Universidad de Sevilla  
Escuela Técnica Superior de Ingeniería Informática

**Analysis report D02**



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

Academic year 2024 – 2025

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# Versioning

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| --- | --- | --- |
| Date | Version | Description |
| 13/03/2025 | v1.0.0 | Creation of the report |
| 02/07/2025 | V2.0.0 | Updated version due to new call |

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# Executive summary

This document serves as a report necessary for the correct execution of the project. In it, the doubts generated along with the development of the project, especially when interpreting the requirements given by the department, will be analyzed and resolved.

The objective of this deliverable was to initialize the entities of the domain, given each student given an independent group of interconnected entities to implement. I as Student 3 had to implement the Flight Crew Members, their Flight Assignments and their Logs.

# Introduction

This report includes a detailed analysis of any and all requirements deemed not specific enough. There will be a reference to the requirements, a listing of the possible options and a conclusion of how the doubt was resolved, aided by the validation of a professor when available.

# Contents

## Information Requirement 3

*“The flight crew members are the people responsible for operating aircrafts and ensuring passenger safety and comfort during a flight. The system must store the following data about them: an employee code (unique, pattern "^[A-Z]{2,3}\d{6}$", where the first two or three letters correspond to their initials), a phone number (pattern "^\+?\d{6,15}$"), their language skills (up to 255 characters), their availability status ("AVAILABLE", "ON VACATION", "ON LEAVE"), the airline they are working for, and their salary. Optionally, the system may store his or her years of experience.”*

### Problems

The main problem with this requirement is the optionality of the third initial and how this affects the uniqueness of the code. There are two possible implementations:

1. Option 1: Considering only the first two characters of the code, that is the name and the first (or only) surname.
2. Option 2: Considering the initial of the name and studying if the crew member has one or two surnames, and then equaling these two surnames initials to the other 2 characters of the code.

### Conclusions

The implementation that I went for was the first option given that the possibilities of the second option giving a false validation is too high and the validation provided by the first option is more than enough.

### Validation

There is a thread on the forum regarding this issue. The answer from the professor was:

*“Si nos hablan de las primeras dos o tres, eso significa que son las dos primeras las que deben coincidir dado que la tercera es opcional; por lo tanto, sea cual sea la tercera letra la daremos por buena siempre y cuando las dos primeras coincidan.”*

While the conversation is regarding the Manager entity and not the FlightCrewMember one, due to their similarities in structure and especially in their identifier code, I decided to use the feedback.

The comment and thread can be found in the following [link](https://ev.us.es/webapps/discussionboard/do/message?action=list_messages&course_id=_89154_1&nav=discussion_board&conf_id=_426211_1&forum_id=_253522_1&message_id=_460881_1)[[1]](#endnote-1).

## Information Requirement 5

*“An activity log records incidents that occur during a flight. They are logged by any of the flight crew members assigned to the corresponding leg and after the leg has taken place. The incidents include weather-related disruptions, route deviations, passenger issues, or mechanical failures, to mention a few. Each log entry includes a registration moment (in the past), a type of incident (up to 50 characters) a description (up to 255 characters), and a severity level (ranging from 0 to 10, where 0 indicates no issue and 10 represents a highly critical situation).”*

### Problems

I’ve chosen the entity because of the related posts on the forum but this same line of questioning is also applicable to the entity FlightAssignment. The main problem with this requirement is the relation to leg, whether to include it in the model or not. There are two possible implementations:

1. Option 1: implement a relation to the entity Leg by the Student 1, understanding the description of the entity literally.
2. Option 2: do not include the relation, given the nature of the project and the individuality of different students’ requirements and implement only a relation to FlightAssignment.

### Conclusions

Finally, I chose the second option after a in-class follow-up and the evaluation of the project itself, as explained in the syllabus. Either of the implementation would have been correct but considering this is a project made to be evaluated and not really to be used as such, leaving the requirements of each student independent seemed the best option.

### Validation

There is a thread on the forum regarding this issue. The answer from the professor was:

*“Los requisitos del estudiante S03 indican que los tripulantes de un vuelo (flight crew members) tienen asignadas tareas (flight assignments) en el contexto de un tramo (leg) específico de un determinado vuelo (flight). También indican que cada tarea puede llevar asociado un conjunto de logs (activity logs) que describen posibles incidencias que hayan ocurrido durante el desarrollo de la misma. Es decir, tenemos un modelo del siguiente corte:*

*A black and white text

AI-generated content may be incorrect.”*

The original message from the student was related to the relation with FlightAssignment and not Leg, however, the model used to solve the question asked did not include Leg and so it validates the decision taken.

The comment and thread can be found in the following [link](https://ev.us.es/webapps/discussionboard/do/message?action=list_messages&course_id=_89154_1&nav=discussion_board&conf_id=_426211_1&forum_id=_253522_1&message_id=_460028_1)[[2]](#endnote-2).

# Conclusions

As proposed in the previous analysis report, controlling the forum for other students’ doubts helps to deal with unspecific requirements and clear doubts about how to implement things.

# References

1. Forum: Tutorials, <https://ev.us.es/webapps/discussionboard/do/message?action=list_messages&course_id=_89154_1&nav=discussion_board&conf_id=_426211_1&forum_id=_253522_1&message_id=_460881_1> (accessed 10/03/2025) [↑](#endnote-ref-1)
2. Forum: Tutorials, <https://ev.us.es/webapps/discussionboard/do/message?action=list_messages&course_id=_89154_1&nav=discussion_board&conf_id=_426211_1&forum_id=_253522_1&message_id=_460028_1> (accessed 10/03/2025) [↑](#endnote-ref-2)