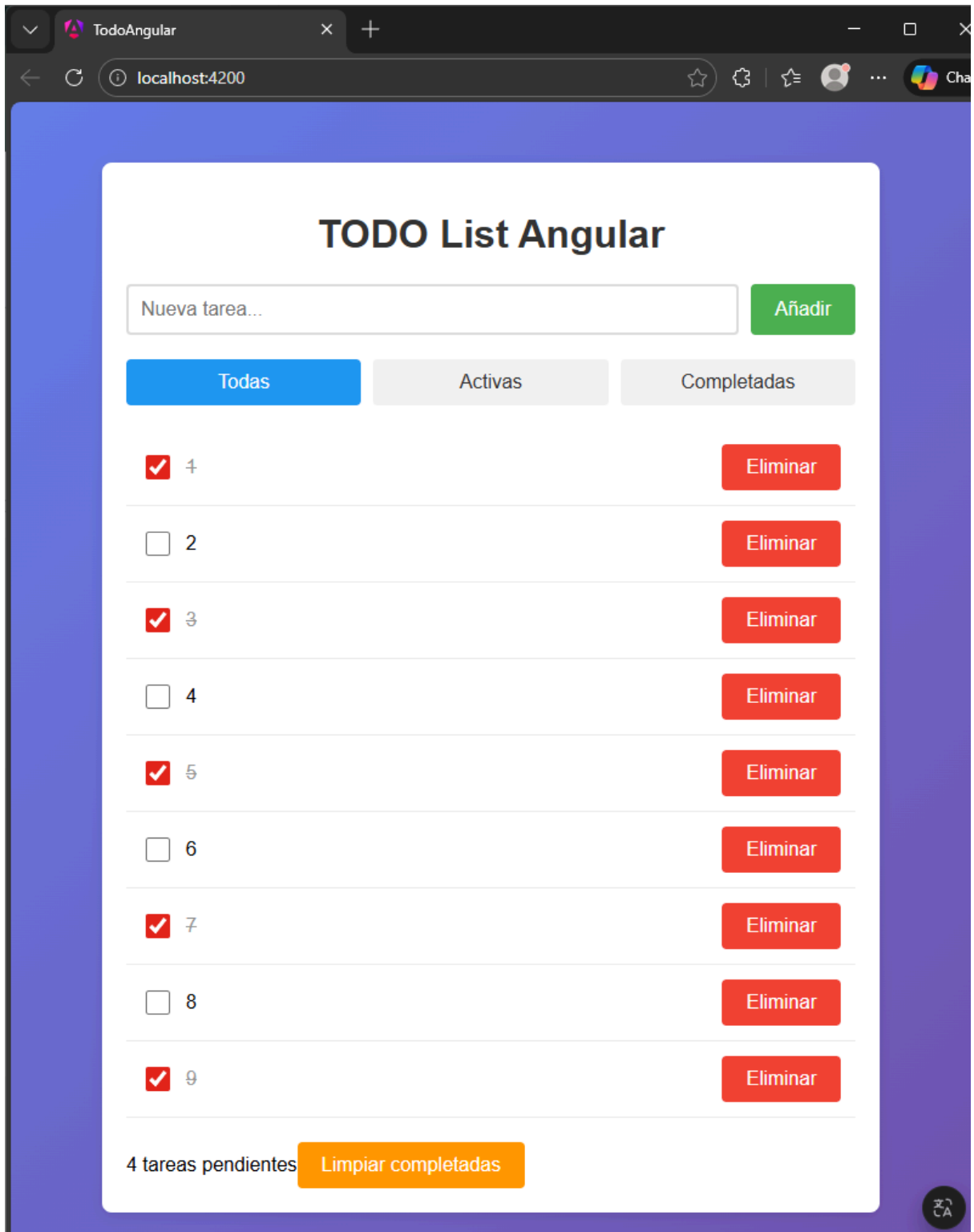
PS C:\Users\shiba\todo-angular> ng serve
Browser bundles
Initial chunk files | Names          | Raw size
main.js             | main           | 13.91 kB |
styles.css          | styles        | 261 bytes |
                   | Initial total  | 14.17 kB |

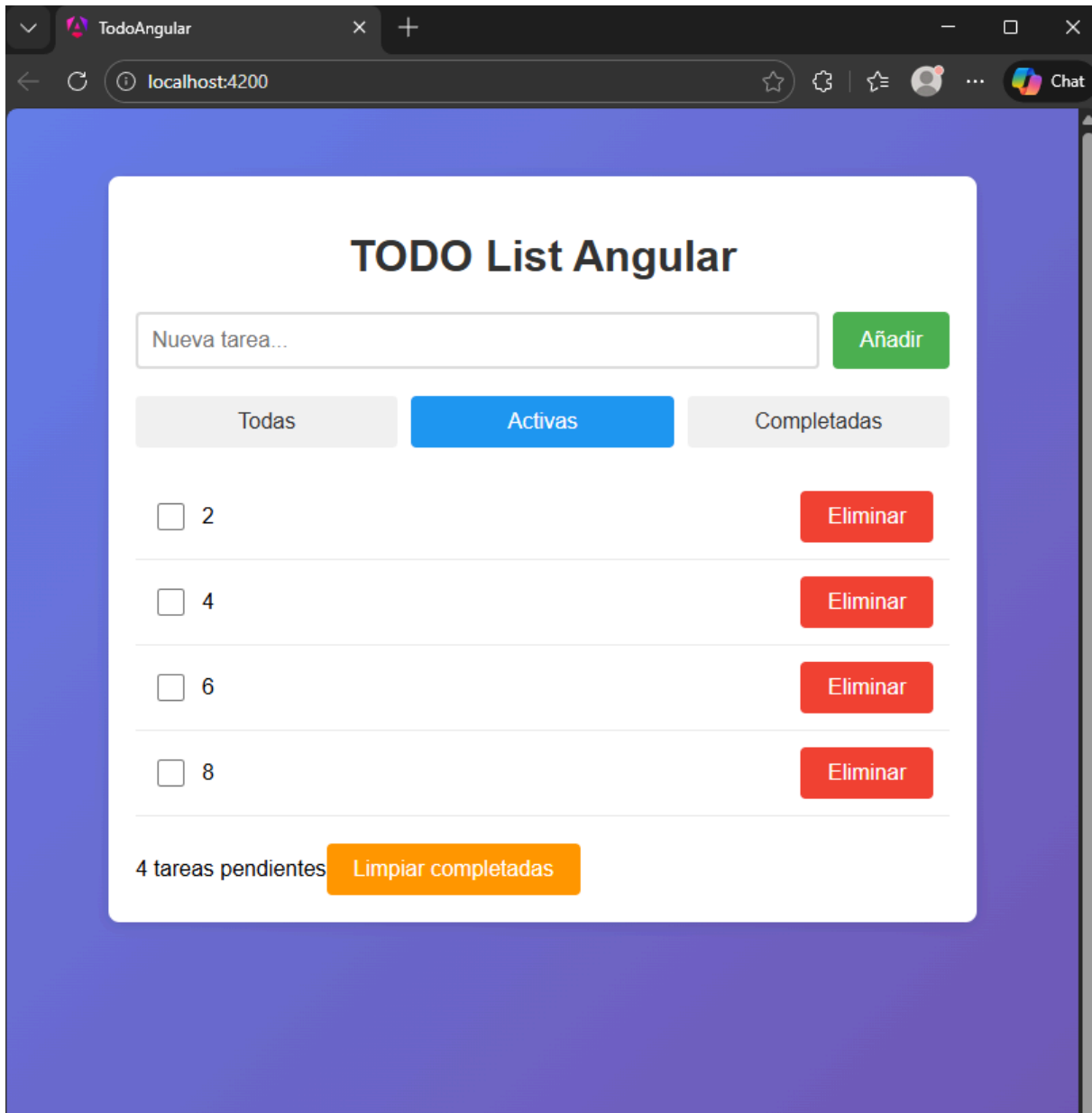
Server bundles
Initial chunk files | Names          | Raw size
main.server.mjs     | main.server    | 15.17 kB |
server.mjs          | server        | 1.81 kB  |
polyfills.server.mjs | polyfills.server | 243 bytes |

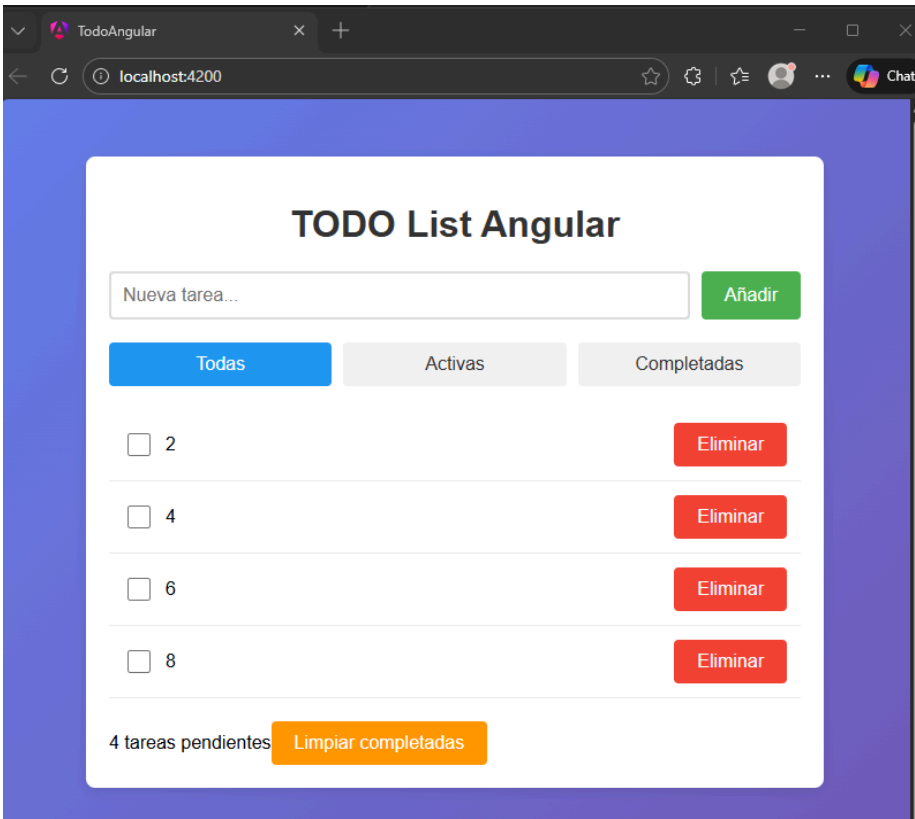
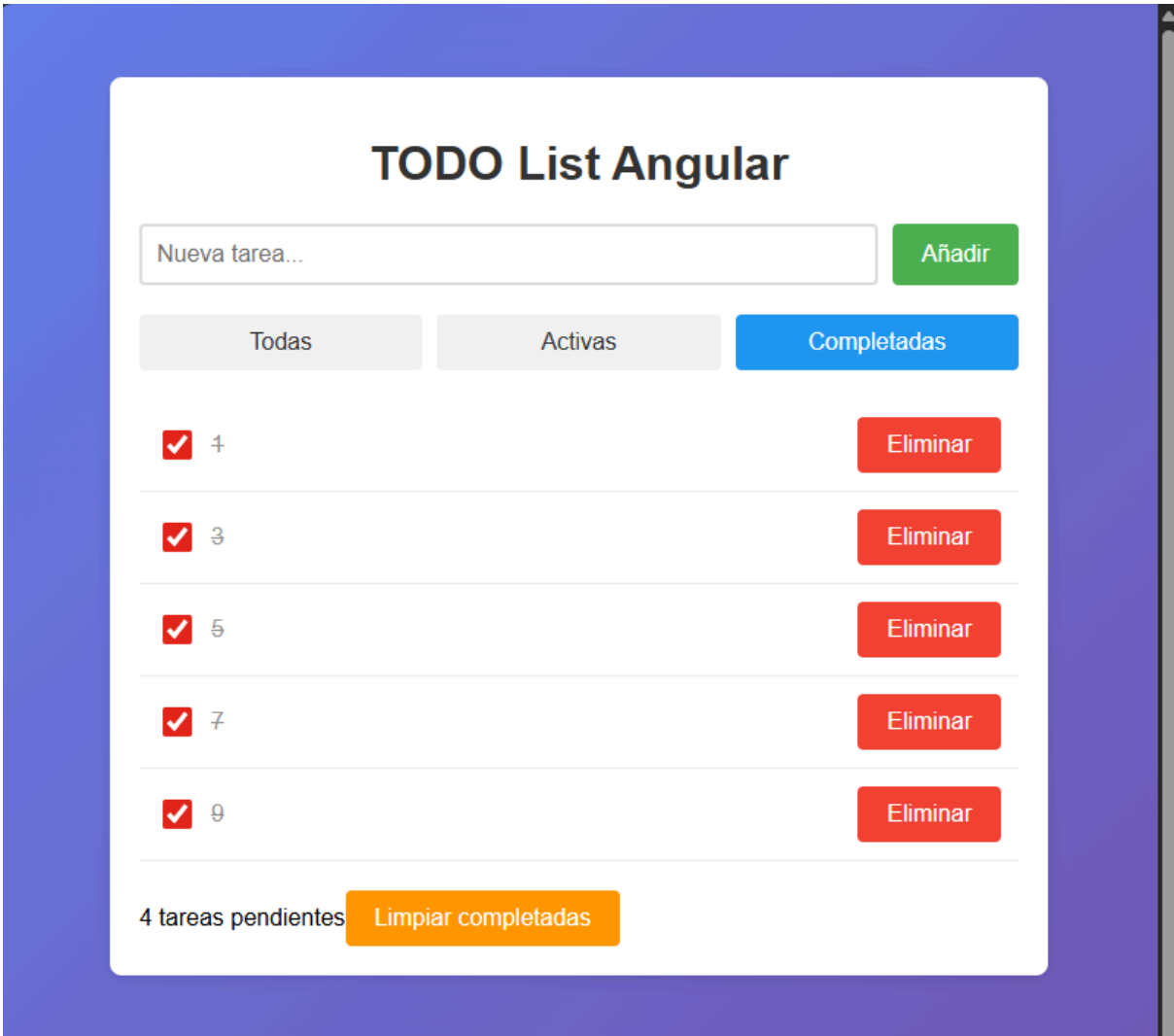
Application bundle generation complete. [3.849 seconds] - 2026-01-26T12:54:32.357Z

