DESIGN AND TESTING 2
COURSE SUMMARY

Group 2
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Content
Summary of the project developed during the course.

Content

1.- GitHub repository

All of our code is located in the master branch of the following repository:

https://github.com/gii-is-DP2/DP2-1920-GI-02

2.- Finish levels in each deliverable

- Deliverable 1: Level 10 (including A+ project *Custom AssertionJ assertions*)
- Deliverable 2: Level 10 (including A+ project *Cucumber*)
- Deliverable 3: Level 9

3.- Tasks performed for each Sprint

3.1.- Tasks performed for Sprint 1

In the first Sprint, we performed the following tasks:

a) Come up with an idea for the application
b) design the domain model
c) specify the user stories
d) specify examples for each user story
e) make a plan for when to perform each task during the remaining three sprints.

3.2.- Tasks performed for Sprint 2

In the previous Sprint, we defined the user stories that were going to be implemented and their positive and negative acceptance tests.

User stories have been distributed for each team member by implementation block:

Claudia Guerrero → Implement a payment:
A secretary can do a payment of a visit. The payment can be pay with cash or creditcard.

Miguel Macarro → New system of making an appointment. New view with visits' vet.

Jose Manuel Volante → Implement a diagnosis:
A vet can add a diagnosis to a visit. The diagnosis can have some prescriptions and medicines.

The process that we have carried out in the sprint is:

1. Each team member has implemented then functionalities that has been distributed by block of the previous Sprint. Of 100% we have the % done. It would look like this:

	Done	To make
Claudia Guerrero	US7 – US8 – US9 – US10 – US11 – US12	US18
Miguel Macarro	US1 – US2 – US3 – US4	US5a – US5b – US6 – US19
Jose Manuel Volante	US13 – US14 – US15 – US16	US17 – US20 – US21

2. All unit tests have been performed for each of the methods created. We have done unit tests for controller, validators, services and query repositories. Positive and negative test has been done for each of these methods.

3. Everything implemented is in master. Then we do the revision of this unit tests. Each member team has been assigned someone else's tests to review and add new ones if necessary.

4. For Travis, we have changed the repository from private to public. Now it works well and pass all the test project.

3.3.- Tasks performed for Sprint 3

The process that we have carried out in the sprint is:

5. Each team member has **implemented** the remaining functionalities of his implementation block. These consisted of the following user stories:

	Done
Claudia Guerrero	US18
Miguel Macarro	US5a – US5b – US6 – US19
Jose Manuel Volante	US17 – US20 – US21

   We now have implemented 100% of the user stories.

6. All **unit tests** have been performed for each of the new methods created. We have done unit tests for controller, validators, services and query repositories. Positive and negative test has been done for each of these methods.

7. We created **parameterized tests** for some unit tests, among others, for example:
   - VisitValidatorTests
   - AdminControllerTests
   - CreditCardValidatorTests
   - PaymentValidatorTests
8. We added an **external service** to our application: The Lorem Flickr API. We use this API to obtain a random image for a given keyword and size via a GET request. We then show this image on our site.

9. We created **customized AssertionJ** assertions for all the classes in our model. We then replaced all uses of assertions in our unit tests with calls to the custom assertions where possible.

10. We created **24 UI tests**, one positive and one negative for each of 12 selected user stories.

11. Later, we transformed the UI tests to work with **cucumber**.

12. We created an **end-to-end test** suite for each **controller** in our application.

13. We created a **contract test** for the LoremFlickr **API** .

14. We created **database integration tests**.

15. Everything is in master. Then we do the **revision** of all things. Each member team has been assigned someone else's tests to review and add new ones if necessary.

3.4.- Tasks performed for Sprint 4

A)- Performance tests (level 6)

For each of our 22 user stories, we performed performance tests (both stress and load tests for a combination of a positive and negative scenario for each user story):

Team Member	Performance tests
Claudia Guerrero	US7 – US12, US18
Miguel Macarro	US1-US6,
Jose Manuel Volante	US13 – US17, US19-US21

The performance tests are described in the report performance.pdf.

