Group deliverables: Acme Toolkits

Acme Toolkits, Inc. is a fictitious company that specialises in helping inventors and patrons. On the one hand, inventors can advertise their components, tools, and toolkits; on the other hand patrons can offer patronages to them. The goal of this project is to develop a WIS to help this company manage their business. This document describes the requirements to fulfil.

Please, fill in the following form, save this document, and attach it to every deliverable. 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.

Group: E7.01

Repository: https://github.com/josperrod9/Acme-Toolkits.git

Student #1

ID Number: 20102017V
Name: Monedero Martín, Alberto
Roles: Developer

Student #2

ID Number: 45157051R
Name: Pérez Rodríguez, José
Roles: Manager, Developer

Student #3

ID Number: 47860188V
Name: Montagut Osuna, Andreu
Roles: Developer

Student #4

ID Number: 80101033Z
Name: Giráldez Álvarez, Pablo
Roles: Developer

Student #5

ID Number: 31872382V
Name: Mario Rey Carmona
Roles: Developer

Student #6

ID Number: 30696743T
Name: Benitez Oliva, Pablo
Roles: Developer

Date: Sevilla 20 Febrero 2022

Evaluation report

This form is experimental. It's been carefully tested, but it might not work well. It's only provided on the purpose that you can know how the lecturers will evaluate your work. They'll check the requirements and will tick them as either fulfilled or unfulfilled; they'll also write comments when appropriate in the grey boxes. Your group deliverable grade will be computed according to the formula in the syllabus; please, check it since it'll rule if any mistake is found in this form!

Recompute grades

Deliverable	# Requested requirements	# Fulfilled requirements	# Unfulfilled requirements	Grade
D01	9	0	9	0.0
D02	15	0	15	0.0
D03	23	0	23	0.0
D04	19	0	19	0.0
D05	5	0	5	0.0
Group deliverable grade (0.05 * D01 + 0.10 * D02 + 0.25 * D03 + 0.50 * D04 + 0.10 * D05)				0.0

General comments:

Deliverable D01: introduction

Information requirements

Intentionally blank.

Functional requirements

1) Modify the anonymous menu so that every member of your workgroup adds a sub-option that takes the browser to their favourite link. The text in the sub-options must match the following pattern: "⟨id-number⟩: ⟨surname⟩, ⟨name⟩", where "⟨id-number⟩" denotes a workgroup member's DNI, NIE, or passport number, "⟨surname⟩" denotes that member's surname/s, and "⟨name⟩" denotes his or her name.

Non-functional requirements

2) The system must be internationalised in English and Spanish. Other mainstream languages are welcome, but not required.

Managerial requirements

3) Instantiate and customise your starter project so that you can work on your deliverables.

4) Produce a workgroup report with the following contents:

   - A description of how the members of your workgroup were recruited.
   - For every member of your workgroup provide: contact data (surnames, names, corporate email address, and recent picture – no avatars or old pictures, please).
   - A formal agreement in which you all commit to working together in this subject, declare that you have understood its syllabus, with a special emphasis on the grading procedure, and commit to achieving a particular mark.
   - A formal agreement regarding how the performance of your workgroup members will be measured. The agreement must make it explicit what "performing well" and "performing badly" means.
   - A formal agreement regarding how workgroup members who perform well will be rewarded.
   - A formal agreement regarding how workgroup members who perform badly will be punished.
   - A formal statement that describes the conditions in which a workgroup member may be fired. Recall that firing a workgroup member means that he or she will fail the subject in the corresponding evaluation call.
   - The report must be dated and signed by every member of your team.

5) Produce a planning report, cf. the annexes.

6) Produce a progress report, cf. the annexes.

7) Produce a report in which you comment on how you have set up your development configuration. Please, note that we are not asking you to reproduce the guidelines to set it up; we are asking you for a report in which you make it clear that you've followed the guidelines and have your development configuration ready to work. The structure of the contents is up to you.

8) Produce a report that describes what you know about the architecture of a WIS. Please, realise that we're asking you to report on what you know thanks to the previous subjects, not the architecture to be taught in this subject. The structure of the contents is up to you.

9) Produce a report that describes what you know about testing a WIS. Please, realise that we're asking you to report on what you know thanks to the previous subjects, not on the approach to testing to be taught in this subject. The structure of the contents is up to you.