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
█
```









Retos extras

```
todo-angular > src > app > <> app.component.html > div.container
1  <div class="container">
2    <h1>{{ title }}</h1>
3
4  <div *ngIf="todos.length === 0" class="empty-state">
5    No hay tareas. ¡Añade una para empezar!
6  </div>
7
8  <div class="input-section">
9    <input
10      type="text"
11      [(ngModel)]="newTodoText"
12      (keyup.enter)="addTodo()"
13      [class.error]="newTodoText.length > 100"
14      placeholder="Nueva tarea...">
15
16    <span *ngIf="newTodoText.length > 100" class="error-msg">
17      Máximo 100 caracteres
18    </span>
19
20    <small>{{ newTodoText.length }} / 100</small>
21
22    <button
23      (click)="addTodo()"
24      [disabled]="newTodoText.trim() === '' || newTodoText.length > 100">
25      Añadir
26    </button>
27  </div>
```

```
30  <div class="filters">
31    <button [class.active]="currentFilter === 'all'" (click)="currentFilter = 'all'">
32      Todas
33    </button>
34    <button [class.active]="currentFilter === 'active'" (click)="currentFilter = 'active'">
35      Activas
36    </button>
37    <button [class.active]="currentFilter === 'completed'" (click)="currentFilter = 'completed'">
38      Completadas
39    </button>
40  </div>
41
42
43  <ul class="todo-list">
44    <li *ngFor="let todo of getFilteredTodos()" [class.completed]="todo.completed" class="todo-item">
45      <input type="checkbox" [checked]="todo.completed" (change)="toggleTodo(todo.id)" class="todo-checkbox">
46      <span class="todo-text">{{ todo.text }}</span>
47      <button (click)="deleteTodo(todo.id)" class="delete-btn">
48        Eliminar
49      </button>
50    </li>
51  </ul>
```


TODO List Angular

WOW WOW WOW WOW WOW WOW WO

Máximo 100 caracteres 101 / 100

Añadir

Todas

Activas

Completadas

☐

WOW WOW WOW WOW WOW WOW WOW WOW WOW WOW
WOW WOW WOW WOW WOW WOW WOW WOW WOW WOW
WOW WOW WOW

Eliminar

☐

WOW WOW WOW WOW WOW WOW WOW WOW WOW WOW
WOW WOW WOW WOW WOW WOW WOW WOW WOW WOW
WOW WOW WOW

Eliminar

2 tareas pendientes

Limpia completada