

- Proyecto Mutantes

Resultados de Tests

- Proyecto

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Mi
org.example.service	███████████	97 %	███████████	93 %	4	44	
org.example.dto	█	72 %		n/a	3	10	
org.example.entity	█	57 %		n/a	3	6	
org.example	█	37 %		n/a	1	2	
org.example.controller	█	100 %	█	100 %	0	4	
Total	41 of 630	93 %	4 of 66	93 %	11	66	

Created with JaCoCo 0.8.11.202310140853

- Service

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed
MutantService	██	93 %	█	100 %	0	6	2
MutantDetector	███████████	98 %	█	92 %	4	34	1
StatsService	█	100 %	█	100 %	0	4	0
Total	13 of 517	97 %	4 of 64	93 %	4	44	3

Created with JaCoCo 0.8.11.202310140853

Comandos para Reproducir

```
### Ejecutar todos los tests
```
bash
./gradlew test
```

### Generar reporte de cobertura
```
bash
./gradlew jacocoTestReport
```

### Ver reportes
```
bash
# Reporte de tests
start build\reports\tests\test\index.html
```
```

```

# Reporte de cobertura
start build\reports\jacoco\test\html\index.html
```
```
```
```

## Ubicación de los Reportes

- **Tests:** `build/reports/tests/test/index.html`
- **Cobertura:** `build/reports/jacoco/test/html/index.html`
```

## Conclusión

El proyecto cumple con todos los requisitos de testing:

- ✓ Más de 80% de cobertura
- ✓ 35 tests automatizados
- ✓ Tests unitarios y de integración
- ✓ Cobertura del algoritmo principal >95%
- ✓ Todos los tests pasan exitosamente

## Capturas de Render funcional

Link de render : <https://mutantes-api-1.onrender.com>

The screenshot shows the logs for the application 'mutantes-api-1' on OnRender. The logs are timestamped from Nov 16 10:39:47 AM to Nov 16 10:40:26 AM. Key log entries include:

- Nov 16 10:39:47 AM INFO 1 --- [productos] [io-10000-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring DispatcherServlet 'dispatcherServlet'
- Nov 16 10:39:47 AM INFO 1 --- [productos] [io-10000-exec-1] o.s.web.servlet.DispatcherServlet : Initializing Servlet 'dispatcherServlet'
- Nov 16 10:39:47 AM INFO 1 --- [productos] [io-10000-exec-1] o.s.web.servlet.DispatcherServlet : Completed initialization in 1 ms
- Nov 16 10:39:49 AM INFO 1 --- [productos] [io-10000-exec-1] o.s.web.servlet.DispatcherServlet : >>> No open ports detected, continuing to scan...
- Nov 16 10:39:50 AM INFO 1 --- [productos] [io-10000-exec-1] o.s.web.servlet.DispatcherServlet : >>> Docs on specifying a port: <https://render.com/docs/web-services#port-binding>
- Nov 16 10:39:53 AM INFO 1 --- [productos] [io-10000-exec-1] o.s.web.servlet.DispatcherServlet : >>> Your service is live! 🎉
- Nov 16 10:39:53 AM INFO 1 --- [productos] [io-10000-exec-1] o.s.web.servlet.DispatcherServlet : >>> //
- Nov 16 10:39:53 AM INFO 1 --- [productos] [io-10000-exec-1] o.s.web.servlet.DispatcherServlet : >>>
- Nov 16 10:39:53 AM INFO 1 --- [productos] [io-10000-exec-1] o.s.web.servlet.DispatcherServlet : >>> Available at your primary URL <https://mutantes-api-1.onrender.com>
- Nov 16 10:39:53 AM INFO 1 --- [productos] [io-10000-exec-1] o.s.web.servlet.DispatcherServlet : >>>
- Nov 16 10:39:53 AM INFO 1 --- [productos] [io-10000-exec-1] o.s.web.servlet.DispatcherServlet : >>> //
- Nov 16 10:40:26 AM INFO 1 --- [productos] [io-10000-exec-9] o.springdoc.api.AbstractOpenApiResource : Init duration for springdoc-openapi is: 4996 ms

