# Requirements – Student #5

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.

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| --- |
| **Group:** C2.009 |
| **Repository:** https://github.com/DP2-2024-2025-C1-009/Acme-ANS-D05 |
| **Student #2**  **ID Number:** \*7\*4\*\*98C  **UVUS:**  jaigommar1  **Name:**  Gómez Marín, Jaime  **Roles:**  Operator, Developer, tester |
| **Date:** Seville, June 26, 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 **technicians** care of aircraft maintenance by conducting regular inspections, performing repairs, and carrying out other maintenance tasks. The system must store the following data about them: a **license number** (unique, pattern "^[A-Z]{2-3}\d{6}$"), a **phone number** (pattern "^\+?\d{6,15}$"), their **specialisation** (up to 50 characters), whether they have passed their **annual health test** or not, and their **years of experience**. Optionally, the system may store their **certifications** (up to 255 characters).

Mensajes de error sin personalizar; claramente no se sigue la metodología recomendada con tres niveles de restricciones:

A screenshot of a computer program

AI-generated content may be incorrect.

1. **Maintenance records** are comprehensive records of activities performed on a given **aircraft** throughout its operational life. The system must store the following data about them: the **moment** when a maintenance takes place, its **status** ("PENDING", "IN PROGRESS", "COMPLETED"), the next **inspection due date**, an **estimated cost**, and some optional **notes** (up to 255 characters).

x Aparece un atributo llamado “ticker” que no se sabe a qué corresponde. Tampoco se encuentra información en la documentación aportada sobre el mismo:

A screenshot of a computer program

AI-generated content may be incorrect.

¿Qué sentido tiene definir una validación local para una restricción que es global sobre todas las cantidades de dinero y que se configura así, globalmente?

A math equation with numbers

AI-generated content may be incorrect.

Justificación del atributo Ticker.

Incorporar un atributo ticker que funciona como identificador secuencial en cada registro de mantenimiento, aunque no figure en los requisitos originales, supone una inversión mínima con un retorno significativo en términos de trazabilidad, depuración y escalabilidad: al asignar un número único y creciente a cada evento, podemos reconstruir con precisión la cronología de acciones para auditorías y cumplimiento normativo, acortar drásticamente los tiempos de resolución de incidencias al referenciar directamente el registro asociado

1. **Maintenance records** rely on **tasks**. A task is a specific predefined operational duty carried out by a **technician** on **aircrafts**. The system must store the following data about tasks: their **type** ("MAINTENANCE", "INSPECTION", "REPAIR", "SYSTEM CHECK"), a **description** (limited to 255 characters), a **priority** (ranging from 0 to 10), and an **estimated duration** (in hours).

¿Qué es el ticker de una tarea? El requisito no indica nada al respecto y en la documentación presentada tampoco se encuentran referencias que lo expliquen:

A computer code with green and blue text

AI-generated content may be incorrect.

Incorporar un atributo ticker que funciona como identificador secuencial en cada tarea cumple con los mismos objetivos que hacerlo con los registros de mantenimiento, aunque no figure en los requisitos originales, supone una inversión mínima con un retorno significativo en términos de trazabilidad, depuración y escalabilidad: al asignar un número único y creciente a cada evento, podemos reconstruir con precisión la cronología de acciones para auditorías y cumplimiento normativo, acortar drásticamente los tiempos de resolución de incidencias al referenciar directamente el registro asociado, de esta manera se potencia la gobernanza de datos y aporta una capa de control y visibilidad.

## 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 two **technician** accounts with credentials “**technician1**/ **technician1**” and “**technician2**/ **technician2**”. Create an additional technician account with credentials “**technician3/ technician3”** that represents a technician with no data, but his or her profile.

Los requisites establecen explícitamente la necesidad de una cuenta con el role de técnico y las credenciales technician3 que no tenga más datos que los del perfil, pero dicha cuenta no existe en los datos de ejemplo:

A screenshot of a computer

AI-generated content may be incorrect.

Es necesario modificar los ficheros de populación para continuar la evaluación en condiciones de igualdad.

## 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 **technicians** on **maintenance records**:

* List their maintenance records.
* Show the details of the maintenance records, including the tasks involved.
* Create, update, and publish maintenance records. Please, note that to publish a maintenance record, it cannot have any unpublished tasks and should have at least one published task.

En el menu se encuentra la siguiente opción, que no se sabe a qué pertenece:

A black and white screen with white text

AI-generated content may be incorrect.

Se ignora por completo en la evaluación.

El formulario exige un ticker que no se sabe a qué corresponde:

A white paper with black text

AI-generated content may be incorrect.

