Testing report

DELIVERABLE 2

DESING AND TESTING 2

2024-2025

MIGUEL GONZÁLEZ ORTIZ

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|  |  |
| --- | --- |
| Group: 21 | |
| Members | Email |
| Sánchez Márquez, Julia | [julsanmar2@alum.us.es](mailto:javgarrod5@alum.us.es) |
| García Rodríguez, Javier | [javgarrod5@alum.us.es](mailto:javgarrod5@alum.us.es) |
| González Ortiz, Miguel | [miggonort1@alum.us.es](mailto:miggonort1@alum.us.es) |
| Palomo García, Miguel | [migpalgar1@alum.us.es](mailto:migpalgar1@alum.us.es) |
| Periáñez Franco, Luis Javier | [luiperfra1@alum.us.es](mailto:luiperfra1@alum.us.es) |

GitHub repository: <https://github.com/miggonort1/Acme-ANS-D04>

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# Executive Summary

This report contains the information obtained through the execution of functional and performance tests. In order to show that the indicated methodology has been followed and the conclusions we have reached after the tests.

**Revision Table**

|  |  |  |
| --- | --- | --- |
| Revision Number | Date | Description |
| v1r0 | 26/05/2025 | First version |

# Introduction

The content of this report is divided into two parts, one with the functional testing analysis and the other with the performance testing analysis.

During the tests I had to make changes in the authorization of a method that was not well implemented, also after the performance tests I have implemented indexes as indicated in the theory slides.

# Contents

**Functional testing**

The tests have been performed following the methodology proposed in the theory slides, obtaining as much coverage as possible.

In my test case I have performed additional tests on the intermediate entity and its functionalities.

**Claim**

**Interfaz de usuario gráfica

El contenido generado por IA puede ser incorrecto.**

* List-mine

The test of the list-mine functionality consisted of viewing the list of claims whose assistant agent is the logged-in person. For the hacking, an attempt was made to access this list without having sufficient permissions, in this case trying to log in with a user of another role or a non-logged in user. The coverage obtained was 100%.

* Show

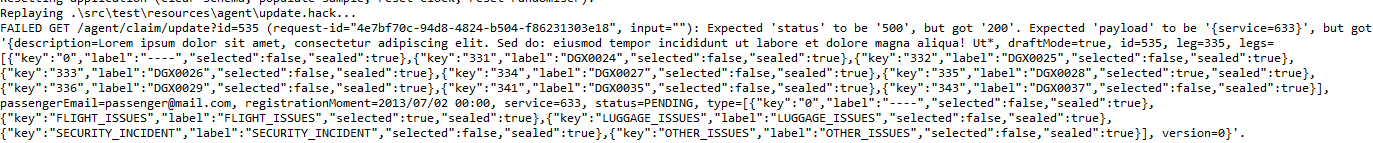
The test of the show functionality consisted of viewing the details of a claims. For the hacking, we tried to access this list without having sufficient permissions, in this case trying to log in with a user of another role and make a show of a claim of which you are not the assistant agent, as well as trying to make a show of a claim with an id that does not exist. The coverage obtained was 100%.

* Create

The test of the create functionality consisted in creating claims with all possible variations in their attributes including not allowed values to check that the appropriate error message is triggered. For the hacking we tried to create with a non-logged user. The coverage obtained was 94,4%.

* Update

The test of the update functionality consisted in updating claims with all possible variations in their attributes including not allowed values to check that the appropriate error message is triggered. For the hacking we tried to update with a non-logged user, also a non-existing claim and it was also tested to try to update an unpublished claim with a user logged in as assistant agent but who is not the owner of that claim. The coverage obtained was 95.9%.

For the claim hacking update tests, I encountered an issue: the expected error code is 500, but the actual response is 200 when attempting to validate a hacking attempt by modifying the date using the browser’s F12 developer tools. Although this discrepancy appears during test replay, the application does handle the attempt to change the date by returning an authorization error. Therefore, it would be impossible to successfully hack the date field.

* Delete

The test of the update functionality consisted in deleting a claim. For the hacking we tried to delete a claim without being logged in, also a non-existing claim and we tried to delete an unpublished claim while logged in as assistant agent without being owner of that claim. The coverage obtained was 98,1%.

