# Requirements – Student #3

Please, fill in the following form, make sure that you have ticked the requirements that you consider fulfilled, save this document, **and attach it in its original format (.docx)** to every deliverable. Regarding your ID, please keep only four random digits and mask the others using an asterisk. **Please, note that this document must be edited with the desktop version of Word since the web version does not properly support forms.** Attaching this document entails that you are the authors of the work delivered, you have not cheated in any way, and you have read and understood the information delivered regarding the subject, with a special emphasis on the methodological guidelines and how your work is going to be graded. Make sure that your project works well with the latest version of the development framework.

|  |
| --- |
| **Group:** C2.027 |
| **Repository:** https://github.com/DP2-C1-027/AirNav-Logistics-C2 |
| Student #2  **ID Number:** 4\*8\*\*7\*4L  **UVUS:**  mannizcob  **Name:**  Niza Cobo, Manuel Jesús  **Roles:**  Manager, Developer |
| **Date:** 02/13/2025 |

# MANDATORY Deliverable D01: introduction

## Information requirements

Intentionally blank.

## Functional requirements

1. Modify the anonymous menu so that it shows an option that takes the browser to the home page of your favourite web site. The title must read as follows: “〈id-number〉: 〈surname〉, 〈name〉”, where “〈id-number〉” denotes your DNI, NIE, or passport number, “〈surname〉” denotes your surname/s, and “〈name〉” denotes your name/s.

X

## Non-functional requirements

Intentionally blank.

## Testing requirements

Intentionally blank.

## Managerial requirements

1. Provide a link to your planning dashboard in GitHub to review the tasks, their current status, and your schedule.

X

# MANDATORY Deliverable D02: data models

## Information requirements

1. 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**.

X ¿Por qué se ha colocado la anotación @ValidIdentifier en la cabecera de la clase y no del atributo?

A screenshot of a computer program

Description automatically generated

**Comment – Student:** La anotación ValidIdentifier usaba un validador a nivel de clase que comprobaba que el código cumpliese con el regex y que las letras del código se correspondiese con las iniciales del usuario.  
  
Para evitar la confusión, se ha procedido a renombrar la anotación ValidIdentifier a ValidFlightCrewMember (solo comprueba las iniciales con las letras del código) y se ha mantenido una anotación a nivel de atributo ValidIdentifier que solo comprueba el regex en el código.  
Texto

El contenido generado por IA puede ser incorrecto.  
Además ahora admite 3 letras en el código, antes solo permitía 2 letras. En caso de no cumplir la regla tanto el validador de atributo como el de clase muestran un mensaje personalizado.

1. A **flight assignment** represents the allocation of a **flight crew member** to a specific **leg** of a flight. Each assignment specifies the flight crew's **duty** in that leg ("PILOT", "CO-PILOT", "LEAD ATTENDANT", "CABIN ATTENDANT"), the **moment** of the last update (in the past), the **current status** of the assignment ("CONFIRMED", "PENDING", or "CANCELLED"), and some **remarks** (up to 255 characters), if necessary.

X En las sesiones de teoría se ha explicado que existen tres anotaciones relacionadas con la persistencia, @Automapped, @Temporal y @Column, sólo una de ellas es necesaria para cada atributo

A close-up of a text

Description automatically generated

**Comment – Student:** Efectivamente, solo es necesario una de ellas. Se ha procedido a eliminar las anotaciones innecesarias, además, se ha realizado una revisión en otras clases que tengan el mismo problema y se han modificado.

FlightAssignment:

Texto

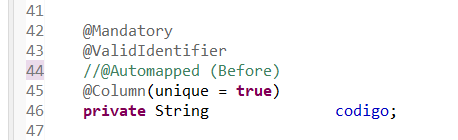
El contenido generado por IA puede ser incorrecto.

ActivityLog:

Texto

El contenido generado por IA puede ser incorrecto.

FlightCrewMember:



1. 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).

X

## Functional requirements

Intentionally blank.

## Non-functional requirements

Intentionally blank.

## Testing requirements

1. Produce assorted sample data to test your application informally. The data must include four **flight crew** **member** accounts with credentials “**memberX**/**memberX**” with X ranging from 1 to 4 (and different duties each). Additionally, create a fifth member account **member/member**,representing a new member with no flight assignment, as if the account had just been created.