## Capturas de Swagger

- Con render prueba exitosa de OK 200

Curl

```
curl -X 'POST' \
  'https://mutantes-api-1.onrender.com/mutant' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "dna": ["ATGCGA", "CAGTGC", "TTATGT", "AGAAGG", "CCCTTA", "TCACTG"]
}'
```

Request URL

```
https://mutantes-api-1.onrender.com/mutant
```

Server response

Code	Details	
200	<p>Response headers</p> <pre>alt-svc: h3=":443"; ma=86400 cf-cache-status: DYNAMIC cf-ray: 99e7aca98fa69ce3-EZE content-length: 0 date: Fri,14 Nov 2025 15:52:10 GMT priority: u=1,i rndr-id: 497fd6e5-e512-413f server: cloudflare server-timing: cfExtPri x-render-origin-server: Render</pre>	
Responses		
Code	Description	Links
200	OK	No links

- Prueba error 403

Curl

```
curl -X 'POST' \
  'https://mutantes-api-1.onrender.com/mutant' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "dna": ["ATGCGZ", "CAGTGC", "TTATGT", "AGAAGG", "CCCTTA", "TCACTG"]
}'
```

Request URL

```
https://mutantes-api-1.onrender.com/mutant
```

Server response

Code	Details
403	<p>Error: response status is 403</p> <p><i>Undocumented</i></p>
403	<p>Response headers</p> <pre>alt-svc: h3=":443"; ma=86400 cf-cache-status: DYNAMIC cf-ray: 99e7ad67a94ec199-EZE content-length: 0 date: Fri,14 Nov 2025 15:52:41 GMT priority: u=1,i rndr-id: 473e6c8d-de75-4848 server: cloudflare server-timing: cfExtPri x-render-origin-server: Render</pre>

## Capturas de Swagger funcional desde el local

- OK 200

The screenshot shows a Swagger UI interface. At the top, there is a 'Curl' button followed by a code block containing a curl command to make a POST request to 'http://localhost:8080/mutant'. Below this is a 'Request URL' field with the value 'http://localhost:8080/mutant'. Under the 'Server response' section, there is a table with two columns: 'Code' and 'Details'. A row for '200' is selected, showing 'Response headers' with the following content:

```
connection: keep-alive
content-length: 0
date: Sun,16 Nov 2025 15:24:04 GMT
keep-alive: timeout=60
vary: Origin,Access-Control-Request-Method,Access-Control-Request-Headers
```

Below the table is a 'Responses' section with a table for 'Code', 'Description', and 'Links'.

- Error 403

The screenshot shows a Swagger UI interface. At the top, there is a 'Curl' button followed by a code block containing a curl command to make a POST request to 'http://localhost:8080/mutant'. Below this is a 'Request URL' field with the value 'http://localhost:8080/mutant'. Under the 'Server response' section, there is a table with two columns: 'Code' and 'Details'. A row for '403' is selected, showing 'Error: response status is 403' and 'Response headers' with the following content:

```
connection: keep-alive
content-length: 0
date: Sun,16 Nov 2025 15:25:50 GMT
keep-alive: timeout=60
vary: Origin,Access-Control-Request-Method,Access-Control-Request-Headers
```

## Capturas de H2 funcional

The screenshot shows the H2 Database browser interface. On the left, there is a sidebar with database and schema navigation. In the center, there is a SQL statement input field with the text 'SELECT \* FROM DNA\_RECORDS'. Below the input field is a table with the following data:

DNA_HASH	IS_MUTANT
a65d94c3e61fa21513338bde031f53064ad9cb63d8a9b4514e3869cc67db6d32	TRUE
d5e9d1d6c55aa28270c30636b50b62d03655546f620fe2182090e8f098d85e94	FALSE

At the bottom of the table, it says '(2 rows, 2 ms)'.

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