# 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:** C2.008 |
| **Repository:** https://github.com/pabniecor/Acme-ANS-C2 |
| **Student #2**  **ID Number:** 4909\*\*\*\*\*  **UVUS:**  VWN3805  **Name:**  Granado Oliva, Samuel  **Roles:**  developer, tester |
| **Date:** Sevilla, July 2nd, 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.

El enlace proporcionado conduce a

A cartoon character in a brown hooded coat

AI-generated content may be incorrect.

Estimado profesor Rafael Corchuelo,

Se ha procedido ha configurar el dashboard como público. Antes sólo el proyecto lo estaba, pero el dashboard se mantuvo como privado por error, se debería poder acceder a él sin problemas ahora.

# 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).

X OJO: mensajes de error no personalizados.

A white background with black text

AI-generated content may be incorrect.

Estimado profesor Rafael Corchuelo,

Se han añadido mensajes de error personalizados e internacionalizados a ambos atributos.

A group of people with text

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

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).

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 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.

Se solicita explícitamente una cuenta con el role de technician sin más datos que los del perfil, pero no se proporciona dicha cuenta:

A screenshot of a computer

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A screenshot of a phone

AI-generated content may be incorrect.

Es necesario cambiar los ficheros de populación para poder realizar la evaluación en condiciones de igualdad con el resto de estudiantes:

technician3,**user-account-technician-03**,HRZ654321,**+5551234567890**,<marquee>Hacked</marquee>,**false**,35,**<script>alert(‘Hacked!’);</script>**

Estimado profesor Rafael Corchuelo,

Se ha creado una nueva cuenta añadiendo los datos proporcionados al csv correspondiente a las cuentas de usuario con el rol de technician. No se le han asociado más datos aparte de su perfil.

A screenshot of a computer

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.

Mismo problema de antes.

Estimado profesor Rafael Corchuelo,

Se ha procedido ha configurar el dashboard como público. Antes sólo el proyecto lo estaba, pero el dashboard se mantuvo como privado por error, se debería poder acceder a él sin problemas ahora.

# 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.

El requisito de solicitar confirmación no aparece en ningún sitio.

A screenshot of a computer

AI-generated content may be incorrect.

Ésta es la interfaz para asignar registros de mantenimiento a tareas. Cómo es posible localizar aquí la información necesaria. ¿Cree el estudiante que su cliente aceptará esta solución?

A screenshot of a computer

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A screenshot of a computer

AI-generated content may be incorrect.

Añado primero la tarea 576, sea cual sea al registro 650, sea cual sea.

Cuando accedo de nuevo al formulario, obtengo de nuevo la posibilidad de añadir esa tarea y si lo intento obtengo un error. ¿Qué sentido tiene ofrecer una opción que seguro va a terminar en error?

A black and grey line

AI-generated content may be incorrect. A screenshot of a computer

AI-generated content may be incorrect.

El curioso el mensaje de error en el selector superior. También es curioso que el formulario habla de “asignar/quitar” tareas, pero sólo hay la opción de asignar.

He llegado a la siguiente situación: tengo un informe de mantenimiento con los datos siguientes:

A screenshot of a computer

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Confirmo en la URL que es el informe 650:

A close up of a text

AI-generated content may be incorrect.

Ahora miro las tareas asociadas:

A screenshot of a computer

AI-generated content may be incorrect.

Confirmo en la URL que tienen los identificadores 576 y 647 respectivamente.

Accedo de nuevo al listado principal:

A screenshot of a computer

AI-generated content may be incorrect.

Ahora pulso en el botón para quitar asignación de tareas y relleno el formulario que aparece de la siguiente forma:

A screenshot of a computer

AI-generated content may be incorrect.

Al pulsar en quitar la asignación voy a la siguiente pantalla:

A screenshot of a computer

AI-generated content may be incorrect.

Vuelvo a pulsar en el botón para quitar asignación y obtengo lo siguiente:

A close up of a text

AI-generated content may be incorrect.

Es decir, que de nuevo obtengo las dos tareas. Vuelvo a seleccionar al 576 y al pulsar en el botón para quitarla el resultado es el siguiente:

A screenshot of a computer

AI-generated content may be incorrect.