X Si intento acceder con member/member se indica que hay un fallo en la autenticación. Significa que no se ha creado:

A close-up of a white and pink box

Description automatically generated

**Comment – Student:** Se creó por error un usuario con credenciales member5/member5. Se ha modificado estas credenciales a member/member. Este nuevo usuario tiene de estado “AVAILABLE” y está vinculado a una aerolinea con legs disponibles para asignar, pero no contempla ningún flight assignment creado, como pide el requisito.

Texto

El contenido generado por IA puede ser incorrecto.

## Managerial requirements

1. Provide a link to your planning dashboard in GitHub to review the tasks, their current status, and your schedule.

X

# MANDATORY Deliverable D03: implementing features

## Information requirements

Intentionally blank.

## Functional requirements

1. Operations by **flight crew members** on **flight assignments**:

* List the flight assignments separately, one for completed flight legs and another one for those planned but that have not taken place yet.
* Show the details of their flight assignments and the associated legs and flight crew members.
* Create, update, and publish their flight assignments. Only crew members with duty “LEAD ATTENDANT” can perform these operations. Please, note that to publish a flight assignment these cannot be linked to legs that have already occurred. Additionally, only flight crew members with an "AVAILABLE" status can be assigned to a leg, and they cannot be assigned to multiple legs simultaneously. Lastly, each leg can only have one pilot and one co-pilot. The allocation of remaining roles for other flight crew members is at the discretion of the “LEAD ATTENDANT”. Flight assignments can be updated or deleted as long as they have not been published.

X Se pide que se muestren los detalles del flight assingnment y las legs asociadas así como los miembros de la tripulación asignados a esa leg. No veo ninguna opción para consultar eso en la vista de detalle de un flight assignment:

A screenshot of a computer

Description automatically generated

**Comment – Student:** Se ha procedido a añadir varios campos read only para mostrar los detalles de la leg y del flight crew member asociados a ese flight assignment.

Considerando que el nombre del flight crew member no es suficiente, se ha optado por mostrar todos los campos relacionados.

Tabla

El contenido generado por IA puede ser incorrecto.

Considerando que el número de vuelo no es suficiente, se ha optado por mostrar todos los campos relacionados.

Interfaz de usuario gráfica, Aplicación

El contenido generado por IA puede ser incorrecto.

Se podría considerar qué campos de los mostrados son más relevantes que otros, los cuales podrían no mostrarse. Ante la duda he optado por la opción menos excluyente.

No permite publicar dos flight assignments para la misma persona en distintas legs que no tienen ningún solapamiento. A continuación, procedo a comentar los pasos:

He creado un nuevo member con credenciales member/member y he creado dos flight assignments con el duty de "PILOT". Uno lo he publicado y el otro está aún sin publicar. Cuando intento publicar el segundo, indica que ese miembro ya está asignado. En efecto tiene otro flight assignment como "PILOT" pero en otra leg que tiene lugar 10 meses después.

A screenshot of a computer

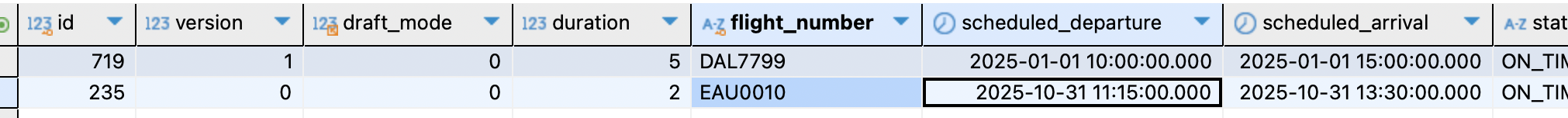
Description automatically generated

Hago clic en la primera fila para publicar ese flight assignement y se muestra lo siguiente:

A screenshot of a computer

Description automatically generated

Es cierto que está asignado en otra leg, pero como muestro a continuación, una leg tiene lugar en enero y la otra en octubre, no hay razón alguna por la que un member no pueda estar asignado a dos legs. Se puede comprobar las fechas de cada leg en la BD:



El problema está en que la consulta no es correcta:



No se puede indicar que la fecha del flight assignment sea mayor o igual que la fecha actual del sistema. Se tendría que comprobar que no tenga otra asignación en las fechas (de las legs) en las que ya tiene alguna asignación publicada.

