

MÁSTER UNIVERSITARIO EN DESARROLLO ÁGIL DE SOFTWARE PARA LA WEB

ASIGNATURA: INTEGRACIÓN CONTINUA EN EL DESARROLLO ÁGIL

CURSO 2024-25

TRABAJO FINAL

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Contenido

Trabajo final integración continua.....	2
1) Creación de la aplicación moviecards.....	2
2) Repositorio moviecards-service y despliegue en Azure.....	2
3) Nueva versión de moviecards.....	5
4) Añadir un nuevo atributo deadDate en la clase Actor.....	9
5) Implementación de DeadDate en MovieCards.....	10

Trabajo final integración continua

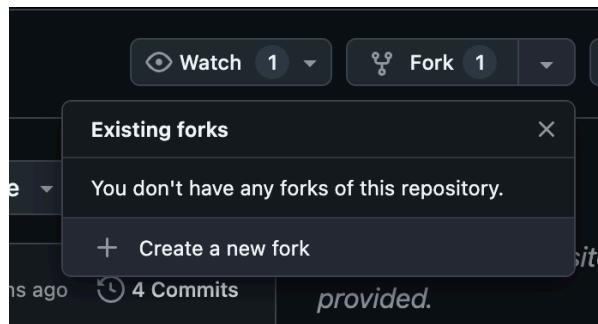
1) Creación de la aplicación moviecards

Se ha seguido la práctica guiada del tema 5 y la aplicación moviecards ha quedado desplegada en el siguiente enlace:

<https://moviecards-villar.azurewebsites.net/>

2) Repositorio moviecards-service y despliegue en Azure

Primero he hecho una copia del repositorio proporcionado en el enlace <https://github.com/josehilara/moviecards-service>. Para ello, desde git en Fork he seleccionado “+ Create a new fork”.



Le he puesto el nombre “moviecards-service” y le he dado a Create fork.

Create a new fork

A *fork* is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project. [View existing forks.](#)

Required fields are marked with an asterisk (*).

Owner * **Repository name ***

 adrianavillar / moviecards-service

moviecards-service is available.

By default, forks are named the same as their upstream repository. You can customize the name to distinguish it further.

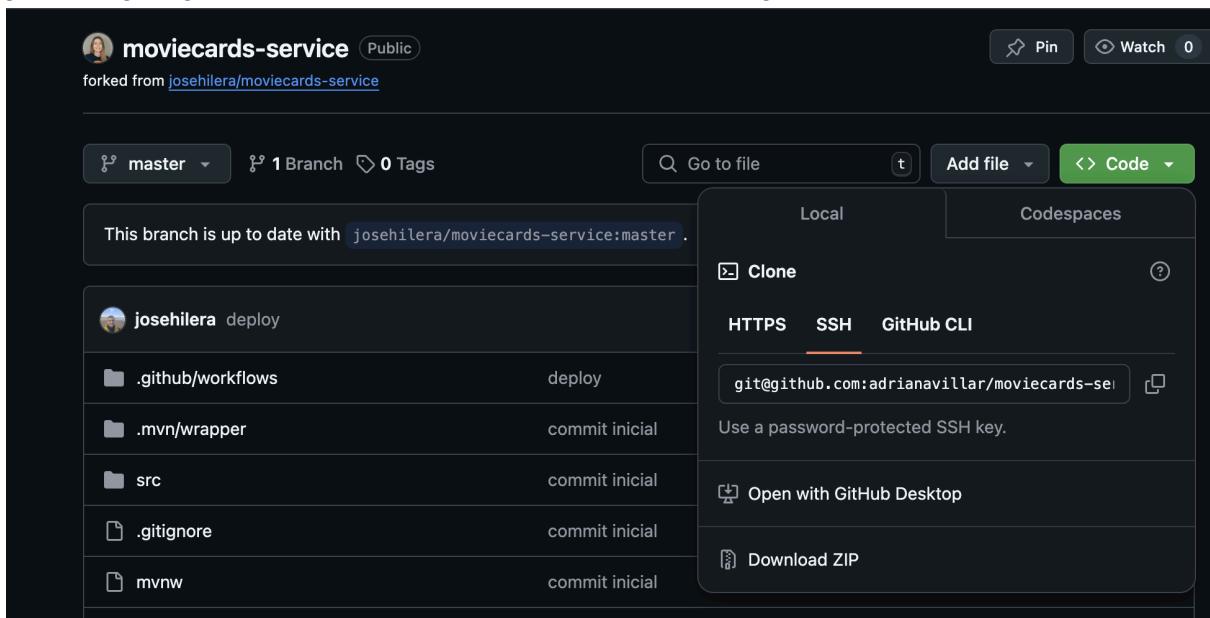
Description (optional)

Copy the master branch only
Contribute back to josehilera/moviecards-service by adding your own branch. [Learn more.](#)

 You are creating a fork in your personal account.