Deliverable D02: the data model

Information requirements

1) The principals may have the following project-specific roles: inventor and/or patron (in addition to the default anonymous, authenticated, and administrator roles provided by the development framework). The project-specific roles must have a profile with the following data: a company (not blank, shorter than 101 characters), a statement (not blank, shorter than 256 characters), and an optional link with further information. The system must be delivered with an account for an administrator principal with credentials “administrator/administrator”.

2) A chirp is an informal short message. The system must store the following data about them: a creation moment, a title (not blank, shorter than 101 characters), an author (not blank, shorter than 101 characters), a body (not blank, shorter than 256 characters), and an optional email address. The author is not required to be the name of an actual principal.

3) An announcement is a formal piece of news. The system must store the following data about them: a creation moment (in the past), a title (not blank, shorter than 101 characters), a body (not blank, shorter than 256 characters), a flag to indicate whether they are critical or not, and an optional link with further information.

4) A component is an invention that is not expected to work standalone, but in conjunction with other components. The system must store the following data about them: a name (not blank, shorter than 101 characters), a code (pattern “^[A-Z]{3}-[0-9]{3}(-[A-Z])?$”, unique), a technology (not blank, shorter than 101 characters), a description (not blank, shorter than 256 characters), a retail price (positive), and an optional link with further information.

5) A tool is an artefact that allows to work with components. The system must store the following data about them: a name (not blank, shorter than 101 characters), a code (pattern “^[A-Z]{3}-[0-9]{3}(-[A-Z])?$”, unique), a technology (not blank, shorter than 101 characters), a description (not blank, shorter than 256 characters), a retail price (zero or positive), and an optional link with further information.

6) A toolkit is a bundle with components and tools that are expected to work as a whole. The system must store the following data about them: a code (pattern “^[A-Z]{3}-[0-9]{3}(-[A-Z])?$”, unique), title (not blank, shorter than 101 characters), description (not blank, shorter than 256 characters), assembly notes (not blank, shorter than 256 characters), and an optional link with

further information. A toolkit may have several instances of the same component, but only one instance of a given tool.

7) A patronage is a financial sponsorship provided by a patron to an inventor. The system must store the following data about them: a status (proposed, accepted, or denied), a code (pattern "^[A-Z]{3}-[0-9]{3}(-[A-Z])?$", unique), legal stuff (not blank, shorter than 256 characters), a budget (positive), a period of time (at least one month long, starting at least one month after the patronage is created), and an optional link with further information.

8) A patronage report consists of a series of messages exchanged between an inventor and a patron regarding a particular patronage. The system must store the following data about them: an automatic sequence number (not blank, matches pattern "⟨patronage-code⟩:⟨serial-number⟩", where "⟨patronage-code⟩" denotes the code of corresponding patronage and "⟨serial-number⟩" denotes a sequential number that starts at "0001" and gets increased with every new patronage report), a creation moment (in the past), a memorandum (not blank, shorter than 256 characters), and an optional link with further information.

9) The system must handle patron dashboards with the following data: total number of proposed/accepted/denied patronages; average, deviation, minimum, and maximum budget of proposed /accepted/denied patronages grouped by currency.

10) The system must handle administrator dashboards with the following indicators: total number of components; average, deviation, minimum, and maximum retail price of components, grouped by technology and currency; total number of tools; average, deviation, minimum, and maximum retail price of tools, grouped by currency; total number of proposed/accepted/denied patronages; average, deviation, minimum, and maximum budget of proposed/accepted/denied patronages.

11) The system configuration must include the following initial data:

- A system currency, which must be “EUR” by default.
- A list of accepted currencies, which must be initialised to “EUR”, “USD”, and “GBP”.
- A list of strong spam terms, which must include “sex”, “hard core”, “viagra”, “cialis”, and their Spanish translations by default.
- A strong spam threshold, which must be 10% by default.
- A list of weak spam terms, which must include “sexy”, “nigeria", “you’ve won”, “one million”, and their corresponding Spanish translations by default.
- A weak spam threshold, which must be 25% by default.

Functional requirements

Intentionally blank.

Non-functional requirements

Intentionally blank.

Managerial requirements

12) Produce a planning report, cf. the annexes.