¿Qué sentido tiene esto? No creo que ningún cliente esté dispuesto a aceptar esto. Imagino que cuando el sistema pase a producción y haya miles de tareas de mantenimiento no va a ser fácil localizar la que necesitemos y mucho menos en ese mensaje de error, que a saber qué longitud puede llegar a alcanzar.

Estimado profesor Rafael Corchuelo,

En cuanto a la solicitud de confirmación, se ha procedido a eliminar el cuadro que solicitaba confirmación en los formularios, de acuerdo con los requisitos.

A screenshot of a computer

AI-generated content may be incorrect.

En cuanto a la asignación de tareas a registros de mantenimiento, le feature ha pasado por una renovación completa. Ahora para asignar una tarea a un registro de mantenimiento se debe acceder al listado de tareas de dicho registro de mantenimiento, allí se muestra un botón para asignar tareas y otro para retirar la asignación de alguna tarea. En esas pantallas de asignación y retirada de asignación se escoge una tarea según su descripción, lo cual es mucho más intuitivo que la id asociada a la tarea como se hacía anteriormente.

A screenshot of a computer

AI-generated content may be incorrect.

A white rectangular object with a long line

AI-generated content may be incorrect.

A close up of a logo

AI-generated content may be incorrect.

Por supuesto, se han corregido los problemas como, por ejemplo, que se ofrezca la posibilidad de volver a asignar la misma tarea al mismo registro de mantenimiento cuando eso siempre iba a terminar en un error de validación, entre los otros problemas que se destacaban.

NOTA: El registro de mantenimiento con ID 581 no está vinculado a ninguna tarea, por lo que podría resultar útil para probar la funcionalidad.

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.

Revisar los problemas comentados en el requisito anterior.

Estimado profesor Rafael Corchuelo,

Los formularios de las features de tareas también contaban con el cuadro de solicitud de confirmación, se ha procedido a eliminarlo de igual manera que se ha hecho en los formularios de las features de registros de mantenimiento.

A close-up of a white background

AI-generated content may be incorrect.

## 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.

Mismo problema de antes.

Estimado profesor Rafael Corchuelo,

Se ha procedido ha configurar el dashboard como público. Antes sólo el proyecto lo estaba, pero el dashboard se mantuvo como privado por error, se debería poder acceder a él sin problemas ahora.

# MANDATORY Deliverable D04: formal testing

## Information requirements

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

X Me pregunto cómo es posible resolver los requisitos usando sólo las siguientes consultas. Segurmente implementando en Java filtros que podrían ser resueltos eficientemente por las propias consultas.

A screenshot of a computer program

AI-generated content may be incorrect.

A screenshot of a computer code

AI-generated content may be incorrect.

Estimado profesor Rafael Corchuelo,

Se han eliminado los filtros de Java que había en el código y se han sustituido por consultas equivalentes.

## Functional requirements

Intentionally blank.

## Non-functional requirements

Intentionally blank.

## Testing requirements

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

Nada más iniciar la suite de pruebas, comienzan a producirse fallos. Se muestra tan sólo el primero a título de ejemplo:

A screen shot of a computer

AI-generated content may be incorrect.

Estimado profesor Rafael Corchuelo,

Se ha vuelto a desarrollar la suite de pruebas, repitiendo las pruebas mediante tester-replay para asegurar que todas funcionan correctamente.

## Managerial requirements

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

Mismo problema de antes.

Estimado profesor Rafael Corchuelo,

Se ha procedido ha configurar el dashboard como público. Antes sólo el proyecto lo estaba, pero el dashboard se mantuvo como privado por error, se debería poder acceder a él sin problemas ahora.

1. Produce a testing report.

El informe indica lo siguiente:

A screenshot of a computer

AI-generated content may be incorrect.

El estudiante no aplica el test correctamente. El p-value no se compara con el nivel de confianza 0.95.

Estimado profesor Rafael Corchuelo,

Se ha procedido a revisar el documento y corregir las conclusiones obtenidas por el estudiante.

# 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.