Create fork

Para clonar el repositorio en local he copiado la clave SSH y dentro de la carpeta donde quería clonarlo, desde la terminal de comandos he puesto lo siguiente:
git clone git@github.com:adrianavillar/moviecards-service.git



moviecards-service (Public)
forked from [josehilera/moviecards-service](#)

master 1 Branch 0 Tags

This branch is up to date with [josehilera/moviecards-service:master](#).

josehilera deploy

.github/workflows deploy
.mvn/wrapper commit inicial
src commit inicial
.gitignore commit inicial
mvnw commit inicial

Local Codespaces

Clone

HTTPS SSH GitHub CLI

git@github.com:adrianavillar/moviecards-service

Use a password-protected SSH key.

Open with GitHub Desktop

Download ZIP

```
~/Desktop/integracion-continua (2.042s)
git clone git@github.com:adrianavillar/moviefcards-service.git
Cloning into 'moviefcards-service'...
remote: Enumerating objects: 72, done.
remote: Counting objects: 100% (72/72), done.
remote: Compressing objects: 100% (43/43), done.
remote: Total 72 (delta 15), reused 66 (delta 13), pack-reused 0 (from 0)
Receiving objects: 100% (72/72), 76.44 KiB | 850.00 KiB/s, done.
Resolving deltas: 100% (15/15), done.
```

Después he seguido los pasos de la guía para hacer el despliegue en Azure (3.4 Trabajo deploy / 3.4.1 Despliegue continuo).

Una vez desplegado y accesible desde el enlace

<https://moviefcards-service-villar.azurewebsites.net/>, he probado los endpoints para comprobar que funcionaban correctamente.

The screenshot shows two separate Postman requests made to the endpoint <https://moviefcards-service-villar.azurewebsites.net/actors>.

Request 1 (POST):

- Method: POST
- URL: https://moviefcards-service-villar.azurewebsites.net/actors
- Body (raw JSON):

```
1 {
2   "id": "1",
3   "name": "Lady Gaga",
4   "birthDate": "1984-02-30",
5   "country": "EEUU",
6   "movies": []
7 }
```

Response 1: 200 OK (1608 ms, 75 B)

Request 2 (GET):

- Method: GET
- URL: https://moviefcards-service-villar.azurewebsites.net/actors
- Headers (3):
- Body (JSON):

Key	Value	Description	Bulk Edit
Key	Value	Description	

Response 2: 200 OK (209 ms, 218 B)

The screenshot shows a Postman interface with the following details:

- URL:** https://moviecards-service-villar.azurewebsites.net/actors/1
- Method:** GET
- Headers:** (6) (shown in the top bar)
- Body:** (JSON, Pretty) - The response body is a JSON object representing an actor:


```

1 {
2   "id": 1,
3   "name": "Lady Gaga",
4   "birthdate": "1984-03-01T00:00:00.000+00:00",
5   "country": "EEUU",
6   "movies": []
7 }
```
- Response Headers:** 200 OK, 448 ms, 216 B, Save Response, etc.

3) Nueva versión de moviecards

He creado una milestone nueva:

The screenshot shows a GitHub repository page for 'adrianavillar / moviecard'. The 'Milestones' tab is selected, showing a single milestone:

- Name:** Nueva version moviecards
- Status:** 0% complete (2 open, 0 closed)
- Actions:** Edit, Close, Delete

Después, he creado dos issues, me las he asignado a mi misma, al proyecto moviecards y a la milestone que acabo de crear “Nueva version moviecards”.