13) Produce a progress report, cf. the annexes.

14) Produce a UML domain model.

15) Produce assorted sample data (methodologically). The credentials in the sample user accounts must be set after the pattern “inventor1/inventor1”, “patron1/patron1”, “inventor2/inventor2”, “patron2/patron2”, and the like.

Deliverable D03: displaying data

Information requirements

Intentionally blank.

Functional requirements

1) Operations by all principals on user accounts:

    - List them grouped by project-specific role, excepting accounts that are disabled or have the anonymous or the administrator roles.
    - Show the identity and profiles of the user accounts that they can list, excepting the credentials and the enablement status.

2) Operations by all principals on chirps:

    - List the chirps that are not older than one month.

3) Operations by all principals on components:

    - List the components that have been published.
    - Show the details of a component that he or she can list.

4) Operations by all principals on tools:

    - List the tools that have been published.
    - Show the details of a tool that he or she can list.

5) Operations by all principals on toolkits:

    - List the toolkits that that have been published.
    - List the toolkits that have been published and include a particular component or tool.
    - Show the details of the toolkits that they can list, including their prices, navigating to their components and tools, as well showing their details.

6) Operations by authenticated principals on announcements:

- List the announcements that are not older than one month.
- Show the details of the announcements that they can list.

7) Operations by authenticated principals on the system configuration:

- Show the information regarding the accepted currencies, and the system currency. If applicable, show information about the service used to perform money exchanges.

8) Operations by inventors on components:

- List their own components.
- Show their own components.

9) Operations by inventors on components:

- List their own tools.
- Show their own tools.

10) Operations by inventors on toolkits:

- List their own toolkits.
- Show their own toolkits, including their prices, their components, and their tools.

11) Operations by inventors on patronages:

- List their patronages.
- Show their patronages, including the profile of the corresponding patron.

12) Operations by inventors on patronage reports:

- List the patronage reports associated with their patronages.
- Show the patronage reports that they can list.

13) Operations by patrons on patronages:

- List their patronages.
- Show their patronages, including the profile of the corresponding inventor.

14) Operations by patrons on patronage reports:

- List the patronage reports associated with their patronages.
- Show the patronage reports that they can list.

15) Operations by patrons on patron dashboards:

- Show their patron dashboards.

16) Operations by administrators on the configuration:

- Show the system configuration.

17) Operations by administrators on administrator dashboards:

- Show the administrator dashboard.

Non-functional requirements

18) Moments and money amounts must be internationalised when they are shown. Other kinds of data might be, but are not expected to be internationalised.

Managerial requirements

19) Produce a planning report, cf. the annexes.

20) Produce a progress report, cf. the annexes.

21) Produce a lint report, cf. the annexes.

22) Produce a test suite for your project. Each member of your workgroup must focus on at least one feature and develop complete test cases for it.

23) Produce a performance report.

Deliverable D04: editing data

Information requirements

Intentionally blank.

Functional requirements

1) Operations by anonymous principals on user accounts:

    - Sign up to the system to create a new user account.
    - Become an inventor and/or a patron.

2) Operations by all principals on chirps:

    - Create a chirp. Note that chirps cannot be updated or deleted; thus, the system must require confirmation before creating them.

3) Operations by inventors on components:

    - Edit their own components, which includes creating, updating, deleting, and publishing them. Updating or deleting a component is allowed as long as it's not been published.

4) Operations by inventors on tools:

    - Edit their own tools, which includes creating, updating, deleting, and publishing them. Updating or deleting a tool is allowed as long as it's not been published.

5) Operations by inventors on toolkits:

    - Edit their own toolkits, which includes creating, updating, deleting, and publishing them. Updating or deleting a toolkit is allowed as long as it's not been published.

6) Operations by inventors on patronages:

    - Decide on a proposed patronage in order to accept or deny it.

7) Operations by inventors on patronage reports:

   - Create a patronage report. Patronage reports cannot be updated or deleted, which requires the system to request confirmation before creating them.

8) Operations by patrons on patronages:

   - Edit their patronages, which includes creating, updating, deleting, and publishing them. Updating or deleting a patronage is allowed as long as it's not been published.

9) Operations by administrators on announcements:

   - Create an announcement. Note that the announcements cannot be updated or deleted; thus, the system must require confirmation to create them.

