DP2 2023-2024
Analysis Report

Acme Software Factory

Repository: https://github.com/rafcasceb/Acme-SF-D02

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GROUP C1.049

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Content Table

Abstract

In this document, an analysis of the different requirements developed regarding the second deliverable will be analyzed.

Revision Table

Date	Version	Description of the changes	Deliverable
07/03/2024	1.0	• Initial version of the document. • Content written.	2
08/03/2024	1.1	• Format fixing.	2

Revision Table

Introduction

This document will include a brief analysis of the project and the group requirements related to the deliverable D02. The structure of it has been determined following the guidelines provided in the Virtual Learning platform, in the document called "08 Annexes".

As part of the work to be done regarding "Acme Software Factory", the group work consists in the creation of several entities: **Claim, Objective, Risk, Notice, Banner and Administrator Dashboard.**

Regarding testing, it is asked to produce assorted data to test the application, including all the entities created and for the "**administrator**" role.

In the following section the requirements will be discussed, and finally, a conclusion will sum up the document.

Contents

Before we delve into the requirements, it is worth mentioning that during the theory class corresponding to Friday, March 1st, the professor was asked about the general ranges for the attributes in case the requirements do not explicitly indicate one. This topic was discussed and later asked by Rafael Castillo Cebolla on the discussion board. Thus, a more effective and publicly available response was provided here.

These were the main points cleared:

- Money amounts: from -1,000,000.00 XXX to +1,000,000.00 XXX, where XXX is a currency unit accepted by the system.
- Timeframes: from 01/01/2000 00:00 to 31/12/2200 23:59.
- Emails or URLs: from 0 to 255 characters.
- Probabilities and percentages: range [0.00, 1.00].

Mandatory Requirements

Information requirements

3) A **claim** is an opposition or contradiction posted by anyone that is made to something considered to be unjust. The system must store the following data about them: a **code** (pattern "C-[0-9]{4}"), not blank, unique), an **instantiation moment** (in the past), a **heading** (not blank, shorter than 76 characters), a **description** (not blank, shorter than 101 characters), the **department** to which it is addressed (not blank, shorter than 101 characters), an **optional email address**, and an **optional link**.

In this requirement, the only conflict was the length of both **link** and **email** attributes. As stated above, the link was said to be limited at 255 characters. The limit of the **email** attribute is not as important as there exists the *@Email* annotation which already implements length constraints.

4) An **objective** allows an authenticated principal to define a goal or end towards which the actions or operations of a specific project are directed. The system must store the following data about them: an **instantiation moment** (in the past), a **title** (not blank, shorter than 76 characters), a **description** (not blank, shorter than 101 characters), a **priority** ("Low", "Medium", "High"), a **status** to indicate whether it is critical or not, a **duration** (must start at any moment after the instantiation moment), and an **optional link** with further information.

There were some conflicts in this requirement:
- The **status** attribute does not clearly state what the client pretends to represent. The two main alternatives were a *Boolean* which indicates whether the objective is critical or not (true or false) or an *Enum* which could indicate a more precise status. This doubt was asked and cleared in the following forum entry.

- Regarding the **duration** attribute, it does not indicate any further information rather that the start constraint. This led to multiple alternatives in both meaning and implementation, that were proposed in the forum, resolving as a result, that this attribute is described as the gap between a **start** date and a **deadline** date.
The details of the entry can be found [here.](here)

5) A **risk,** positive or negative, is a fact that has a certain impact on the development of a project and must be considered by the administrator. The system must store the following data about them: a **reference** (pattern "R-[0-9]{3}"), not blank, unique), an **identification date** (in the past), an **impact** (positive real number), a **probability**, a **value** (result of the multiplication of impact and probability), a **description** (not blank, shorter than 101 characters), and an **optional link** with further information.

There were some conflicts in this requirement:

- The **probability** attribute is modeled in the range [0.00, 1.00]. This is the standard for percentages and probabilities, and it was asked in one of the follow-ups of this deliverable. It was then further cleared in the forum, as stated at the beginning of the section. This range must be checked in the service class.
- **Impact** is also in that range, as it corresponds to a percentage.
- Regarding **identification date**, the minimum, stated in the introduction to this section, is 01/01/2000 00:00. This constraint, however, must be checked in the service, so we are not able to do it for this deliverable.
- The **link** has 255 characters at most.

6) A **notice** is a message posted by an authenticated principal. The system must store the following data about them: an **instantiation moment** (in the past), a **title** (not blank, shorter than 76 characters), an **author** (not blank, shorter than 76 characters), a **message** (not blank, shorter than 101 characters), an **optional email address**, and an **optional link**. The author must be computed as follows: "⟨username⟩ - ⟨surname, name⟩", where "⟨username⟩" denotes the username of the principal who has posted the note and "⟨surname, name⟩" denotes his or her full name.

The main issue in this requirement was a misunderstanding of the **author** attribute. The pattern was initially implemented with the annotation *@Regexp.* However, in the first follow-up, the professor said that the implementation made no sense, as the pattern corresponded to data that was included in the logged-in user, so this could only be calculated through the service, which is out of the scope of this deliverable.

7) A **banner** allows administrators to advertise products, services, or organisations. The system must store the following data about them: an **instantiation/update moment** (in the past), a **display period** (must start at any moment after the instantiation/update moment and must last for at least one week), a link to a **picture** that must be stored somewhere else, a **slogan** (not blank, shorter than 76 characters), and a **link** to a target web document.

No issue more than the limit on the date was found in this requirement.

Testing requirements

8) Produce initial data to cold start your project; it must include an administrator account with credentials "administrator/administrator". Produce assorted sample data to test your requirements; it must include two administrator accounts with credentials "**administrator1/administrator1**" and "**administrator2/administrator2**".

No conflict was found.

Supplementary Requirements

Information requirements

21) The system configuration must include the following initial data:
    A system currency, which must be initialised to "EUR".
    A list of accepted currencies, which must be initialised to "EUR", "USD", and "GBP".

No conflict was found.

22) The system must handle administrator dashboards with the following indicators: total number of principals with each role; ratio of notices with both an email address and a link; ratios of critical and non-critical objectives; average, minimum, maximum, and standard deviation of the value in the risks; average, minimum, maximum, and standard deviation of the number of claims posted over the last 10 weeks.

No conflict was found.

Managerial requirements

23) Produce a UML domain model.

No conflict was found.

24) Produce an analysis report.

No conflict was found.

25) Produce a planning and progress report.

No conflict was found.

Conclusions

The requirements involving this deliverable resulted in some conflicts that were successfully solved via the forum without any further trouble. The collaboration of the members of our group along with students in other groups was crucial to clarify the different issues that were found in the requirements.

Bibliography

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