He pasado las dos issues a Todo, y una de ellas a In Progress:

Después de cambiar el código como indica la práctica, he hecho commit pero el proceso de despliegue ha fallado porque no ha superado la cobertura que tenía especificada:

```

qa
failed 1 minute ago in 24s

Review code quality with Sonarqube
110 [INFO] SUM publisher in SUM system was detected. You can use the sonar.scm.provider property to explicitly specify it.
117 [INFO] CPD Executor: 7 files had no CPD blocks
118 [INFO] CPD Executor: Calculating CPD for 10 files
119 [INFO] CPD Executor: CPD calculation finished (done) | time=6ms
120 [INFO] Analysis report generated in 33ms, dir size=246.9 kB
121 [INFO] Analysis report compressed in 22ms, zip size=87.8 kB
122 [INFO] Analysis report uploaded in 211ms
123 [INFO] -----
124 [INFO] Check Quality Gate status
125 [INFO] -----
126 [INFO] BUILD FAILURE
127 [INFO] -----
128 [INFO] Total time: 14.613 s
129 [INFO] Finished at: 2025-02-01T23:01:22Z
130 [INFO] -----
131 [ERROR] Failed to execute goal org.sonarsource.scanner.maven:sonar-maven-plugin:3.10.0.2504:sonar (default-cli) on project moviecards:
132 [ERROR]   QUALITY GATE STATUS: FAILED - View details on http://localhost:9000/dashboard?id=lauraceras%3Amoviecards -> [Help 1]
133 [ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
134 [ERROR] Re-run Maven using the -X switch to enable full debug logging.
135 [ERROR] -----
136 [ERROR] For more information about the errors and possible solutions, please read the following articles:
137 [ERROR] [Help 1] http://wiki.apache.org/confluence/display/MAVEN/MojoExecutionException
138 [Error] Process completed with exit code 1.

```

Por ello, he ido a SonarQube y he bajado el nivel de cobertura a 0% para que pueda seguir con el despliegue:

The screenshot shows the SonarQube Quality Gates interface. At the top, there's a message about a new version available. The main navigation bar includes Projects, Issues, Rules, Quality Profiles, Quality Gates (selected), and Administration. A search bar and a 'Create' button are also present.

Update Condition Dialog:

- Quality Gate fails when:** Coverage on New Code
- Operator:** Is less than
- Value:** 0
- Buttons:** Update Condition, Cancel

Main Configuration Page:

- Quality Gates:** Control calidad (Sonar way, DEFAULT, BUILT-IN)
- Conditions:**
 - Conditions on New Code:**

Metric	Operator	Value
Coverage	is less than	0.0%
Duplicated Lines (%)	is greater than	3.0%
Maintainability Rating	is worse than	A (Technical debt ratio is less than 5.0%)
Reliability Rating	is worse than	A (No bugs)
Security Hotspots Reviewed	is less than	100%
Security Rating	is worse than	A (No vulnerabilities)
 - Conditions on Overall Code:** (This section is collapsed in the screenshot)

He aprobado manualmente el workflow:

The screenshot shows a GitHub pull request titled "Manual approval required for workflow run 13093206216 #13".

Actions:

- Open**

Comments:

- adrianavillar** opened now
- Workflow is pending manual review.
URL: <https://api.github.com/adrianavillar/moviecard/actions/runs/13093206216>
- Required approvers: [adrianavillar]
- Respond "approved", "approve", "lgtm", "yes" to continue workflow or "denied", "deny", "no" to cancel.
- adrianavillar** self-assigned this now
- Add a comment**

Labels:

- None yet

Projects:

- No projects

Milestone:

- No milestone

Relationships:

- None yet

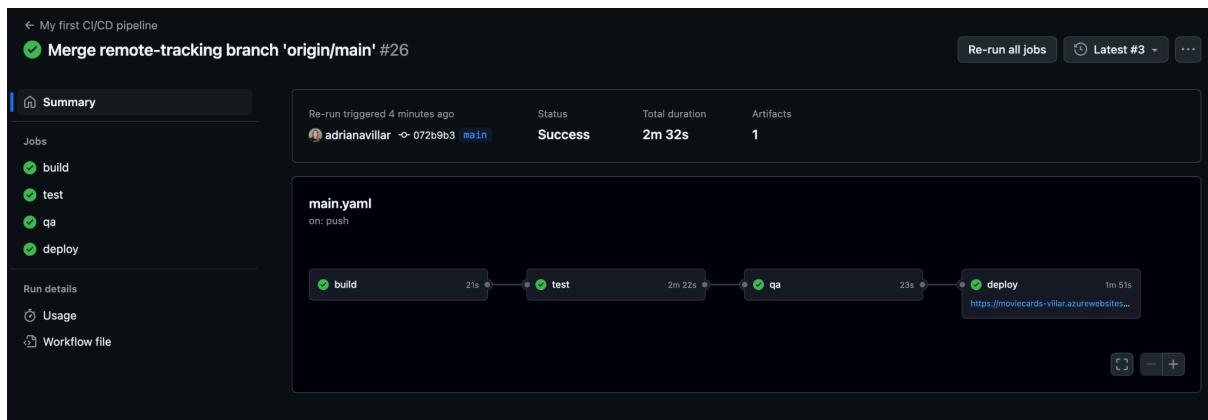
Development:

- Create a branch for this issue or link a pull request.

Notifications:

- Customize

Y ha finalizado el despliegue.



Para comprobarlo he añadido desde Postman un actor más y desde la aplicación he comprobado que salgan en el listado de actores:

```

GET https://moviecards-service-villar.azurewebsites.net/actors
200 OK
101 ms 320 B
[{"id": 1, "name": "Lady Gaga", "birthdate": "1984-03-01T00:00:00.000+00:00", "country": "EEUU", "movies": []}, {"id": 2, "name": "Katy Perry", "birthdate": "1998-07-05T00:00:00.000+00:00", "country": "EEUU", "movies": []}]
  
```

Identificador	Nombre	Fecha Nacimiento	País	Editar
1	Lady Gaga	01-03-1984	EEUU	<button>Editar</button>
2	Katy Perry	05-07-1998	EEUU	<button>Editar</button>

Por último, he pasado las dos issues a finalizado y el milestone también:

4) Añadir un nuevo atributo deadDate en la clase Actor

Dentro de la clase Actor.java he añadido el campo deadDate junto con sus respectivos getters y setters y he hecho commit.

```
@DateTimeFormat(pattern = "yyyy-MM-dd") 2 usages
private Date deadDate;
```

```
public Date getDeadDate() { return deadDate; }

public void setDeadDate(Date deadDate) { this.deadDate = deadDate; }
```

Desde postman he comprobado que funcionase correctamente y guardase la fecha de fallecimiento:

```

1  [
2    {
3      "id": 1,
4      "name": "Katy Perry",
5      "birthDate": "1998-07-05T00:00:00.000+00:00",
6      "country": "EEUU",
7      "movies": [],
8      "deadDate": "1999-07-05T00:00:00.000+00:00"
9    },
10   {
11     "id": 2,
12     "name": "Lady Gaga",
13     "birthDate": "1998-07-05T00:00:00.000+00:00",
14     "country": "EEUU",
15     "movies": [],
16     "deadDate": "1999-07-05T00:00:00.000+00:00"
17   }
18 ]

```

5) Implementación de DeadDate en MovieCards

He creado el milestone y las issues. Además, he pasado las issues a Todo.

Milestone Screenshot:

Issues Screenshot:

```

is:issue state:open

```

Issue Title	Author	Created At	Description
Reducir problemas críticos en SonarQube a menos de 5	adrianavillar	1 minute ago	#19 - adrianavillar opened 1 minute ago · ⚡ Implementación...
Actualizar pruebas de integración para incluir fecha de fallecimiento en actores	adrianavillar	2 minutes ago	#18 - adrianavillar opened 2 minutes ago · ⚡ Implementación...
Actualizar pruebas de integración para incluir fecha de fallecimiento en actores	adrianavillar	2 minutes ago	#17 - adrianavillar opened 2 minutes ago · ⚡ Implementación...
Modificar tests unitarios para manejar fecha de fallecimiento	adrianavillar	4 minutes ago	#16 - adrianavillar opened 4 minutes ago · ⚡ Implementación...
Modificar modelo y lógica para manejar fecha de fallecimiento	adrianavillar	4 minutes ago	#15 - adrianavillar opened 4 minutes ago · ⚡ Implementación...
Agregar trabajo "stage" al workflow para pre-producción	adrianavillar	6 minutes ago	#14 - adrianavillar opened 6 minutes ago · ⚡ Implementación...