Tal y como está la aplicación actual, un miembro sólo puede tener un assignment publicado (si se realiza a través de la interfaz).

**Comment – Student:** Se ha comprobado el caso en concreto y efectivamente es algo que el sistema debería contemplar. Ha sido modificado de tal manera que los flight crew members ahora pueden publicar un flight assignment vinculados a una leg si la franja de tiempo en la que se efectua la leg no entra en conflicto con otra ya publicada por ese flight crew member.

Procedo a mostrar un ejemplo **SIN** conflictos en la franja de tiempo:

1) Se publica este flight assignment vinculado al member1 cuya leg trascurre desde las 18:30 del día 1/10/2025 – 23:30 del día 1/10/2025.

Interfaz de usuario gráfica, Texto, Aplicación, Correo electrónico

El contenido generado por IA puede ser incorrecto.

2) Procedemos a crear un flight assignment vinculado al member1 cuya leg trascurre desde las 11:20 del día 18/04/2025 – 15:35 del día 18/04/2025. Ambas legs ocurren en franjas de tiempo diferentes.

Interfaz de usuario gráfica, Texto, Aplicación, Correo electrónico

El contenido generado por IA puede ser incorrecto.

Interfaz de usuario gráfica, Texto, Aplicación, Correo electrónico, Sitio web

El contenido generado por IA puede ser incorrecto.

3) El sistema permite realizar la acción de publicación.

Interfaz de usuario gráfica, Texto, Aplicación, Correo electrónico

El contenido generado por IA puede ser incorrecto.

Procedo a mostrar un ejemplo **CON** conflictos en la franja de tiempo:

1) Se publica este flight assignment vinculado al member1 cuya leg trascurre desde las 11:15 del día 30/11/2025 – 13:30 del día 30/11/2025.

Tabla

El contenido generado por IA puede ser incorrecto.

2) Modifico una leg con código DAL0015 que tiene relación con el member1 para que la franja de tiempo entre en conflicto con la recien publicada DAL0014.

Interfaz de usuario gráfica, Texto

El contenido generado por IA puede ser incorrecto.

3) Procedemos a crear un flight assignment vinculado al member1 cuya leg es la recien modificada DAL0015 que trascurre desde las 10:15 del día 30/11/2025 – 12:30 del día 30/11/2025. Ambas legs se cruzan en el tiempo, por lo que el flight crew member no puede estar en dos sitios a la vez.

Interfaz de usuario gráfica, Texto, Aplicación, Correo electrónico

El contenido generado por IA puede ser incorrecto.

Interfaz de usuario gráfica, Texto, Aplicación, Correo electrónico

El contenido generado por IA puede ser incorrecto.

3) El sistema no permite realizar la acción de publicación.

Interfaz de usuario gráfica, Texto, Aplicación, Correo electrónico

El contenido generado por IA puede ser incorrecto.

A partir de aquí, se para la evaluación.

1. Operations by **flight crew members** on **activity log records**:

* List the activity log records in their flight assignments.
* Show the details of their activity log records.
* Create, update, delete and publish activity log records. They cannot be published if their corresponding flight assignments have not been published yet. No updating or deletion is possible once an activity log record has been published.

X

## Non-functional requirements

Intentionally blank.

## Testing requirements

Intentionally blank.

## Managerial requirements

1. Provide a link to your planning dashboard in GitHub to review the tasks, their current status, and your schedule.

X

# MANDATORY Deliverable D04: formal testing

## Information requirements

1. Create appropriate indices for your entities, if required.

X

## Functional requirements

Intentionally blank.

## Non-functional requirements

Intentionally blank.

## Testing requirements

1. Produce a test suite for Requirements #8 and #9.

X

## Managerial requirements

1. Provide a link to your planning dashboard in GitHub to review the tasks, their current status, and your schedule.

X

1. Produce a testing report.

X

# SUPPLEMENTARY I Deliverable D01: introduction

## Information requirements

Intentionally blank.

