Acme Newspaper

Acme, Inc. is a holding that encompasses many companies worldwide. One of them is Acme News-paper, Inc., which is kind of a social network in which users can collaboratively edit and publish their newspapers.

The goal of this project is to develop a web information system to help Acme Newspaper, Inc. manage their business. This document provides an informal description of their requirements; ask your lecturers for clarifications and details.

C-level requirements

Information requirements

1. The system must support two kinds of actors, namely: administrators and users. It must store the following information regarding them: their names, surnames, postal addresses (optional), phone numbers (optional), and email addresses. Phone numbers are sequences of digits that may optionally start with a "+".
2. A user may create a newspaper, for which the system must store a title, a publication date (year, month, and day), a description, an optional picture, and the list of articles of which it is composed.
3. For each article, the system must store a title, the moment when it is published, a summary, a piece of text (the body), and some optional pictures. An article is published when the corresponding newspaper is published.

Functional requirements

4. An actor who is not authenticated must be able to:
   1. Register to the system as a user.
   2. List the newspapers that are published and browse their articles.
   3. List the users of the system and display their profiles, which must include their personal data and the list of articles that they have written as long as they are published in a newspaper.
   4. Search for a published article using a single key word that must appear somewhere in its title, summary, or body.
   5. Search for a published newspaper using a single keyword that must appear somewhere in its title or its description.
5. An actor who is authenticated must be able to:
   1. Do the same as an actor who is not authenticated, but register to the system.
6. An actor who is authenticated as a user must be able to:
   1. Create a newspaper. A user who has created a newspaper is commonly referred to as a publisher.
   2. Publish a newspaper that he or she's created. Note that no newspaper can be published until each of the articles of which it is composed is saved in final mode.

3. Write an article and attach it to any newspaper that has not been published, yet. Note that articles may be saved in draft mode, which allows to modify them later, or final model, which freezes them forever.

7. An actor who is authenticated as an administrator must be able to:
    1. Remove an article that he or she thinks is inappropriate.
    2. Remove a newspaper that he or she thinks is inappropriate. Removing a newspaper implies removing all of the articles of which it is composed.
    3. Display a dashboard with the following information:
        - The average and the standard deviation of newspapers created per user.
        - The average and the standard deviation of articles written by writer.
        - The average and the standard deviation of articles per newspaper.
        - The newspapers that have at least 10% more articles than the average.
        - The newspapers that have at least 10% fewer articles than the average.
        - The ratio of users who have ever created a newspaper.
        - The ratio of users who have ever written an article.

Non-functional requirements

8. The system must be available in English and Spanish.
9. The system will be run in Spain, so it must comply with the Spanish regulations except for the following ones: a) the requirement in LOPD regarding keeping files and communications secure and confidential (unless you opt to earn an A$^+$, in which case you're requested to use the HTTPS protocol where appropriate); b) the requirement in LSSI regarding informing the Chamber of Commerce about your internet domain.
10. The system must be as efficient as possible.
11. Pictures are not required to be stored by the system, but their URLs to external storage systems like Flickr.com or Pinterest.com.
12. The "Terms and Conditions" document must make it explicit the reasons why an article or a newspaper may be considered inappropriate and thus can be removed from the system by an administrator.
13. When displaying a newspaper, the system must first display its title, its description, its picture (if any) and a table of contents that must include the title, the writer, and the summary of each article in that newspaper. Clicking on the title must allow to navigate to the corresponding article and clicking on the writer must allow to display his or her profile. It'd be very appreciated if only the first few lines of the summaries were shown, so that they are fully shown when the actor clicks on them.

B-level requirements

Information requirements

14. The writer of an article may write follow-ups on it. Follow-ups can be written only after an article is saved in final mode and the corresponding newspaper is published. For every follow-up, the system must store the following data: title, publication moment, summary, text, and optional pictures.

15. A user may post a chirp. For every chirp, the system must store the moment, a title, and a description. The list or chirps are considered a part of the profile of a user.

Functional requirements

16. An actor who is authenticated as a user must be able to:
    1. Post a chirp. Chirps may not be changed or deleted once they are posted.
    2. Follow or unfollow another user.
    3. List the users who he or she follows.
    4. List the users who follow him or her.
    5. Display a stream with the chirps posted by all of the users that he or she follows.
17. An actor who is authenticated as an administrator must be able to:
    1. Manage a list of taboo words.
    2. List the articles that contain taboo words.
    3. List the newspapers that contain taboo words.
    4. List the chirps that contain taboo words.
    5. Remove a chirp that he or she thinks is inappropriate.
    6. Display a dashboard with the following information:
        - The average number of follow-ups per article.
        - The average number of follow-ups per article up to one week after the corresponding newspaper's been published.
        - The average number of follow-ups per article up to two weeks after the corresponding newspaper's been published.
        - The average and the standard deviation of the number of chirps per user.
        - The ratio of users who have posted above 75% the average number of chirps per user.

Non-functional requirements

18. The system must be configured with the following taboo words by default: "sex", "sexo", "viagra", and "cialis".

A-level requirements

Information requirements

19. There's a new kind of actors: customers.
20. Newspapers can be public or private. Public newspapers can be browsed by any user; private newspapers can be only browsed by customers who have subscribed to them.

Functional requirements

21. An actor who is not authenticated must be able to:
    1. Register to the system as a customer.
22. An actor who is authenticated as a customer can:
    1. Subscribe to a private newspaper by providing a valid credit card.
23. An actor who is authenticated as a user must be able to:
    1. Decide on whether a newspaper that he or she's created is public or private.
24. An actor who is authenticated as an administrator must be able to:

1. Display a dashboard with the following information:
   - The ratio of public versus private newspapers.
   - The average number of articles per private newspapers.
   - The average number of articles per public newspapers.
   - The ratio of subscribers per private newspaper versus the total number of customers.
   - The average ratio of private versus public newspapers per publisher.

Non-functional requirements

25. Private newspapers can be fully displayed by customers who have subscribed to them. If a private newspaper is shown to an actor who is not a customer who has subscribed to it, then only the table of contents must be shown. Simply put, no navigation from the table of contents to the articles must be allowed.