The screenshot shows a Trello board titled "moviecards". It has three columns: "Todo" (6 items), "In Progress" (0 items), and "Done" (4 items). Each column contains several cards with descriptions and user icons.

- Todo:**
 - moviecard #16: Modificar tests unitarios para manejar fecha de fallecimiento
 - moviecard #17: Actualizar pruebas de integración para incluir fecha de fallecimiento en actores
 - moviecard #18: Actualizar pruebas de integración para incluir fecha de fallecimiento en actores
 - moviecard #19: Reducir problemas críticos en SonarQube a menos de 5
- In Progress:** No items in this column.
- Done:**
 - moviecard #2: Añadir color de fondo a la página principal
 - moviecard #3: Añadir color al título de la página principal
 - moviecard #9: Modificar el código de la aplicación en src/main
 - moviecard #10: Modificar el código de las pruebas en src/test

5.1)

He pasado la issue a In Progress:

The screenshot shows the same Trello board after one item has been moved. The "In Progress" column now contains one item:

- In Progress:** moviecard #14: Agregar trabajo "stage" al workflow para pre-producción

He vuelto a crear una nueva aplicación web en azure, esta vez llamada moviecards-pre-villar.

En cuanto al código he añadido en el main.yaml una nueva fase llamada stage antes de deploy:

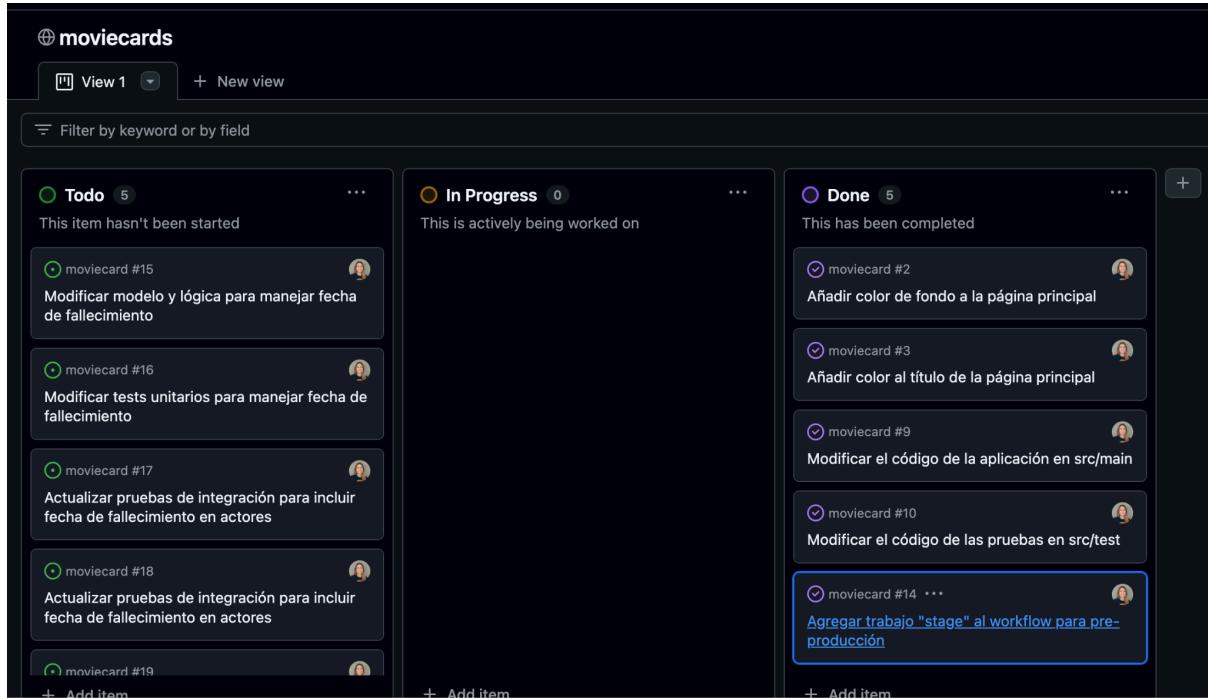
```

79   stage:
80     runs-on: ubuntu-latest
81     needs: qa
82     if: github.ref=='refs/heads/main'
83     environment:
84       name: 'Staging'
85       url: ${{ steps.deploy-to-webapp.outputs.webapp-url }}
86
87   steps:
88     - name: Download artifact from build job
89       uses: actions/download-artifact@v4
90       with:
91         name: moviecards-pre-java
92
93     - name: Deploy to Azure Web App (Staging)
94       id: deploy-to-webapp
95       uses: azure/webapps-deploy@v3
96       with:
97         app-name: 'moviecards-pre-villar'
98         slot-name: 'Staging'
99         package: '*.jar'
100        publish-profile: ${{ secrets.AZUREAPPSERVICE_PUBLISHPROFILE_12F11B88D8CE4CA7B28172DF9308BA566 }}
```

