

# TP7

## 4.1 Agregar Code Coverage a nuestras pruebas unitarias de backend y front-end e integrarlas junto con sus resultados en nuestro pipeline de build.

- 4.1.1 En el directorio raiz de nuestro proyecto Angular instalar el siguiente paquete:

```
PS C:\Users\santi\Documents\AA-Universidad\Ingeniería de Software III\Angular> npm install karma-coverage --save-dev

up to date, audited 938 packages in 3s

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

11 vulnerabilities (7 moderate, 4 high)

To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
npm notice
npm notice New patch version of npm available! 10.8.2 -> 10.8.3
npm notice Changelog: https://github.com/npm/cli/releases/tag/v10.8.3
npm notice To update run: npm install -g npm@10.8.3
npm notice
```

- 4.1.2 Editar nuestro archivo karma.conf.js para que incluya reporte de cobertura

```
karma.conf.js X
C: > Users > santi > Documents > AA-Universidad > Ingeniería de Software III > Angular_WebAPINetCore8_CRUD_Sample > EmployeeCrudAngular > karma.conf.js > ...
1  module.exports = function (config) {
2      config.set({
3          frameworks: ['jasmine', '@angular-devkit/build-angular'],
4          plugins: [
5              require('karma-jasmine'),
6              require('karma-chrome-launcher'),
7              require('karma-junit-reporter'),
8              require('karma-coverage'),
9              require('@angular-devkit/build-angular/plugins/karma')
10         ],
11         reporters: ['progress', 'junit', 'coverage'],
12         junitReporter: {
13             outputDir: 'test-results',
14             outputFile: 'test-results.xml',
15             useBrowserName: false
16         },
17         coverageReporter: {
18             type: 'lcov',
19             dir: require('path').join(__dirname, './coverage'),
20             subdir: '.',
21             file: 'lcov.info'
22         },
23         preprocessors: {
24             // Agrega los archivos que deseas instrumentar para la cobertura
25             'src/**/*.ts': ['coverage'], // Asegurate de instrumentar los archivos de tu aplicación
26         },
27         port: 9876,
28         colors: true,
29         logLevel: config.LOG_INFO,
30         autoWatch: true,
31         browsers: ['ChromeHeadless'],
32         singleRun: true,
33         restartOnFileChange: true
34     });
35 };
36
```

#### 4.1.3 En el dir raíz del proyecto EmployeeCrudApi.Tests ejecutar:

```
PS C:\Users\santi\Documents\AA-Universidad\Ingeniería de Software III\Angular_WebAPINetCore8_CRUD_Sample\EmployeeCrudApi.Tests> dotnet add package coverlet.collector
Determining projects to restore...
Writing C:\Users\santi\AppData\Local\Temp\tmpft3lqw.tmp
info : X.509 certificate chain validation will use the default trust store selected by .NET for code signing.
info : X.509 certificate chain validation will use the default trust store selected by .NET for timestamping.
info : Adding PackageReference for package 'coverlet.collector' into project 'C:\Users\santi\Documents\AA-Universidad\Ingeniería de Software III\Angular_WebAPINetCore8_CRUD_Sample\EmployeeCrudApi.Tests\EmployeeCrudApi.Tests.csproj'.
info : GET https://api.nuget.org/v3/registration5-gz-semver2/coverlet.collector/index.json
info : OK https://api.nuget.org/v3/registration5-gz-semver2/coverlet.collector/index.json 182ms
info : Restoring packages for C:\Users\santi\Documents\AA-Universidad\Ingeniería de Software III\Angular_WebAPINetCore8_CRUD_Sample\EmployeeCrudApi.Tests.csproj...
info : GET https://api.nuget.org/v3-flatcontainer/coverlet.collector/index.json
info : OK https://api.nuget.org/v3-flatcontainer/coverlet.collector/index.json 677ms
info : GET https://api.nuget.org/v3-flatcontainer/coverlet.collector/6.0.2/coverlet.collector.6.0.2.nupkg
info : OK https://api.nuget.org/v3-flatcontainer/coverlet.collector/6.0.2/coverlet.collector.6.0.2.nupkg 21ms
info : Installed coverlet.collector 6.0.2 from https://api.nuget.org/v3/index.json to C:\Users\santi\.nuget\packages\coverlet.collector\6.0.2 with content hash bJShQ6uWRTQ100ZeyiMqcFlhP7WJ+bCuabUs885dJiBEzMsJMSFr7B0yeCw4rgvQokteGi5rKQTLkhfQPUXg2A==.
info : GET https://api.nuget.org/v3/vulnerabilities/index.json
info : OK https://api.nuget.org/v3/vulnerabilities/index.json 16ms
info : GET https://api.nuget.org/v3-vulnerabilities/2024.10.02.05.41.40/vulnerability.base.json
info : GET https://api.nuget.org/v3-vulnerabilities/2024.10.02.05.41.40/2024.10.02.05.41.40/vulnerability.update.json
info : OK https://api.nuget.org/v3-vulnerabilities/2024.10.02.05.41.40/vulnerability.base.json 15ms
```