## Functional requirements

Intentionally blank.

## Non-functional requirements

Intentionally blank.

## Testing requirements

Intentionally blank.

## Managerial requirements

Intentionally blank.

# SUPPLEMENTARY I Deliverable D02: data models

## Information requirements

1. The system must handle **flight crew member** **dashboards** with the following **indicators**:

* The last five destinations to which they have been assigned.
* The number of legs that have an activity log record with an incident severity ranging from 0 up to 3, 4 up to 7, and 8 up to 10.
* The crew members who were assigned with him or her in their last leg.
* Their flight assignments grouped by their statuses.
* The average, minimum, maximum, and standard deviation of the number of flight assignments they had in the last month.

X

## Functional requirements

Intentionally blank.

## Non-functional requirements

Intentionally blank.

## Testing requirements

Intentionally blank.

## Managerial requirements

1. Produce a UML domain model regarding the information requirements in your project.

X

# SUPPLEMENTARY I Deliverable D03: implementing features

## Information requirements

Intentionally blank.

## Functional requirements

1. Operations by **anonymous principals** on user **accounts**:

* Sign up to the system and become a flight crew member.

X

1. Operations by **flight crew members** on **user accounts**:

* Update their profiles.

X

1. Operations by **any principals** on **flight assignments**:

* List the flight assignments that are published.
* Show the details of the flight assignments (excluding their activity logs).

X

1. Operations by **flight crew member** on **dashboards**:

* Show their flight crew member dashboards.

X

## Non-functional requirements

Intentionally blank.

## Testing requirements

Intentionally blank.

## Managerial requirements

1. Provide a link to a video in which you informally test requirement #8 and #9. Videos should not exceed 10 minutes in length and must be stored at the USE's facilities.

X

# SUPPLEMENTARY I Deliverable D04: formal testing

## Information requirements

Intentionally blank.

## Functional requirements

Intentionally blank.

## Non-functional requirements

Intentionally blank.

## Testing requirements

1. Perform five mutations in your code and report on the results.

## Managerial requirements

1. Produce a lint report.

# SUPPLEMENTARY II Deliverable D01: introduction

## Information requirements

Intentionally blank.

## Functional requirements

Intentionally blank.

## Non-functional requirements

Intentionally blank.

## Testing requirements

Intentionally blank.

## Managerial requirements

1. Produce an analysis report.

X

1. Produce a planning and progress report.

X

# SUPPLEMENTARY II Deliverable D02: data models

## Information requirements

1. The system is required to provide crew members with information about **visa requirements**. A web service must be used to populate this entity with information about visa requirements. Thus, the exact data to store depends on the chosen service, and it is the students' responsibility to define them accordingly. It is also the students’ responsibility to find the appropriate service; no implicit or explicit liabilities shall be covered by the University of Seville or their individual affiliates if the students hire pay-per-use services! The students are strongly advised to ensure that the service they choose is free of charge.

X

## Functional requirements

Intentionally blank.

## Non-functional requirements

Intentionally blank.

## Testing requirements

Intentionally blank.

## Managerial requirements

1. Produce an analysis report.

X

1. Produce a planning and progress report.

X

# SUPPLEMENTARY II Deliverable D03: implementing features

## Information requirements

Intentionally blank.

## Functional requirements

1. Operations by **flight crew members** on **visa requirements**:

* List visa requirements according to the destination countries of their flight assignments.
* Show the details of the visa requirements they can list.

X

1. Operations by **administrators** on **visa requirements**:

* Populate the database with visa requirements data.

X

## Non-functional requirements

Intentionally blank.

## Testing requirements

Intentionally blank.

## Managerial requirements

1. Produce an analysis report.

X

1. Produce a planning and progress report.

X

# SUPPLEMENTARY II Deliverable D04: formal testing

## Information requirements

Intentionally blank.

## Functional requirements

Intentionally blank.

## Non-functional requirements

Intentionally blank.

## Testing requirements

1. Produce as a complete test suite as possible for Requirement #29 ensuring that the web service is properly mocked.

## Managerial requirements

1. Produce an analysis report.

X

1. Produce a planning and progress report.

X