* Publish

The test of the update functionality consisted in publishing a claim. For the hacking we tried to publish a claim that was already published, also a non-existing claim and we tried to publish an unpublished claim while logged in as assistant agent without being owner of that claim. The coverage obtained was 95,6%.

**Tracking logs**

**Interfaz de usuario gráfica, Aplicación

El contenido generado por IA puede ser incorrecto.**

* List-mine

The test of the list-mine functionality consisted of viewing the list of tracking logs whose assistant agent is the logged-in person. For the hacking, an attempt was made to access this list without having sufficient permissions, in this case trying to log in with a user of another role or a non-logged in user. The coverage obtained was 94,9%.

* Show

The test of the show functionality consisted of viewing the details of a tracking log. For the hacking, we tried to access this list without having sufficient permissions, in this case trying to log in with a user of another role and make a show of an tracking log of which you are not the assistant agent, as well as trying to make a show of a tracking log with an id that does not exist. The coverage obtained was 96.2%.

* Create

The test of the create functionality consisted in creating tracking logs with all possible variations in their attributes including not allowed values to check that the appropriate error message is triggered. For the hacking we tried to create with a non-logged user. The coverage obtained was 97.7%.

* Update

The test of the update functionality consisted in updating tracking logs with all possible variations in their attributes including not allowed values to check that the appropriate error message is triggered. For the hacking we tried to update with a non-logged user, also a non-existing tracking log and it was also tested to try to update a tracking log with a user logged in as assistant agent but who is not the owner of that tracking log. The coverage obtained was 94.7%.

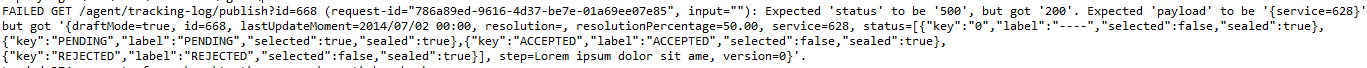
For the tracking logs hacking update tests, I encountered an issue: the expected error code is 500, but the actual response is 200 when attempting to validate a hacking attempt by modifying the date using the browser’s F12 developer tools. Although this discrepancy appears during test replay, the application does handle the attempt to change the date by returning an authorization error. Therefore, it would be impossible to successfully hack the date field.



* Publish

The test of the update functionality consisted in publishing a tracking log. For the hacking we tried to publish a tracking log that was already published, also a non-existing tracking log and we tried to publish an unpublished tracking log while logged in as assistant agent without being owner of that tracking log. The coverage obtained was 94,9%.

For the tracking logs hacking publish tests, I encountered an issue: the expected error code is 500, but the actual response is 200 when attempting to validate a hacking attempt by modifying the date using the browser’s F12 developer tools. Although this discrepancy appears during test replay, the application does handle the attempt to change the date by returning an authorization error. Therefore, it would be impossible to successfully hack the date field.



* Delete

The test of the update functionality consisted in deleting an tracking log. For the hacking we tried to delete a tracking log without being logged in, also a non-existing tracking log and we tried to delete a tracking log while logged in as assistant agent without being owner of that tracking log. The coverage obtained was 92.1%.

**Performance testing**

During the performance analysis, the performance before and after the indexes were implemented was analyzed.

* Analysing performance

Average of the times obtained before the implementation of indexes:

**Interfaz de usuario gráfica, Gráfico, Aplicación, Excel

El contenido generado por IA puede ser incorrecto.**

Average of the times obtained after the implementation of indexes:

Aplicación

El contenido generado por IA puede ser incorrecto.

Comparison of the analyses obtained before and after the implementation of the indexes:

Interfaz de usuario gráfica, Aplicación, Tabla, Excel

El contenido generado por IA puede ser incorrecto.

Z-test analysis:

Tabla

El contenido generado por IA puede ser incorrecto.

After the z-test, the p-value (critical z-value for a two-tailed test) is not within the range (0 - alpha), where alpha = 0.05. Therefore, my changes involving indexes do not improve performance, as there are too few indexes to observe any significant improvement.

# Conclusion

Everything went as expected.

# Bibliography

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