- 4.1.4 Agregar a nuestro pipeline ANTES del Build de Back la tarea de test con los argumentos especificados y la de publicación de resultados de cobertura:

- **4.1.5 Agregar a nuestro pipeline ANTES del Build de front la tarea de test y la de publicación de los resultados.**

```
1 trigger:
2   branches:
3     include:
4       - main
5 pool:
6   vmImage: 'windows-latest'
7 stages:
8   - stage: __default
9     jobs:
10      - job: Build_Backend
11        displayName: 'Build Backend (ASP.NET Core)'
12        steps:
13          - task: DotNetCoreCLI@2
14            displayName: 'Ejecutar pruebas de la API'
15            inputs:
16              command: 'test'
17              projects: '**/*.Tests.csproj'
18              arguments: '--collect:"XPlat Code Coverage"'
19          - task: PublishCodeCoverageResults@2
20            inputs:
21              summaryFileLocation: '$(Agent.TempDirectory)**/*.cobertura.xml'
22              failIfCoverageEmpty: false
23            displayName: 'Publicar resultados de code coverage del back-end'
24          - task: UseDotNet@2
25            inputs:
26              packageType: 'sdk'
27              version: '8.0.401'
28              installationPath: '$(Agent.ToolsDirectory)/dotnet'
29          - task: NuGetToolInstaller@1
30          - task: NuGetCommand@2
31            inputs:
32              restoreSolution: '**/*.sln'
33          - task: DotNetCoreCLI@2
34            displayName: 'Build API'
35            inputs:
36              command: 'build'
37              projects: '**/EmployeeCrudApi.csproj'
38              arguments: '--configuration $(configuration)'
```

```

33 | - task: DotNetCoreCLI@2
34 |   displayName: 'Build API'
35 |   inputs:
36 |     command: 'build'
37 |     projects: '**/EmployeeCrudApi.csproj'
38 |     arguments: '--configuration $(configuration)'
39 | - task: PublishBuildArtifacts@1
40 |   inputs:
41 |     pathToPublish: '$(Build.SourcesDirectory)/EmployeeCrudApi/EmployeeCrudApi'
42 |     artifactName: 'backend'
43 | - job: Build_Frontend
44 |   displayName: 'Build Frontend (Angular)'
45 |   pool:
46 |     vmImage: 'ubuntu-latest'
47 |   steps:
48 |     - task: NodeTool@0
49 |       inputs:
50 |         versionSpec: '18.x'
51 |       displayName: 'Instalar Node.js'
52 |     - task: CmdLine@2
53 |       displayName: 'Instalar Angular CLI'
54 |       inputs:
55 |         script: |
56 |           npm install -g @angular/cli
57 |     - task: CmdLine@2
58 |       displayName: 'Instalar dependencias del frontend'
59 |       inputs:
60 |         script: |
61 |           npm install
62 |         workingDirectory: '$(Build.SourcesDirectory)/EmployeeCrudAngular'
63 |     - task: CmdLine@2
64 |       displayName: 'Ejecutar pruebas del front'
65 |       continueOnError: true
66 |       inputs:
67 |         script: |
68 |           npx ng test --karma-config=karma.conf.js --watch=false --browsers ChromeHeadless --code-coverage
69 |         workingDirectory: '$(Build.SourcesDirectory)/EmployeeCrudAngular'
70 | - task: PublishCodeCoverageResults@2
71 |   inputs:
72 |     summaryFileLocation: '$(Build.SourcesDirectory)/EmployeeCrudAngular/coverage/lcov.info'
73 |     failIfCoverageEmpty: false
74 |     condition: always()
75 |     displayName: 'Publicar resultados de code coverage del front'
76 | - task: PublishTestResults@2
77 |   inputs:
78 |     testResultsFormat: 'JUnit'
79 |     testResultsFiles: '$(Build.SourcesDirectory)/EmployeeCrudAngular/test-results/test-results.xml'
80 |     failTaskOnFailedTests: true
81 |     condition: always()
82 |     displayName: 'Publicar resultados de pruebas unitarias del front'

