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.

Group:

Repository:

Student #2

ID Number: XXXX8043X
UVUS:
Name:
Roles:

Date:

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.

Non-functional requirements

Intentionally blank.

Testing requirements

Intentionally blank.

Managerial requirements

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

MANDATORY

Deliverable D02: data models

Information requirements

3) 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).

4) **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).

5) **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).

Functional requirements

Intentionally blank.

Non-functional requirements

Intentionally blank.

Testing requirements

6) 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.

Managerial requirements

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

Information requirements

Intentionally blank.

Functional requirements

8) 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.

9) 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.

Non-functional requirements

Intentionally blank.

Testing requirements

Intentionally blank.

Managerial requirements

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

MANDATORY
Deliverable D04: formal testing

Information requirements

11)   Create appropriate indices for your entities, if required.

Functional requirements

Intentionally blank.

Non-functional requirements

 Intentionally blank.

Testing requirements

12)   Produce a test suite for Requirements #8 and #9.

Managerial requirements

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

14)   Produce a testing report.

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

15) 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

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

SUPPLEMENTARY I
Deliverable D03: implementing features

Information requirements

Intentionally blank.

Functional requirements

17)   Operations by **anonymous principals** on **user accounts**:

  - Sign up to the system and become a technician.

18)   Operations by **technicians** on **user accounts**:

  - Update their profiles.

19)   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).

20)   Operations by **technicians** on **dashboards**:

  - Show their dashboards.

Non-functional requirements

Intentionally blank.

Testing requirements

Intentionally blank.

Managerial requirements

21) 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

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

Managerial requirements

23)   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

24)   Produce an analysis report.

25)   Produce a planning and progress report.

SUPPLEMENTARY II
Deliverable D02: data models

Information requirements

26) 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

27) Produce an analysis report.

28) Produce a planning and progress report.

SUPPLEMENTARY II
Deliverable D03: implementing features

Information requirements

Intentionally blank.

Functional requirements

29)   Operations by **technicians** on **courses**:

   • List the course available and show their details.

30)   Operations by **administrators** on **courses**:

   • Populate the database with courses data.

Non-functional requirements

Intentionally blank.

Testing requirements

Intentionally blank.

Managerial requirements

31)   Produce an analysis report.

32)   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

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

Managerial requirements

34)   Produce an analysis report.

35)   Produce a planning and progress report.