Escuela Técnica Superior de Ingeniería Informática

**Planning report D01**



Degree in Computer Engineering – Software Engineering  
Design and Testing II.

Academic year 2024 – 2025

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| **Laboratory group C1.005** | | |
| **Alphabetised authors** | **Role** | **Role description** |
| Artero Bellido Manuel – manartbel@alum.us.es | Manager | Makes plans, creates and supervises tasks, initialises the repository and writes reports |
| Calderón Rodríguez, Manuel María -mancalrod@alum.us.es | Operator | Creates deployment configurations, deploys the application, keeps the application running and writes reports |
| González Benito, Claudio – clagonben@alum.us.es | Developer | Creates development configuration, customises the starter, implements features, does informal testing and writes reports |
| Márquez Gutiérrez, José Manuel – josmargut@alum.us.es | Tester | Does formal testing and writes reports |
| Ramos Vargas, Alba – albramvar1@alum.us.es | Analyst | Elicits requirements, defines features, creates the domain model and writes reports |

# Versioning

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| --- | --- | --- |
| Date | Version | Description |
| 20/02/2025 | V1.0.0 | Creation of the report |

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# Executive summary

This document serves as a summary of the knowledge of the team previous to the subject and lists all the concepts that were considered if not fully mastered, sufficiently understood by the members of the team.

# Introduction

This document will analyze the knowledge of the team before starting the project. Not only does this allow the tutors to contextualize the experience and knowledge of the members but it will also allow the students to see the progress they’ve made once the project ends.

It considers other courses that all of the members have passed and doesn’t mention any knowledge that any one member may have acquired on their own, as it doesn’t reflect on the whole team.

# Our testing knowledge

Before starting this course, the team passed Design and Testing 1. This provides ample context for the knowledge that we will expand during this semester even if there are some areas that may be neglected.

In this course we learned the following:

* The concept of ‘Subject Under Test’ or SUT and the different kinds of tests that can be implemented and when each one is suitable and called for.
* Good practices and rules of thumb, this includes:
  + Parameterizing unit tests
  + Focusing and simplifying tests to simplify debugging
  + Fluent assertions
  + DAMP (Descriptive And Meaningful Phrases”) principle to improve readability
* Structure of a test, number of test cases when dealing with conditional, ranges, collections and loops.
* Making sure to test both positive and negative test cases.

As we used layered architecture, we learned and implemented the following kinds of tests:

* Unit tests
* Integration tests
* End-to-end tests
* Acceptance tests

As we used the Spring-boot framework, we learned of the different kinds of:

* Sociable and individual tests
* Test doubles
  + Dummies
  + Stubs
  + Spies
  + Mocks
  + Fakes

Some tools we used are:

* Junit5: for backend unit tests
* Mockito: for using mocks in tests
* Jest: for testing React components in frontend

# Conclusions

Even if our testing knowledge is recent and not too specific, we consider that we are ready to delve into the subject and deepen our understanding of software as a whole and how testing can optimize and better our coding.

# References

* Universidad de Sevilla, Escuela Técnica de Ingeniería Informático. Design and Testing I, [Unit 7: Introduction to information systems testing](https://ev.us.es/ultra/courses/_89406_1/outline/file/_4939112_1). (accessed 20 of February 2025).
* Universidad de Sevilla, Escuela Técnica de Ingeniería Informático. Design and Testing I, [Unit 8: Information systems testing](https://ev.us.es/ultra/courses/_89406_1/outline/file/_4967146_1). (accessed 20 of February 2025).