```

- **4.1.6 Ejecutar el pipeline y analizar el resultado de las pruebas unitarias y la cobertura de código.**

Summary Tests <u>Code Coverage</u>				
Build configuration: empty   Build platform: empty				
63.32%	10	199	126	
Line Coverage	Modules	Total Lines	Covered Lines	
Filter by module name				
Modules	Covered Lines	Total Lines	Line Coverage ↑	Coverage Chart
D:\a\1\s\EmployeeCrudApi\EmployeeCrudApi\Controllers\EmployeeController.cs	60	72	83.33%	
D:\a\1\s\EmployeeCrudApi\EmployeeCrudApi\Data\ApplicationDbContext.cs	4	4	100.00%	
D:\a\1\s\EmployeeCrudApi\EmployeeCrudApi\Models\Employee.cs	3	3	100.00%	
D:\a\1\s\EmployeeCrudApi\EmployeeCrudApi\Program.cs	0	24	0.00%	
src/app/addemployee/addemployee.component.ts	42	55	76.36%	
src/app/app.component.ts	2	2	100.00%	
src/app/employee.model.ts	3	3	100.00%	
src/app/employee.service.ts	6	13	46.15%	
src/app/employee/employee.component.ts	5	22	22.73%	
src/environments/environment.ts	1	1	100.00%	

## 4.2 Agregar Análisis Estático de Código con SonarCloud:

### 4.2.1 Integraremos SonarCloud para analizar el código fuente. Configurar SonarCloud en nuestro pipeline siguiendo instructivo 5.1

```

22 |         task: SonarCloudPrepare@2
23 |         inputs:
24 |           SonarCloud: 'SonarCloud'
25 |           organization: 'mussalovesmuzska'
26 |           scannerMode: 'MSBuild'
27 |           projectKey: 'mussalovesmuzska_angularcustom-tp7.git'
28 |           projectName: 'angularcustom-tp7.git'
    |
    | Settings
    |
50 |         task: SonarCloudAnalyze@2
51 |         inputs:
52 |           jdkversion: 'JAVA_HOME_17_X64'
    |
    | Settings
53 |         task: SonarCloudPublish@2
54 |         inputs:
55 |           pollingTimeoutSec: '300'

```

- **4.2.2 Vemos el resultado de nuestro pipeline, en extensions tenemos un link al análisis realizado por SonarCloud**

#20241002.2 • agregado sonarCloud  
 angularcustom-tp7.git
 Run new

This run is being retained as one of 3 recent runs by main (Branch).
 View retention leases

Summary Tests Extensions Code Coverage

SonarCloud Analysis Report  
 Quality Gate none (angularcustom-tp7.git)  
[See analysis details on SonarCloud](#)

- 4.2.3 Ir al link y analizar toda la información obtenida. Detallar en la entrega del TP los puntos más relevantes del informe, qué significan y para qué sirven.**

mussalovesmuzska > angularcustom-tp7.git > main
 Summary Issues Security Hotspots Measures Code Activity

Filters
 

- Clean Code Attribute
  - Consistency 3
  - Intentionality 3
  - Adaptability 0
  - Responsibility 3
- Software Quality
  - Security 1
  - Reliability 3
  - Maintainability 5
- Severity
  - Blocker 0
  - High 3
  - Medium 4
  - Low 2
  - Info 0

Bulk Change Select issues Navigate to issue 9 issues 55min effort

EmployeeCrudApi/EmployeeCrudApi/Controllers/EmployeeController.cs

☐ Consistency  
 Use 'GeneratedRegexAttribute' to generate the regular expression implementation at compile-time. No tags +  
 Open Not assigned Maintainability Code Smell Info ROSLYN 0min effort 1 hour ago

☐ Consistency  
 Use 'GeneratedRegexAttribute' to generate the regular expression implementation at compile-time. No tags +  
 Open Not assigned Maintainability Code Smell Info ROSLYN 0min effort 1 hour ago

☐ Intentionality  
 Make 'FormatName' a static method. pitfall +  
 Open Not assigned Maintainability Code Smell Minor 5min effort 1 hour ago