Una vez subidos los cambios quedan así las ramas. He hecho que la rama de producción dependa de la de preproducción porque así sería más seguro que todo se prueba bien antes de llegar a producción, pero depende del proyecto puede ser útil hacer pruebas rápidas en preproducción sin que afecten a producción y se podrían hacer en paralelo.

The screenshot shows the GitHub Actions pipeline interface. At the top, it says "My first CI/CD pipeline" and "Modificar secret de stagin #31". The status is "Success" with a duration of "6m 19s" and one artifact. On the left, there's a sidebar with "Summary", "Jobs" (listing build, test, qa, stage, deploy), "Run details", "Usage", and "Workflow file". The main area shows the "main.yml" workflow triggered via push 9 hours ago. It consists of five sequential steps: build, test, qa, stage, and deploy. Each step is green with a checkmark, indicating success. The total duration for the workflow is 6m 19s.

Ya podemos pasar la issue a terminado:



5.2) 5.3) 5.4) 5.5)

He hecho los cambios en las clases necesarias, además de agregar el campo `deadDate` y modificar los tests unitarios, de integración y end to end.

```

53
54     @Test ✘ adrianavillar
55     void testSetGetDeadDate() {
56         Date deadDateExample = new Date();
57         actor.setDeadDate(deadDateExample);
58         assertEquals(deadDateExample, actor.getDeadDate());
59     }
60

61
62     @Test ✘ adrianavillar
63     public void testSaveActor() {
64         Actor actor = new Actor();
65         actor.setName("actor");
66         actor.setBirthDate(new Date());
67         actor.setCountry("spain");
68         actor.setDeadDate(new Date());
69
70         Actor savedActor = actorJPA.save(actor);
71
72         assertNotNull(savedActor.getId());
73
74         Optional<Actor> foundActor = actorJPA.findById(savedActor.getId());
75
76         assertTrue(foundActor.isPresent());
77         assertEquals(savedActor, foundActor.get());
78     }

```

```

@Test - adrianavillar
public void testPageLoad() {
    driver.get("http://localhost:8089/actors/new");
    assertEquals( expected: "FichasPelículasApp | Aplicación de gestión de fichas de películas", driver.getTitle());

    assertTrue(driver.findElement(By.id("name")).isDisplayed());
    assertTrue(driver.findElement(By.id("birthDate")).isDisplayed());
    assertTrue(driver.findElement(By.id("country")).isDisplayed());
    assertTrue(driver.findElement(By.id("deadDate")).isDisplayed());

}

```

```

@Test - adrianavillar
public void testListActors() {
    driver.get("http://localhost:8089/actors");
    WebElement title = driver.findElement(By.className("card-header"));
    assertEquals( expected: "Listado Actores", title.getText());

    WebElement table = driver.findElement(By.className("table-hover"));

    WebElement thead = table.findElement(By.tagName("thead"));
    assertTrue(thead.isDisplayed());

    WebElement headerRow = thead.findElement(By.tagName("tr"));
    assertEquals( expected: "Identificador", headerRow.findElements(By.tagName("th")).get(0).getText());
    assertEquals( expected: "Nombre", headerRow.findElements(By.tagName("th")).get(1).getText());
    assertEquals( expected: "Fecha Nacimiento", headerRow.findElements(By.tagName("th")).get(2).getText());
    assertEquals( expected: "País", headerRow.findElements(By.tagName("th")).get(3).getText());
    assertEquals( expected: "Fecha Fallecimiento", headerRow.findElements(By.tagName("th")).get(4).getText());
    assertEquals( expected: "Editar", headerRow.findElements(By.tagName("th")).get(5).getText());

}

```

Antes de subirlos he comprobado que todos los tests pasaran y así corregir los que no.