Por el contrario no se solicita el momento de mantenimiento, que se ha aclarado no es el momento de creación del registro, sino el momento en que el técnico realizó el mantenimiento en el pasado.

En cualquier caso se rellena el formulario así:

A white paper with black text

AI-generated content may be incorrect.

Nótese que al pulsar el botón para crear no se reporta ningún error en la fecha de siguiente inspección, que está en el pasado y por lo tanto ya no es posible.

Ahora se hackea el avión tal y como se indica:

A screenshot of a computer

AI-generated content may be incorrect.

Al pulsar en crear, se obtiene lo siguiente:

A white background with black text

AI-generated content may be incorrect.

Es decir, un mensaje de error como respuesta a un intento de hackeo que debería haber sido desautorizado.

Finalmente se rellena el formulario como sigue:

A white paper with black text

AI-generated content may be incorrect.

Al pulsar en el botón para crear se obtiene de nuevo el mismo formulario, sin ninguna información más. Se hace scroll hacia abajo para ver posibles mensajes de depuración y se encuentra lo siguiente:

A screen shot of a computer code

AI-generated content may be incorrect.

Claramente hay un problema en el reporte de los errores y el formulario no funciona correctamente. El primer error es responsabilidad del estudiante; el segundo está relacionado con el role technician3 que ha sido necesario añadir al sistema para poder realizar la evaluación en condiciones de igualdad. Resulta extraño que dicho problema no haya sido reportado antes.

Se corrige el error relacionado con el número de licencia en los ficheros de populación, se repopula y se intenta de nuevo la misma secuencia de operaciones. El resultado es el mismo, por lo que queda confirmado que el formulario no funciona correctamente.

1. Operations by **technicians** on **tasks**:

* List their tasks and show their details.
* Create, update, delete, and publish tasks. Note that published tasks cannot be updated or deleted.

El formulario solicita un ticker que no aparece documentado en ningún sitio:

A screenshot of a computer

AI-generated content may be incorrect.

Dado que no puedo hacer pruebas de registros de mantenimiento con el técnico 3, entro en el sistema como el técnico 1. Tomo un registro de mantenimiento cualquiera no publicado y sin tareas (consultando la BD directamente, dado que la interfaz de usuario no ofrece nada para buscarlos). Selecciono el que tiene “TICKER-29”:

A screenshot of a computer

AI-generated content may be incorrect.

Al acceder a la lista de tareas obtengo lo siguiente:

A screenshot of a computer

AI-generated content may be incorrect.Como se puede ver no hay nada que me permita gestionarlas.

## 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.

Hay índices redundantes:

A screen shot of a computer program

AI-generated content may be incorrect.

A computer code with text

AI-generated content may be incorrect.

¿Cómo es posible que el estudiante haya podido resolver los requisitos sólo con las siguientes consultas? Esto hace pensar que muy seguramente ha implementado en Java parte de las mismas y que no ha sacado partido a JPQL:

A screenshot of a computer program

AI-generated content may be incorrect.

A screenshot of a computer program

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.

A la vista de los problemas identificados, la suite es claramente incompleta.

Por otra parte, destacan los evidentes problemas de cobertura de instrucciones a los que no se ha prestado atención. Sólo se muestra uno pues son numerosos:

A computer code with many colors

AI-generated content may be incorrect.

Y, además, la suite no se ha podido ejecutar dado que ha empezado a fallar en el primer caso de prueba y así ha seguido hasta el final. Se muestra sólo un ejemplo:

A screenshot of a computer code

AI-generated content may be incorrect.

## 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.

Claramente el informe no corresponde a la realidad del proyecto presentado. Según el informe todo está OK, y esto no es así.

# 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 **technician dashboards** with the following **indicators**:

* The number of maintenance records grouped by their status.
* The maintenance record with the nearest inspection due date, provided that he or she is involved in any tasks that need to be performed as part of that maintenance.
* The top five aircrafts with higher number of tasks in their maintenance records.
* The average, minimum, maximum, and standard deviation of the estimated cost of their maintenance records in the last year.
* The average, minimum, maximum, and standard deviation of the estimated duration of the tasks in which he or she is involved.

## 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.

# 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 technician.

1. Operations by **technicians** on **user accounts**:

* Update their profiles.

1. Operations by **administrators** on **maintenance records**:

* List the maintenance records in the system that are published.
* Show the details of the maintenance records (including the tasks involved).

1. Operations by **technicians** on **dashboards**:

* Show their dashboards.

## 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 have a notice board to advertise **courses** for technicians. A web service must be used to populate this entity with information about courses. 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 **technicians** on **courses**:

* List the course available and show their details.

1. Operations by **administrators** on **courses**:

* Populate the database with courses 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.