☐ Consistency  
 Member 'FormatName' does not access instance data and can be marked as static  
 Open Not assigned Maintainability Code Smell Info ROSLYN 0min effort 1 hour ago

☐ Intentionality  
 Member 'FormatName' should be used instead of the 'FormatName' extension method. pitfall +  
 Open Not assigned Maintainability Code Smell Minor 5min effort 1 hour ago

Activate Windows

Consistency | Not conventional

**Use 'GeneratedRegexAttribute' to generate the regular expression implementation at compile-time.**

roslyn:SYSLIB1045 external\_roslyn:SYSLIB1045 ROSLYN

Software qualities impacted: Maintainability

Open Not assigned Code Smell Info

Where is the issue? Activity

Open in IDE

Tags  
 No tags +

Line affected  
 L41

Effort  
 0 min

Introduced  
 1 hour ago

```

37 [HttpPost]
38 public async Task<IActionResult> Create([FromBody] Employee employee)
39 {
40     // Verificar si el nombre contiene números
41     if (Regex.IsMatch(employee.Name, @"[0-9]"))
  
```

Use 'GeneratedRegexAttribute' to generate the regular expression implementation at compile-time.

Esto indica que utilizar este atributo tiene un impacto medio a la hora de compilar y que el mismo podría intercambiarse para verificar si el nombre contiene un número.

Intentionality | Not clear

**Make 'FormatName' a static method.** [↗](#)

Methods and properties that don't access instance data should be static [csharpsquid:S2325](#)

Software qualities impacted: Maintainability

☐ Open

☐ Not assigned

☐ Code Smell

☒ Minor

Where is the issue?

Why is this an issue?

How can I fix it?

Activity

More info

Open in IDE

138

139

140

141

142

143

```
return Ok("Empleado eliminado correctamente.");
}
```

```
// Función auxiliar para formatear el nombre
private string FormatName(string fullName)
```

Make 'FormatName' a static method.

Indica que si la función para formatear el nombre no accede a instancias de datos, debería implementarse como una función estática.

Member 'FormatName' does not access instance data and can be marked as static [↗](#)

roslyn:CA1822 [external\\_roslyn:CA1822](#) ROSLYN

Software qualities impacted: Maintainability

☐ Open

☐ Not assigned

☐ Code Smell

☒ Info

Where is the issue?

Why is this an issue?

Activity

Open in IDE

138

139

140

141

142

143

```
return Ok("Empleado eliminado correctamente.");
}
```

```
// Función auxiliar para formatear el nombre
private string FormatName(string fullName)
```

Member 'FormatName' does not access instance data and can be marked as static

Indica lo mismo que el caso anterior.



Intentionality | Not efficient

**Indexing at Count-1 should be used instead of the "Enumerable" extension method "Last"** [↗](#)

Prefer indexing instead of "Enumerable" methods on types implementing "IList" [csharpsquid:S6608](#)

Software qualities impacted: Maintainability

Open

Not assigned

Code Smell

Minor

Where is the issue?

Why is this an issue?

How can I fix it?

Activity

More info

Open in IDE

Tags

performance

Line affected

L153

Effort

5 min

Introduced

1 hour ago

146

```
        if (parts.Length == 0) return fullName;
147
148        // Formatear cada parte del nombre con la primera letra en mayúscula
149        var firstNames = parts.Take(parts.Length - 1)
150            .Select(p => CultureInfo.CurrentCulture.TextInfo.ToTitleCase(p.ToLower()));
151
152        // Convertir el apellido (última parte) a mayúsculas
153        var lastName = parts.Last().ToUpper();
```

Indexing at Count-1 should be used instead of the "Enumerable" extension method "Last"

Indica que debería usarse otro método(Si count es i, deberíamos usar i-1) en vez del metodo "Last"

Responsibility | Not trustworthy

**Value type property used as input in a controller action should be nullable, required or annotated with the JsonRequiredAttribute to avoid under-posting.** [↗](#)

Value type property used as input in a controller action should be nullable, required or annotated with the JsonRequiredAttribute to avoid under-posting. [csharpsquid:S6964](#)

Software qualities impacted: Reliability

Open

Not assigned

Code Smell

Major

Where is the issue?

Why is this an issue?

How can I fix it?