B)- Profiling (level 8)

We performed 4 profilings using glowroot on the user stories that gave the worst results in the performance testing:

Team Member	Profiling
Miguel Macarro	Profiling 1
Claudia Guerrero	Profiling 2
Jose Manuel Volante	Profiling 3
	Profiling 4

The profilings are detailed in part 1 of the document profiling.pdf

C)- Code refactoring (level 8)

Claudia Guerrero performed 3 refactorings based on code smells. They are detailed in the

report refactoring.pdf.

D)- Optimization by refactoring based on profilings (level 9)

Because of a misunderstanding of the requirements, for level 9 we performed three (instead of one) refactorings based on profilings. Based on the profilings 2, 3, and 4, we improved the corresponding user stories by refactoring the code:

Team Member	Optimization based on ..
Claudia Guerrero	Profiling 2
Miguel Macarro	Profiling 3
José Manuel Volante	Profiling 4

The refactorings based on profiling are described in the second part of the report profiling.pdf.

E)- Use of Sonarcloud

We used Sonarcloud to show the difference in code quality before and after the refactoring. The conclusions are included in the report refactoring.pdf

4.- Retrospectives for each Sprint

4.1.- Retrospective for Sprint 1

a.- Team retrospective

Generally this Sprint went well because all members team work about the same and the tasks that proposed in the planning have been fulfilled.

b.- Individual retrospective

Regarding individual perspective of each, it is believed that the Sprint went well and we don't have any problem.

Individual performance in hours about this Sprint 2:

Member	Hours
Claudia Guerrero	25
Miguel Macarro	25
Jose Manuel Volante	25

4.2.- Retrospective for Sprint 2

a.- Team retrospective

Generally this Sprint went well because all members team work about the same and the tasks that proposed in the planning have been fulfilled.

With the implementation of new functionalities we don't have any problems.
Then, with the unit tests we have some problems that we don't know how to do test controllers and other negatives tests.
We have resolved this because we studied some concepts about it and because we worked together a lot. The team has done three or four meetings all weeks. So if someone have a problem, the partners help with it in the meetings.
For this reason, nobody has been stuck in any task.

b.- Individual retrospective

Regarding individual perspective of each, it is believed that the Sprint went well and we don't have any problem.

Individual performance in hours about this Sprint 2:

Member	Hours
Claudia Guerrero	48
Miguel Macarro	50
Jose Manuel Volante	45

4.3.- Retrospective for Sprint 3

a.- Team retrospective

Generally this Sprint went well because all members team work about the same and the tasks that proposed in the planning have been fulfilled.

With the implementation of new functionalities, we don't have any problems.

We did have quite a few problems executing the UI test because the would unpredictably work some times and fail other times. After investigating the issue, we found out that it was caused by the chromedrive attempting to click on an element before it was actually loaded. We tried to solve this issue by introducing ChromeDriverWait statements but that didn't work either. The solution that we finally came up with was to introduce Thread.sleep() statements. While not as elegant as using ChromeDriveWait, this solution makes that the tests work all the time.

The team has done three or four meetings all weeks. So if someone have a problem, the partners help with it in the meetings.
For this reason, nobody has been stuck in any task.

b.- Individual retrospective

Regarding individual perspective of each, it is believed that the Sprint went well and we don't have any problem.

Individual performance in hours about this Sprint 3:

Member	Hours
Claudia Guerrero	75
Miguel Macarro	75
Jose Manuel Volante	65

4.4.- Retrospective for Sprint 4

a.- Team retrospective

Generally, this Sprint went well because all members team work about the same and the tasks that proposed in the planning have been fulfilled.

We had quite a few problems with the performance tests using gatling. We had underestimated the time it took it perform them, making us fall behind schedule for this Sprint. This is one of the reasons why, unfortunately, we could not do a A+ project for this sprint.

The team has done three or four meetings all weeks. So if someone have a problem, the partners help with it in the meetings.
For this reason, nobody has been stuck in any task.

b.- Individual retrospective

Regarding individual perspective of each, it is believed that the Sprint went well and we don't have any problem.

Individual performance in hours about this Sprint 3:

Member	Hours
Claudia Guerrero	55
Miguel Macarro	55
Jose Manuel Volante	55