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HW1: Mid-term assignment report

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1 Introduction

1.1 Overview of the work

The purpose of the presented application is to show the information of the most recent COVID19 status in a certain county of Portugal. It's name is Covid19 Portugal.

1.2 Current limitations

I wasn't able to implement most of the tests, either because they wouldn't work or because of poor time management skills. Nevertheless, the application works, it has a logger and a working cache.

2 Product specification

2.1 Functional scope and supported interactions

The user is able to interact with the application by introducing the name of a city to search for. After that, they can either search for other cities or look at the changes that the cache suffered by changing to the cache page.

Logger:

```
2021-05-14 16:49:21.309  WARN 197629 --- [nio-8080-exec-3] ua.public_health.app.cache.Cache         : Cache call MISS for location aveiro.
2021-05-14 16:49:21.309  INFO 197629 --- [nio-8080-exec-3] u.public_health.app.service.API_Service  : API Service call to get data from location: aveiro
2021-05-14 16:49:22.969  INFO 197629 --- [nio-8080-exec-4] u.p.app.controller.UIController          : Interface Controller call to get cache page
2021-05-14 16:49:22.969  INFO 197629 --- [nio-8080-exec-4] ua.public_health.app.cache.Cache         : Cache call HIT count: 2
2021-05-14 16:49:22.969  INFO 197629 --- [nio-8080-exec-4] ua.public_health.app.cache.Cache         : Cache call MISS count: 4
2021-05-14 16:49:22.969  INFO 197629 --- [nio-8080-exec-4] ua.public_health.app.cache.Cache         : Cache call REQUEST count: 6
2021-05-14 16:49:28.426  INFO 197629 --- [nio-8080-exec-5] u.p.app.controller.UIController          : Interface Controller call to get data home page
2021-05-14 16:49:30.169  INFO 197629 --- [nio-8080-exec-6] u.p.app.controller.UIController          : Interface Controller call to get data for location aveiro
2021-05-14 16:49:30.169  INFO 197629 --- [nio-8080-exec-6] ua.public_health.app.cache.Cache         : Cache call HIT for location aveiro
2021-05-14 16:49:31.409  INFO 197629 --- [nio-8080-exec-7] u.p.app.controller.UIController          : Interface Controller call to get cache page
2021-05-14 16:49:31.409  INFO 197629 --- [nio-8080-exec-7] ua.public_health.app.cache.Cache         : Cache call HIT count: 3
2021-05-14 16:49:31.409  INFO 197629 --- [nio-8080-exec-7] ua.public_health.app.cache.Cache         : Cache call MISS count: 4
2021-05-14 16:49:31.409  INFO 197629 --- [nio-8080-exec-7] ua.public_health.app.cache.Cache         : Cache call REQUEST count: 7
```

2.2 System architecture

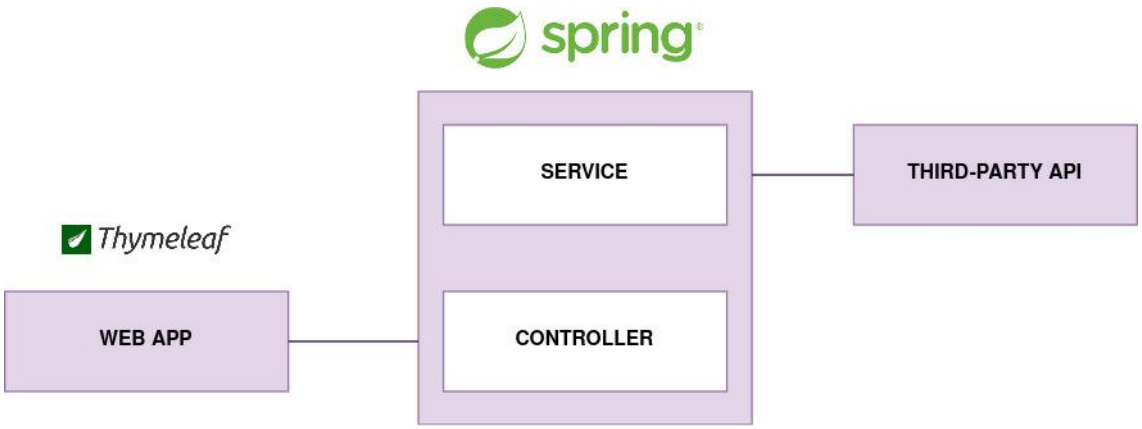

Figure 1: Software Architecture

The services created interact directly with the third party API and fetch all the necessary data to its corresponding entity/model.

The controller, on the other hand, was used to manipulate the web app and to create allo the necessary endpoints.

2.3 API for developers

Cache endpoints:
- /cache

REST:
- /info/location_names
- /info/by_location/{location}

3 Quality assurance

3.1 Overall strategy for testing

The goal was to implement tests for all the components that were developed, such as: controller, service, model, user interface and cache. Out of those 5, only 2 were completed and only 1 was functional (cache).

Nevertheless, the next step, for the UI, would be to run the tests with selenium IDE on firefox, export to jUnit and then change accordingly to what would be necessary.

For the controller I would have to create a mock of the service, because it's what it's used in the real controller. This would be done using mockito.

For the model, although no validators are implemented, some tests could be created.

Finally, as the last step, I intended to use SonarQube to statically analyze the state of the code and make as many changes as necessary (given their importance, of course).

4 References & resources

Project resources

- Video demo and ready to use application: https://github.com/carolinaaraujo00/TQS/tree/main/HW1