

Acme Car'n Go!

Acme, Inc. is very happy with the information system that D&T Inc. has designed to support their Bed'n Breakfast business. They are requesting a new project with which they wish to explore a new complementary business: Car 'n go!, which aims to help people find cheap car rentals to move around. They don't want to develop a full-fledged system, just a proof of concept by means of which they can validate their new business idea. If it works well, it's likely that this new system gets integrated into the Acme Bed'n Breakfast system. This document provides an informal description of their requirements; ask your lecturers for clarifications and details.

C-level requirements

Information requirements

- The actors of the system are administrators and customers. For every actor, the system must store his or her full name, a valid email address, and a valid phone number (with an optional international dial code).
- For every customer, the system stores the offers and the requests that he or she makes. Both offers and requests consist of a title, a description, the moment that the customer is planning on moving around, an origin place, and a destination place. The places are typically described by means of an address, but they can include optional GPS co-ordinates.

Functional requirements

- An actor who is not authenticated must be able to:
 - o Watch a welcome page with a banner that publicises Acme Car'n go! and a button to register as a customer or to login.
- An actor who is authenticated as a customer must be able to:
 - o Post an offer in which he or she advertises that he's going to move from a place to another place and would like to share his or her car with someone else.
 - o Post a request in which he or she informs that he or she wishes to move from a place to another one and would like to find someone with whom he or she can share the trip.
 - o Apply for an offer or a request, which must be accepted by the customer who posted it. Applications can be pending, accepted, or denied.
 - o Search for offers and requests using a single keyword that must appear somewhere in their titles, descriptions, or places.
- An actor who is authenticated as an administrator must be able to:
 - o Change the banner that the system shows on the welcome page.
 - o Ban an offer or a request that he or she finds inappropriate. Such offers and requests must not be displayed to a general audience, only to the administrators and the customer who posted it.
 - o Display a dashboard with the following information:
 - Ratio of offers versus requests.
 - Average number of offers and request per customer.

- Average number of applications per offer or request.
- The customer who has more applications accepted.
- The customer who has more applications denied.

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; 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.
- The system must somewhat highlight banned offers and requests when they are displayed to the appropriate actors.

B-level requirements

Information requirements

- The system must store comments on actors, offers, and requests. For every comment, the system must store a title, the moment when it is posted, a piece of text, and a number of stars (in range zero through five).

Functional requirements

- An actor who is authenticated must be able to:
 - Post a comment on another actor, on an offer, or a request.
- An actor who is authenticated as an administrator must be able to:
 - Ban a comment that he or she finds inappropriate. Such comments must not be displayed to a general audience, only to the administrators and the actor who posted it.
 - Display a dashboard with the following information.
 - Average number of comments per actor, offer, or request.
 - Average number of comments posted by administrators and customers.
 - The actors who have posted $\pm 10\%$ the average number of comments per actor.

Non-functional requirements

Intentionally blank.

A-level requirements

Information requirements

- Actors may exchange messages. For every message, the system must store its sender, its recipient, the moment when it was sent, its title, its text, and an arbitrary number of attachments.

Functional requirements

- An actor who is authenticated must be able to:
 - Exchange messages with other actors.
 - List the messages that he or she's got and reply to them.
 - List the messages that he or she's got and forward them.
 - Erase his or her messages, which requires previous confirmation.
- An actor who is authenticated as an administrator must be able to:
 - Display a dashboard with the following information:
 - The minimum, the average, and the maximum number of messages sent per actor.
 - The minimum, the average, and the maximum number of messages received per actor.
 - The actors who have sent more messages.
 - The actors who have got more messages.

Non-functional requirements

- The attachments are not stored by the system, but the URLs required to de-reference them.