



8 DE MARZO DE 2024

ANALYSIS REPORT

GROUP C-1.047



ACME Software
Factory

Acme SF, Inc.

Repository link: <https://github.com/Cargarmar18/Acme-SF.git>

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1. Executive summary

This analysis report navigates the requisites of D02, considering both managerial and supplementary requirements, with a particular focus on non-functional prerequisites. The managerial requirements, comprising the entities risk, banner, claim, objective, notice, furthermore the creation of initial and sample data of the ones required of the elicited entities. In addition for other documents related to analysis, the analysis concludes that both requirements are completely clear for the analyst and do not necessitate an additional report, solidifying the decision not to generate supplementary documentation.

It is important to emphasize that commentary is not necessary for every requirement, but only for those that demand a thorough analysis, which are relatively few in number. To streamline the process and encourage instructor feedback, it is advisable to share the analysis records on the forum. This not only allows the instructor to review them but also simplifies the provision of a link to the instructor's validation.

2. Revision table

Revision number	Date	Description
1.0.0	08/03/2024	Document elaboration.

3. Introduction

This analysis report navigates the requisites of D02, considering both managerial and supplementary requirements,

This analysis report have been manufactured in alignment with the annex. As have been defined it commences with a cover page featuring the author's report credentials. A version

table follows, delineating modifications made in this document, classified by number and accompanied by their respective dates, and a brief description of what have been added. After this, an executive summary is presented with the according information indicated in the annex. And this introduction that works as a precedent of the actual contents specified before.

4. Contents

The listing of requirements and their corresponding breakdowns can be found as follows.

Requirement 003:

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.

An exhaustive examination of the requirement has been undertaken through consultations with the client, elucidating the following ambiguities:

1. Constraints

The constraints found in this requirement that may need further analysis are described as follows:

- **Implicit constraint:** patterns must begin with "C" and end with "4" to make the code pattern just the specific structure.
- **Implicit constraint:** all attributes that are not explicitly mentioned as optional are mandatory.
- **Implicit constraint:** URLs must have a maximum length of 255 characters.

It is worth noting that the mentioned implicit constraints were agreed upon by the client.

Requirement 004:

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.

An exhaustive examination of the requirement has been undertaken through consultations with the client, elucidating the following ambiguities:

1. Duration implementation

The "duration" implementation, due to its lack of explicit specification regarding the associated requirement, introduces uncertainty into the implementation process. It could be interpreted as a Date, a numerical type or a custom data type.

The alternatives given to the client were the following:

- **Alternative 1:** Using Date, with the pro of being comparable with other date attributes (needed for a constraint) and the con that it does not make much sense with the concept of "duration".
- **Alternative 2:** Using a numerical type, with the pro that it matches the concept of "duration" and the con that the constraint cannot be checked directly in the entity.
- **Alternative 3:** Using a custom data type, with the pros that the solution would be reusable and would match the concept of "duration", but the cons of the high complexity and the probability of arising errors.

The client, after being consulted, has concluded that the time periods or the duration attributes must be addressed as two new attributes of the Date type; one referring to the beginning moment and other referring to the end moment, with a correct set of constraints. In addition, the client elucidated that a time period or duration cannot be under an hour long.

Also, the client redefined the requirement to prevent ambiguities as follows:

*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 *an execution period (must start at any moment after the instantiation moment and last for at least one hour)*, and an optional link with further information.*

2. Constraints

The constraints found in this requirement that may need further analysis are described as follows:

- **Explicit constraint:** the beginning moment previously mentioned by the client must be at any moment after the instantiation moment. This means that this constraint must be implemented in the service, adding the task to the workload of the project in its D03 version.
- **Explicit constraint:** the end moment previously mentioned by the client must be at least one hour after the beginning moment of the objective. This constraint must be implemented in the service as well.
- **Implicit constraint:** upper limit for dates. The upper limit for dates is 2200/12/31 23:59, that is, all dates must correspond to a moment before the upper limit date. This constraint must be implemented in the service as well.
- **Implicit constraint:** lower limit for dates. The lower limit for dates is 2000/01/01 00:00, that is, all dates must correspond to a moment after the lower limit date. This lower limit must be implemented in the service as well.
- **Implicit constraint:** upper limit for URLs. The upper limit for URLs is 255 characters.
- **Implicit constraint:** all attributes that are not explicitly mentioned as optional are mandatory.

Again, the implicit constraints were agreed upon the client.

Requirement 005:

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.

1. Constraints

The constraints found in this requirement that may need further analysis are described as follows:

- **Implicit constraint:** patterns must begin with “^” and end with “\$” to make the code pattern just the specific structure.
- **Implicit constraint:** an impact and a probability that after a follow up meeting will follow the max limit of 100 and the minimum limit of 0.
- **Implicit constraint:** the links are URLs that must have a maximum length of 255 characters.

It is worth noting that the mentioned implicit constraints were agreed upon the client.

Requirement 006:

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.

1. Constraints

The constraints found in this requirement that may need further analysis are described as follows:

- **Explicit constraint:** the author is a union of username and surname, name from the user who posted the message. This means that this constraint must be implemented in the service, adding the task to the workload of the project in its D03 version.
- **Implicit constraint:** URLs must have a maximum length of 255 characters.
- **Implicit constraint:** all attributes that are not explicitly mentioned as optional are mandatory.

Again, the implicit constraints were agreed upon the client.

3. Relationships and extras.

Invoices are the way in which sponsorships are billed, therefore, the sponsorships could have many invoices related to them. This results in a many to one relationship from many invoices to one sponsorship.

Requirement 007:

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.

An exhaustive examination of the requirement has been undertaken through consultations with the client, elucidating the following ambiguities:

1. Constraints

The constraints found in this requirement that may need further analysis are described as follows:

- **Explicit constraint:** the display period must take at least 1 week long and must start after the instantiationUpdateMoment, this constraint will be developed following the custom constraints guidelines.
- **Implicit constraint:** an impact and a probability that after a follow up meeting will follow the max limit of 100 and the minimum limit of 0.
- **Implicit constraint:** both links are URLs that must have a maximum length of 255 characters.

Once again, the implicit constraints were agreed upon the client.

Requirement 008:

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".

In this requirement, it is worth mentioning that the production of assorted sample data to test the application informally implicitly involves generating sample data for the entities (claim, objective, risk, notice and banner). This sample data will imply generating data by exploring potential values that may lead to errors within the constraints of the entities.

Requirement 021:

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".

In this requirement, commenting on analysis has not been deemed necessary due to its simplicity. Although it is worth noticing what was remarked in the last follow-up, the initialised currency is not an "initialCurrency" it is a better name "defaultCurrency". The uniqueness of the configuration it is also not necessary since the data is 1 row long.

Requirement 022:

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.

In this requirement, commenting on analysis has not been deemed necessary due to its simplicity.

Requirement 023:

Produce an analysis report.

In this requirement, commenting on analysis has not been deemed necessary due to its simplicity.

Requirement 024:

Produce a planning and progress report.

In this requirement, commenting on analysis has not been deemed necessary due to its simplicity.

Requirement 025:

Produce a UML domain model.

In this requirement, commenting on analysis has not been deemed necessary due to its simplicity.

5. Conclusions

As a conclusion, this analysis report means a strategic guide in understanding what the student must make in order to satisfy the projects requisites proposed by the evaluators of this subject.

6. Bibliography

Intentionally blank.