# 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:** C2.054 |
| **Repository:** https://github.com/DP2-C1-054/Acme-ANS-C2 |
| Student #2  **ID Number:** \*\*76\*\*24X  **UVUS:**  manzurfer  **Name:**  Zurita Fernández, Manuel  **Roles:**  Developer, Tester |
| **Date:** Seville, July 4, 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 OJO: sólo hay un enlace para todo el proyecto.

MZ: Se han añadido los enlaces correspondientes para cada entrega.

RC: No se han tenido en cuenta ni tareas de coordinación ni de preparación del material de la entrega, ni de control de calidad, por ejemplo.

MZ: Se han tenido en cuenta, para esta entrega, tareas de coordinación, preparación de entrega, control de calidad, revisiones y documentación.

# 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

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

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

## 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**:

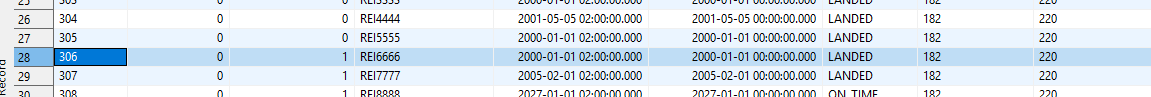
* List the flight assignments separately, one for completed flight legs and another one for those planned but that have not taken place yet.
* Show the details of their flight assignments and the associated legs and flight crew members.
* Create, update, and publish their flight assignments. Only crew 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.

Se hackea el formulario para crear una asignación de vuelo como se indica. Al pulsar en el botón para crear no se desautoriza la petición, sino que se muestran los errores indicados:

A screenshot of a computer

AI-generated content may be incorrect.

Se consulta la BD para comprobar que el tramo de vuelo 306 NO está publicado:



Se hackea el formulario con ese tramo y el resultado es el que aparece en pantalla al pulsar el botón create:

A screenshot of a computer

AI-generated content may be incorrect.

Es decir, la petición no es desautorizada.

MZ: Se han corregido las features correspondientes a los flight assignment de tal manera que se desautorizan las acciones ilegales, siguiendo la metodología propuesta. Por lo tanto, los intentos de introducir un valor no válido mediante hacking serán desautorizados. Recomiendo consultar la base de datos de nuevo, ya que se han modificado varios archivos que han provocado el cambio en los IDs de las entidades, por lo que el tramo 306 ya no existe.

RC: Revisión C2. Un assignment es un objeto composite de tipo agregado fuerte. Es decir, los activity logs están supeditados a los assignments, no tienen entidad por sí solos. Me pregunto entonces para qué el botón siguiente en la lista de asignaciones:

A screenshot of a computer

AI-generated content may be incorrect.

Creo un assignment con los siguientes datos:

A white paper with black lines

AI-generated content may be incorrect.

El formulario tan sólo ofrece opción de actualizar y publicar. Entiendo que entonces sólo se podrán acceder a sus activity logs una vez publicado (es una de las opciones que se ha comentado en el foro que se darían por válidas). Tampoco es posible borrarlo.

Publico por lo tanto, pero ahora el formulario se convierte en lo siguiente:

A white and grey striped background

AI-generated content may be incorrect.

Es decir, ya no tengo ninguna opción. En cualquier caso, solicito las URLs <http://localhost:8080/Acme-ANS-C2/flight-crew-member/flight-assignment/publish?id=829> y <http://localhost:8080/Acme-ANS-C2/flight-crew-member/flight-assignment/update?id=829>. Ambas son intentos de hackeo dado que no se puede ni publicar ni actualizar un assignment ya publicado, pero el sistema no desautoriza las peticiones, devuelve exactamente el mismo formulario de antes. Es decir, se cumple una de las condiciones de suspenso.

MZ: Se ha modificado la forma de listar los activity logs de tal forma que se accede al listado de estos dentro de un flight assignment individual, y la lista que se muestra es de los activity logs correspondientes a ese assignment, visible cuando el mismo está publicado. También se han corregido los métodos authorise para las publicaciones y actualizaciones de un flight assignment para que se desautoricen en caso de estar publicado ya. Se ha añadido la opción para borrar un flight assignment.

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.

El menu principal proporciona una opción sin sentido: los activity logs son entidades subordinadas a los assignments; no tiene sentido listarlos ni gestionarlos independientemente.

A screenshot of a computer

AI-generated content may be incorrect.

Como se puede ver, puedo publicar una asignación de vuelo sin ningún log de actividad. El problema es que una vez publicada no puedo añadir los logs:

A screenshot of a computer

AI-generated content may be incorrect.