Activity

More info

Open in IDE

Tags

asp.net

Line affected

L10

Effort

5 min

Introduced

1 hour ago

2

```
using System.Collections.Generic;
3
4 using System.Linq;
5
6 using System.Threading.Tasks;
7
8 namespace EmployeeCrudApi.Models
9 {
10     public class Employee
11     {
12         public int Id { get; set; }
13
14         public string Name { get; set; }
15         public DateTime CreatedDate { get; set; }
16     }
17 }
```

Value type property used as input in a controller action should be nullable, required or annotated with the JsonRequiredAttribute to avoid under-posting.

Este mensaje significa que cuando propiedades de tipo de valor se usan como parámetros de entrada en un controlador de ASP.NET, puede haber un riesgo de "under-posting", que ocurre cuando no se envían todos los datos necesarios al servidor.

Responsibility | Not trustworthy

**Make sure this database password gets changed and removed from the code.** [🔗](#)

Database passwords should not be disclosed [secrets:S6703](#)

Software qualities impacted: Security

☐ Open
 ☐ Not assigned
 ☒ Vulnerability
 ☐ Blocker

Tags

cwe +

Line affected
L3

Effort
30 min

Introduced
1 hour ago

Where is the issue?
Why is this an issue?
How can I fix it?
Activity
More info

Open in IDE

```

1  santin_ {
2      "ConnectionStrings": {
3          "DefaultConnection": "Server=localhost,1433;Initial Catalog=master;Persist Security Info=False;User ID=SA;Password=
YourStrongP@ssw0rd;MultipleActiveResultSets=False;Encrypt=False;TrustServerCertificate=True;Connection Timeout=30;"
4      },
5      "Logging": {
6          "LogLevel": {
7              "Default": "Information",
8              "Microsoft.AspNetCore": "Warning"
9          }
10     },
11     "AllowedHosts": "*"
12 }

```

**Make sure this database password gets changed and removed from the code.**

Nos indica que no deberíamos escribir los datos de ingreso a nuestra BD en nuestro código.

## 4.3 Pruebas de Integración con Cypress:

- 4.3.1 En el directorio raíz de nuestro proyecto Angular instalar el siguiente paquete:

```

PS C:\Users\santi\Documents\AA-Universidad\Ingeniería de Software III\angularcustom\EmployeeCrudAngular> npm install cy
press --save-dev

added 113 packages, and audited 1051 packages in 42s

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

11 vulnerabilities (7 moderate, 4 high)

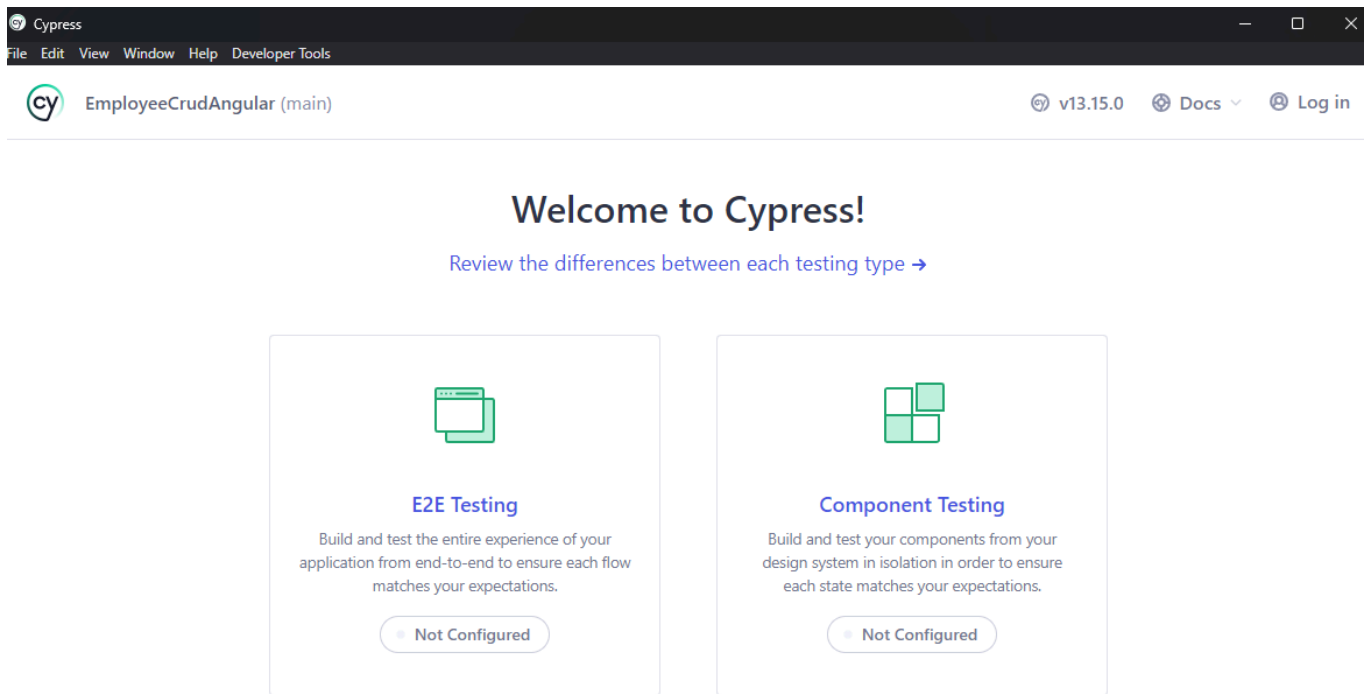
To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.