Como no estoy en la rama main el paso de deploy se lo salta pero podemos ver que todos los tests han pasado correctamente.

Y dentro de la aplicación vemos que se muestra correctamente la columna de deadDate y en el formulario se ha añadido correctamente el campo:

Listado Actores

Identificador	Nombre	Fecha Nacimiento	País	Fecha Fallecimiento	Editar
1	Katy Perry	05-07-1998	EEUU	05-07-1999	<button>Editar</button>
2	Lady Gaga	05-07-1998	EEUU	05-07-1999	<button>Editar</button>

[Volver a la Página de Inicio](#)

He añadido un nuevo actor para comprobar el funcionamiento y podemos ver como se ha agregado en el listado de actores.

Editar Actor

Actor actualizado correctamente

Nombre

Harry

Fecha nacimiento

01/02/2003



País

España

Fecha fallecimiento

20/01/2023



Guardar

No hay ninguna película registrada en la que haya participado este actor

[Volver a la Página de Inicio](#)

[Volver al listado de actores](#)

Listado Actores

Identificador	Nombre	Fecha Nacimiento	País	Fecha Fallecimiento	Editar
1	Katy Perry	05-07-1998	EEUU	05-07-1999	<button>Editar</button>
2	Lady Gaga	05-07-1998	EEUU	05-07-1999	<button>Editar</button>
3	Harry	01-02-2003	España	20-01-2023	<button>Editar</button>

[Volver a la Página de Inicio](#)

He mergeado la rama que he creado con mi rama main:

Require approval from specific reviewers before merging

[Rulesets](#) ensure specific people approve pull requests before they're merged.

[Add rule](#)

[Hide all checks](#)

All checks have passed

4 successful and 1 skipped checks

	My first CI/CD pipeline / build (push)	Successful in 20s	Details
	My first CI/CD pipeline / test (push)	Successful in 3m	Details
	My first CI/CD pipeline / qa (push)	Successful in 24s	Details
	My first CI/CD pipeline / stage (push)	Successful in 34s	Details
	My first CI/CD pipeline / deploy (push)	Skipped	Details

This branch has no conflicts with the base branch

Merging can be performed automatically.

[Merge pull request](#)

You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

← My first CI/CD pipeline

✓ Merge pull request #24 from adrianavillar/añadir-campo-enddate #43

Re-run all jobs ⋮

Summary

Triggered via push 6 minutes ago

Status: Success | Total duration: 6m 22s | Artifacts: 1

adrianavillar pushed ↗ 7cc59d4 main

main.yaml
on: push

build 20s → **test** 2m 20s → **qa** 25s → **stage** 35s → **deploy** 2m 10s

<https://movierecords-pre-villar.azurewebsites.net>

<https://movierecords-villar.azurewebsites.net>

Jobs

- build
- test
- qa
- stage
- deploy

Run details

Usage

Workflow file

Ya está subido en la rama principal y en deploy.

Ya podemos marcar como finalizadas las diferentes issues:



5.6)

Primero desde sonarqube he modificado el número de critical issues por el que fallaría el despliegue a 4 (con 5 o más falla):

Conditions on Overall Code

Metric	Operator	Value	Actions
Critical Issues	is greater than	4	

You may click unlock to edit this quality gate. Adding extra conditions to a compliant quality gate can result in drawbacks. Are you reconsidering [Clean as You Code?](#) We strongly recommend this methodology to achieve a Clean Code status.