Compruebo que tampoco es posible gestionar los logs mientras no está publicado:

A white sheet with blue lines

AI-generated content may be incorrect.

Por lo tanto, la conclusión es que no es posible gestionar los logs.

MZ: Se ha eliminado la opción de listar los activity logs del menú principal. En cambio, se ha introducido la opción de consultarlos en ambos listados de los flight assignments. Desde ahí, se podrá acceder a todas las features correspondientes a los activity logs.

RC: ¿Qué diferencia existe entre ofrecer el listado en el menú principal o en un botón, cuando el problema es que el estudiante NO tiene un agregado débil en el que el todo y las partes se gestionen por separado (caso por ejemplo, del estudiante #5), sino un agregado fuerte.

Se le comentó en relación a esa gestión independiente de los activity logs y la implementación proporcionada en C2 sigue igual. Además, las asignaciones de vuelo se ofrecen al usuario a través de sus ids, lo que no tiene ningún sentido para el mismo.

A line graph with a long line

AI-generated content may be incorrect.

MZ: Se ha modificado la implementación para que el listado de los activity logs de un flight assignment concreto se encuentre dentro del show de este, como se ha especificado en la corrección del requisito #8. También se ha eliminado el campo de flight assignment del formulario de creación de un activity log, ya que ahora solo se pueden crear logs desde el listado de logs de un único flight assignment. En caso de querer crear un log para otro assignment, tendremos que volver al listado de estos y seleccionar el assignment deseado.

## 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.

Sólo se ha definido el índice indicado en Flight Assignment:

A screenshot of a computer program

AI-generated content may be incorrect.

Pero tenemos consultas como la siguiente:



MZ: Se han añadido índices a la entidad de ActivityLog y modificado los de FlightAssignment:

Texto

El contenido generado por IA puede ser incorrecto.

Texto

El contenido generado por IA puede ser incorrecto.

Recomiendo consultar los repositorios de las features para ambas entidades, ya que hay métodos que han sido eliminados o modificados.

RC: Una rápida inspección del código deja claro que hay índices redundantes, el propio estudiante lo comenta en su réplica:

A screenshot of a computer program

AI-generated content may be incorrect.

Se revisan las consultas y la primera que se encuentra require un índice que no ha sido definido:

A close up of words

AI-generated content may be incorrect.

MZ: Se ha eliminado el índice redundante de “allocated\_flight\_crew\_member\_id” y se ha añadido el índice necesario para la primera consulta de AnyFlightAssignmentRepository:

A screen shot of a computer

AI-generated content may be incorrect.

## Functional requirements

Intentionally blank.

## Non-functional requirements

Intentionally blank.

## Testing requirements

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

Al ejecutar la test suite proporcionada se producen problemas con los casos de prueba asociados con estos requisitos. Por ejemplo:

A close up of a text

AI-generated content may be incorrect.

A close up of text

AI-generated content may be incorrect.

A close-up of text

AI-generated content may be incorrect.

MZ: Se ha realizado toda la test suite de nuevo, siguiendo la metodología de la asignatura y pudiéndose ejecutar sin problemas ni errores.

RC: La suite se ejecuta, pero es incompleta. Un simple vistazo a la primera feature en el analyser revela que el estudiante NO ha seguido la metodología de la asignatura, a pesar de que lo afirma:

A screenshot of a computer

AI-generated content may be incorrect.

MZ: Se ha realizado la test suite por completo de nuevo, siguiendo la metodología de la asignatura, usando el analyser para cerciorarse de ello.

## 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 El informe indica que:

A screenshot of a computer

AI-generated content may be incorrect.

No queda claro a qué se hace referencia como “valor de p”. Asumiendo que se hace referencia al p-value, el objetivo no es “alcanzar 0.05”. El estudiante debe revisar la teoría y entender bien cómo se interpretan los resultados del test.

MZ: Después de realizar de nuevo los tests y revisar la teoría, se ha modificado el testing report con los nuevos índices y resultados.

RC: Revisado. OK

# 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.

# 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.

1. Produce a planning and progress report.

# 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.

## Functional requirements

Intentionally blank.

## Non-functional requirements

Intentionally blank.

## Testing requirements

Intentionally blank.

## Managerial requirements

1. Produce an analysis report.

1. Produce a planning and progress report.

# 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.

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

* Populate the database with visa requirements data.

## Non-functional requirements

Intentionally blank.

## Testing requirements

Intentionally blank.

## Managerial requirements

1. Produce an analysis report.

1. Produce a planning and progress report.

# 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.

1. Produce a planning and progress report.