10) Operations by an administrator principal on the configuration:

    - Update the system configuration.

Non-functional requirements

11) Moments and money amounts must be internationalised when they are entered. Other kinds of data might be, but are not expected to be internationalised.

12) The system must show all money amounts as they are entered by the users, but also their corresponding money exchanges according to the system currency. The money exchanges must be performed online using a free service available on the Web. It's the students' responsibility to find the appropriate service; no implicit or explicit liabilities will be covered by the University of Seville if the students hire a pay-per-use service.

13) The system must prevent the principals from storing chirps, announcements, components, tools, or toolkits if they are considered spam. Something is considered spam if its text contains a ratio of strong/weak spam words higher than the corresponding threshold. Realise that a term must be considered spam irrespective of its case and the blanks in between its words. For instance, "one␣million" is a spam term that matches "one␣million", "ONE␣MILLION", "OnE␣␣␣MiLLiOn", or "One␣⏎␣Million"; it doesn't match "One Millionaire", "One or two millions", or "One sex million", though.

14) The spam detector must be reusable across different projects; that is: it must be implemented as an independent project and packaged into a reusable .jar artefact.

Managerial requirements

15) Produce a planning report.

16) Produce a progress report.

17) Produce a Lint report.

18) Produce a test suite for your project. Each member of your workgroup must focus on at least one feature and develop complete test cases for it.

19) Produce a performance report.

Deliverable D05

Information requirements

Intentionally blank.

Functional requirements

Intentionally blank.

Non-functional requirements

Intentionally blank.

Managerial requirements

1) Produce a planning report, cf. the annexes.

2) Produce a progress report, cf. the annexes.

3) Produce a report that describes what you have learnt about the architecture of a WIS in this subject. The structure of the contents is up to you.

4) Produce a report that describes what you've learnt about testing in this subject. The structure of the contents is up to you.

5) Package the Acme Framework as an independent .jar component. Produce a new version of your D04 deliverable that used the framework as an independent .jar component. Write a report in which you explain how you've achieved this requirement.

Annex: contents of reports

General structure

Every report is expected to look professional and have the following structure:

- Cover: include your workgroup number, your repository, the names of your colleagues, their corporate e-mail addresses, and date.
- Table of contents: simple listing with section numbers, titles, and page numbers.
- Executive summary: it is expected to be 50-250 word long in most cases.
- Revision table: include revision number, date, and short description en each entry.
- Introduction: describe the contents succinctly, and don't forget to describe the structure of the document in the last paragraph; a typical introduction is half a page or a page long.
- Contents: the structure varies according to the report to be produced.
- Conclusions: it is expected to be 200 word long in most cases.
- Bibliography: if there's no relevant bibliography, leave it "intentionally blank".

Contents of a planning report

The contents of a planning report consists of a list of tasks and a budget required to complete a particular deliverable.

Regarding the list of tasks, you must report on their titles, descriptions, assignees, roles, and time spent.

Regarding the budget, you must report on the total number of hours spent by each role, the total personnel cost (per role), and the amortisation cost. Typically, one manager's or one analyst's work hour costs approximately €25.00 and the other roles' work hour costs approximately €15.00. To compute the amortisation, assume that the amortisation period is three years' time.

Contents of a progress report

The contents of a progress report focus on the evaluation of the performance of the workgroup members, which must be computed according to the procedure on which the students agreed, plus a description of the rewards and punishments.

Contents of a Lint report

The contents of a Lint report must include the bad smells reported by Lint regarding your project (not the framework or other libraries you use). In cases in which you think that Lint is reporting an innocuous bad smell, provide a clear justification in your report; otherwise, correct the bad smell and omit it from the report.

Contents of a performance report

The contents of a performance report must include two analysis regarding the 95%-confidence interval for the average wall time taken by the requests to your system. Each analysis must be performed on a different computer. The contents must also include a hypothesis contrast that makes it clear what the most efficient computer is at the 95% confidence level.

In the very exceptional cases in which a workgroup is composed of a single person, the first confidence-interval analysis must be performed on a single computer; the second confidence-interval analysis must be simulated as follows: shift the performance data obtained on the previous computer by adding 10% the average request time obtained in the previous computer.