Acme Chorbies

Acme, Inc. is a holding that encompasses many companies worldwide. One of them is Acme Chorbies, Inc., which is a social network for people who wish to know other people.

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

C-level requirements

Information requirements

- Actors can be either administrators or chorbies. For every actor, the system must store his or her name, surname, email, and phone number (with international prefixes if necessary).
- A chorbi is a person who wishes to know another person. For every chorbi, the system must store his or her picture, a description, the kind of relationship that he or she wishes to engage, his or her birth date, genre, coordinates, and credit card. The kind of relationship can be either "activities", "friendship", or "love". The genre can be either "man" or "woman". The coordinates of a person include the country, the state and province (which are optional), and the city. The system must store the following information about credit cards: a holder name, a brand name, a number, an expiration month, an expiration year, and a CVV code, which is an integer between 100 and 999.
- Every chorbi has a search template, for which the system must store the following search fields: a kind of relationship, an approximate age (plus minus five years), a genre, some coordinates, and a single keyword. The relationship can be either "activities", "friendship", or "love". The genre can be either "man" or "woman". Initially, every search field must be null, which means that every chorbi satisfies the corresponding search criteria; chorbies can change the template to refine their searches.

Functional requirements

- A user who is not authenticated must be able to:
  - See a welcome page with a banner that advertises Acme projects, including Acme Pad-Thai, Acme BnB, and Acme Car'n go! The banners must be selected randomly.
  - Login to the system using his or her credentials.
  - Register to the system as a chorbi. As of the time of registering, a chorbi is not required to provide a credit card. No person under 18 is allowed to register to the system.
- An actor who is authenticated must be able to:
  - Browse the list of chorbies who have registered to the system.
- An actor who is authenticated as a chorbi must be able to:
  - Change his or her profile.
  - Change his or her search template.
  - Browse the results of his or her search template as long as he or she's registered a valid credit card. Note that the validity of the credit card must be checked every

time the results of the search template are displayed. The results of search templates must be cached for at least 12 hours.

- An actor who is authenticated as an administrator must be able to:
  - o Ban a chorbi, that is, to disable his or her account.
  - o Unban a chorbi, which means that his or her account is re-enabled.
  - o Change the banners that are displayed on the welcome page and the time that the results of search templates are cached. The time must be expressed in hours, minutes, and seconds.
  - o Display a dashboard with the following information:
    - ▪ A listing with the number of chorbies per country and city.
    - ▪ The minimum, the maximum, and the average ages of the chorbies.
    - ▪ The ratio of chorbies who have not registered a credit card or have registered an invalid credit card.
    - ▪ The ratios of chorbies who search for "activities", "friendship", and "love".

Non-functional requirements

- The system must be available in English and Spanish.
- 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.
- The system must be as efficient as possible.
- Images are not requested to be stored by the system, but their URLs.
- To check the validity of a credit card, the system must check its brand (which must be either VISA, MASTERCARD, DISCOVER, DINNERS, or AMEX), its number (which must pass Luhn's check), and its expiration date (which is expected to be at least one day ahead).
- When some information that is entered by a chorbi is displayed, telephone numbers and emails must be masked using three asterisks. For instance, if a chorbi enters "You can contact me at +34 111 222 333 or someone@somewhere.com", the system must show ""You can contact me at *** or ***".

B-level requirements

Information requirements

- A chorbi may like another chorbi. The system must store the moment when he or she likes him or her and an optional comment.

Functional requirements

- An actor who is authenticated must be able to:
  - o Browse the list of chorbies who have registered to the system and navigate to the chorbies who like them.
- An actor who is authenticated as a chorbi must be able to:
  - o Like another chorbi; a like may be cancelled at any time.
- An actor who is authenticated as an administrator must be able to:

- o Display a dashboard with the following information:
    - ▪ The list of chorbies, sorted by the number of likes they have got.
    - ▪ The minimum, the maximum, and the average number of likes per chorbi.

A-level requirements

Information requirements

- A chorbi may chirp to another chorbi. A chirp is kind of a short message that a chorbi may send to another one. For every chirp, the system must store the moment when it is sent, a subject, a piece of text, and an optional list of attachments.

Functional requirements

- An actor who is authenticated as a chorbi must be able to:
    - o Chirp to another chorbi.
    - o Browse the list of chirps that he or she's got, and reply to any of them.
    - o Browse the list of chirps that he or she's sent, and re-send any of them.
    - o Erase any of the chirps that he or she's got or sent, which requires previous confirmation.
- An actor who is authenticated as an administrator must be able to:
    - o Display a dashboard with the following information:
        - ▪ The minimum, the maximum, and the average number of chirps that a chorbi receives from other chorbies.
        - ▪ The minimum, the maximum, and the average number of chirps that a chorbi sends to other chorbies.
        - ▪ The chorbies who have got more chirps.
        - ▪ The chorbies who have sent more chirps.

Non-functional requirements

- Attachments are not required to be stored by the system, but referenced by means of their URLs.