Luego he filtrado dentro de issues las que son críticas para poder modificarlas en el código:

Last analysis of this Branch had 2 warnings February 2, 2025 at 1:51 PM Version 0.0.1-SNAPSHOT

Project Settings ▾ Project Information 1 / 8 issues 1h 12min effort

Filters My Issues All Clear All Filters

Issues in new code

Type: Bug 0, Vulnerability 2, Code Smell 6

Severity: CRITICAL (Blocker 2, Critical 8, Minor 7, Info 42, Major 1)

Scope: Resolution, Status, Security Category, Creation Date

Bulk Change

src/.../moviecards/controller/ActorController.java

- Define a constant instead of duplicating this literal "actor" 3 times. (11 days ago, L40%, design, Code Smell, Critical, Open, Not assigned, 8min effort, Comment)
- Define a constant instead of duplicating this literal "title" 3 times. (11 days ago, L41%, design, Code Smell, Critical, Open, Not assigned, 8min effort, Comment)
- Define a constant instead of duplicating this literal "actors/form" 4 times. (11 days ago, L42%, design, Code Smell, Critical, Open, Not assigned, 10min effort, Comment)
- Replace this persistent entity with a simple POJO or DTO object. (11 days ago, L46%, design, Vulnerability, Critical, Open, Not assigned, 10min effort, Comment)

src/.../moviecards/controller/MovieController.java

- Define a constant instead of duplicating this literal "movie" 3 times. (11 days ago, L40%, design, Code Smell, Critical, Open, Not assigned, 8min effort, Comment)
- Define a constant instead of duplicating this literal "title" 3 times. (11 days ago, L41%, design, Code Smell, Critical, Open, Not assigned, 8min effort, Comment)
- Define a constant instead of duplicating this literal "movies/form" 4 times. (11 days ago, L42%, design, Code Smell, Critical, Open, Not assigned, 10min effort, Comment)
- Replace this persistent entity with a simple POJO or DTO object. (11 days ago, L46%, design, Vulnerability, Critical, Open, Not assigned, 10min effort, Comment)

He hecho en local los cambios correspondientes y lo he desplegado para comprobarlo:

```
private static final String ACTOR_ATTRIBUTE = "actor"; 3 usages
private static final String TITLE_ATTRIBUTE = "title"; 3 usages
private static final String ACTORS_FORM_ATTRIBUTE = "actors/form"; 4 usages
```

Podemos ver en sonarqube que hemos reducido los fallos críticos a dos:

Last analysis of this Branch had 2 warnings February 2, 2025 at 2:32 PM Version 0.0.1-SNAPSHOT

Project Settings ▾ Project Information 1 / 2 issues 20min effort

Filters My Issues All Clear All Filters

Issues in new code

Type: Bug 0, Vulnerability 2, Code Smell 0

Severity: CRITICAL (Blocker 4, Critical 2, Minor 7, Info 42, Major 1)

Scope: Resolution, Status, Security Category, Creation Date

Bulk Change

src/.../moviecards/controller/ActorController.java

- Replace this persistent entity with a simple POJO or DTO object. (11 days ago, L49%, design, Vulnerability, Critical, Open, Not assigned, 10min effort, Comment)

src/.../moviecards/controller/MovieController.java

- Replace this persistent entity with a simple POJO or DTO object. (11 days ago, L49%, design, Vulnerability, Critical, Open, Not assigned, 10min effort, Comment)

Y vemos que ha pasado sin problemas la fase de qa:

Triggered via push 6 minutes ago	Status	Total duration	Artifacts
adrianavillar pushed -> d810513 main	Success	5m 27s	1

main.yaml
on: push

build → test → qa → stage → deploy

Para finalizar he pasado la última issue a terminado:

The image shows a three-column kanban board interface. The left column is labeled "Todo" (0 items) with the description "This item hasn't been started". The middle column is labeled "In Progress" (0 items) with the description "This is actively being worked on". The right column is labeled "Done" (10 items) with the description "This has been completed". Each "Done" item is represented by a card with a purple circle icon, a title, a user profile picture, and a brief description. At the bottom of each column are "+ Add item" buttons.

Y he cerrado la milestone:

The image shows a list of three closed milestones. Each milestone is represented by a horizontal bar indicating 100% completion, followed by the count of open and closed items. Below each bar are "Edit", "Reopen", and "Delete" buttons. The milestones are:

- Implementación de Fecha de Fallecimiento en MovieCards**
Closed now (Last updated less than a minute ago)
100% complete 0 open 6 closed
Edit Reopen Delete
- Nueva versión moviercards para utilizar el nuevo servicio**
Closed 13 hours ago (Last updated about 14 hours ago)
100% complete 0 open 2 closed
Edit Reopen Delete
- Aplicación con colores**
Closed 19 hours ago (Last updated about 19 hours ago)
100% complete 0 open 4 closed
Edit Reopen Delete