```

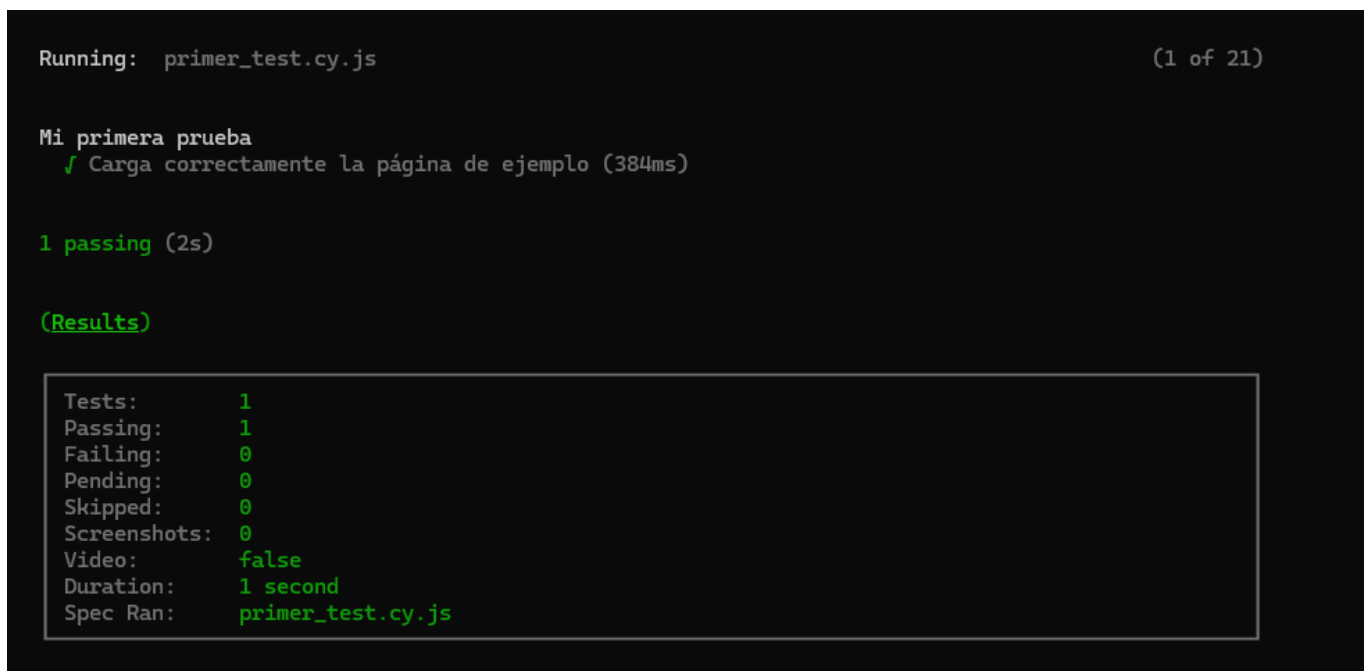
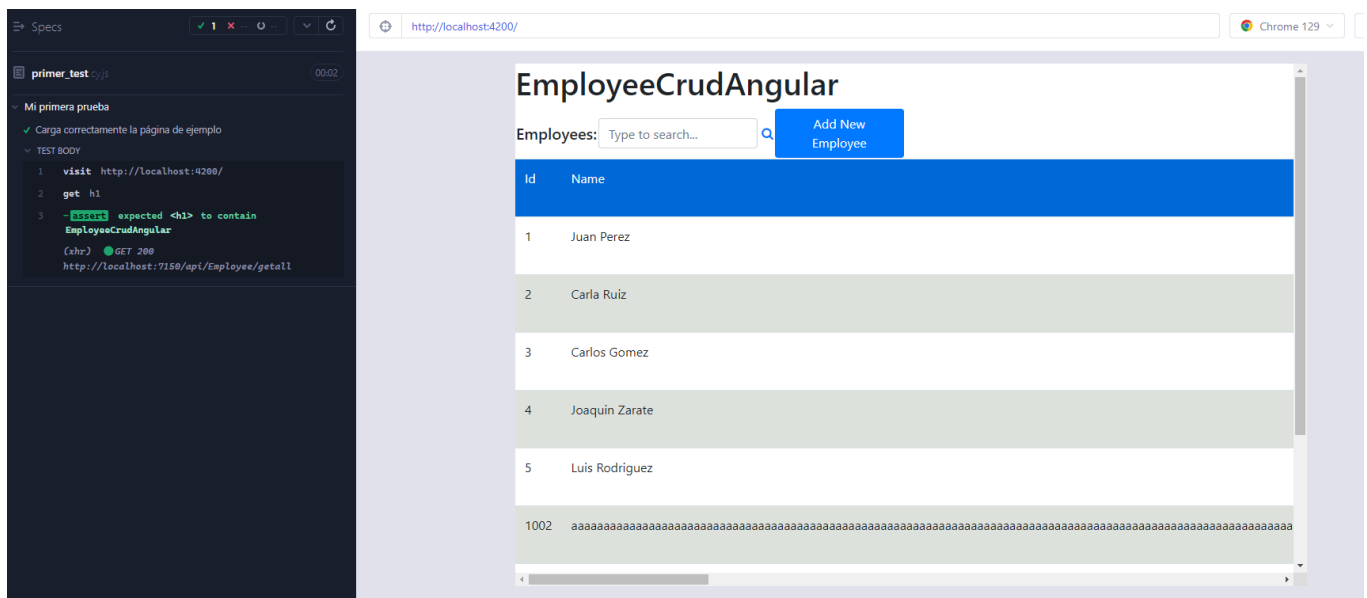
- 4.3.2 Abrir Cypress:



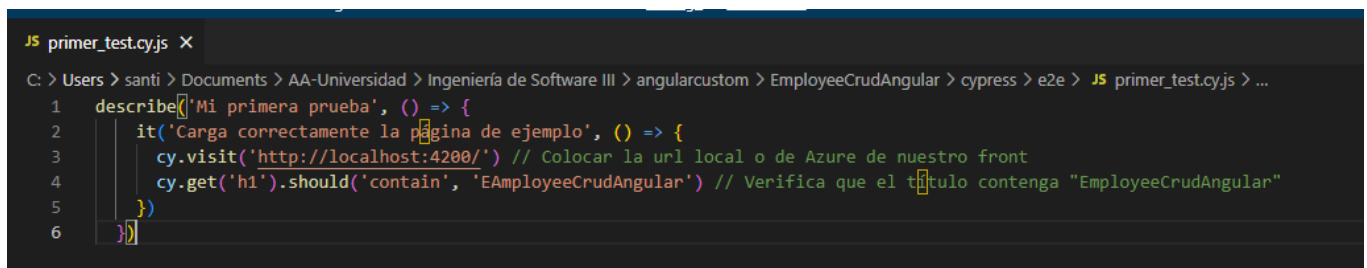
- **4.3.4 Crear nuestra primera prueba navegando a nuestro front.**

```
JS primer_test.cy.js X
C: > Users > santi > Documents > AA-Universidad > Ingeniería de Software III > angularcustom > EmployeeCrudAngular > cypress > e2e > JS primer_test.cy.js > ...
1 describe('Mi primera prueba', () => {
2   it('Carga correctamente la página de ejemplo', () => {
3     cy.visit('http://localhost:4200/') // Colocar la url local o de Azure de nuestro front
4     cy.get('h1').should('contain', 'EmployeeCrudAngular') // Verifica que el título contenga "EmployeeCrudAngular"
5   })
6 })
```

- **4.3.5 Correr nuestra primera prueba**



#### 4.3.6 Modificar nuestra prueba para que falle.



Running: primer\_test.cy.js

(1 of 21)

Mi primera prueba

1) Carga correctamente la página de ejemplo

0 passing (6s)

1 failing

1) Mi primera prueba

Carga correctamente la página de ejemplo:

AssertionError: Timed out retrying after 4000ms: expected '<h1>' to contain 'EEmployeeCrudAngular'  
at Context.eval (webpack://employee-crud-angular/./cypress/e2e/primer\_test.cy.js:4:19)

#### (Results)

```
Tests:      1
Passing:    0
Failing:    1
Pending:    0
Skipped:    0
Screenshots: 1
Video:      false
Duration:   6 seconds
Spec Ran:   primer_test.cy.js
```

### 4.3.6 Grabar nuestras pruebas para que Cypress genere código automático y genere reportes:

JS primer\_test.cy.js TS cypress.config.ts X

C: > Users > santi > Documents > AA-Universidad > Ingeniería de Software III > angularcustom > EmployeeCrudAngular > TS cypress.config.ts > ...

```
1 import { defineConfig } from "cypress";
2
3 export default defineConfig({
4   e2e: {
5     setupNodeEvents(on, config) {
6       // implement node event listeners here
7     },
8     reporter: 'junit', // Configura el reporter a JUnit
9     reporterOptions: {
10       mochaFile: 'cypress/results/results-[hash].xml', // Directorio y nombre de los archivos de resultados
11       toConsole: true, // Opcional: imprime los resultados en la consola
12     },
13   },
14   experimentalStudio: true,
15 });
16
17
```



```
JS primer_test.cy.js JS Employee_test.cy.js TS cypress.config.ts
C: > Users > santi > Documents > AA-Universidad > Ingeniería de Software III > angularcustom > EmployeeCrudAngular > cypress > e2e > JS Employee_test.cy.js > ...
1 describe('editEmployeeTest', () => {
2   it('Edita correctamente un empleado', () => {
3     cy.visit('http://localhost:4200/') // URL del front
4
5     // Haz clic en el botón de editar empleado
6     cy.get(':nth-child(7) > :nth-child(4) > a > .fa').click();
7
8     // Asegúrate de que el campo de texto esté visible y habilitado
9     cy.get('.form-control')
10      .should('be.visible')
11      .should('not.be.disabled')
12
13     cy.wait(500);
14
15     cy.get('.form-control').type('{selectall}{backspace}') // Selecciona todo el texto y lo elimina
16
17     cy.wait(500);
18
19     cy.get('.form-control').should('have.value', ''); // Verifica que el campo esté vacío
20
21     // Escribe el nuevo nombre
22     cy.get('.form-control').type('Emilia Schwindt Modified');
23
24     // Envía el formulario
25     cy.get('.btn').click();
26
27     // Verifica que el nombre fue actualizado correctamente
28     cy.get(':nth-child(7) > :nth-child(2)').should('have.text', ' Emilia Schwindt Modified ');
29   });
30 });
31
```

Specs

Employee\_test.cy.js 0002

```
(cypress) GET 200
http://localhost:7150/api/Employee/getall

(cypress) GET 200
http://localhost:7150/api/Employee/getbyid?id=1002

4 get .form-control
5 -expected expected <input.form-control.ng-untouched.ng-pristine.ng-valid> to be visible
6 -expected expected <input.form-control.ng-untouched.ng-pristine.ng-valid> not to be disabled
7 wait 500
8 get .form-control
9 -type {selectall}{backspace}
10 wait 500
11 get .form-control
12 -expected expected <input.form-control.ng-untouched.ng-valid.ng-dirty> to have value ''
13 get .form-control
14 -type Emilia Schwindt Modified
15 get .btn
16 -click
(cypress) PUT 200
http://localhost:7150/api/Employee/update
(new url) http://localhost:4200/

(cypress) GET 200
http://localhost:7150/api/Employee/getall

17 get :nth-child(7) > :nth-child(2)
18 -expected expected '<td>' to have text '<tbody>Emilia Schwindt MODIFIED</tbody>'
```

http://localhost:4200/

Chrome 129 1000x660

# EmployeeCrudAngular

Employees:

Id	Name	Created Date		
1	Juan Perez	05/09/2024 00:00:00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Carla Ruiz	05/09/2024 22:22:47	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Carlos Gomez	06/09/2024 09:16:50	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Joaquin Zarate	06/09/2024 09:19:37	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	Luis Rodriguez	06/09/2024 09:23:31	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1002	Emilia Schwindt MODIFIED	24/09/2024 18:56:26	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1003	Juan Carlos CHAMIZO	24/09/2024 19:08:54	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Activate Windows  
Go to Settings to activate Windows.