



# Acme Parade

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Acme Madrugá, Inc. is requesting us maintenance of their recent project. This document provides an informal requirement specification. Ask your lecturers for clarifications and details, if necessary.

## Preliminaries

Acme Madrugá, Inc. has become a successful business, but they have realised that their brand is likely to restrict it to religious brotherhoods. They are planning on reaching other kinds of brotherhoods, which requires a little rebranding regarding their project. In the new version of their project, they wish to change every reference to “processions” into references to “parades”. The new project must then be released as “Acme Parade”. They are also requesting us to design a new banner that must clearly reflect the rebranding that their business is undergoing. Note that the name of the company has not changed, so the copyright notice must retain Acme Madrugá, Inc. as the holder. The new terms and conditions document must make it explicit that Acme Madrugá, Inc. is the company that provides the service and Acme Parade is the name of the service.

## C-level requirements

### Information requirements

1. Brotherhoods can manage their histories. A history is composed of one inception record, zero or more period records, zero or more legal records, zero or more link records, and zero or more miscellaneous records. For every record, the system must store its title and a piece of text that describes it. For every inception record, it must also store some photos; for every period record, it must also store a start year, an end year, and some photos; for every legal record, it must also store a legal name, a VAT number, and the applicable laws; for every link record, it must also store a link to another brotherhood with which the original brotherhood is linked.

### Functional requirements

2. An actor who is not authenticated must be able to:
  1. Display the history of every brotherhood that he or she can display.
3. An actor who is authenticated as a brotherhood must be able to:
  1. Manage their history, which includes listing, displaying, creating, updating, and deleting its records.
4. An actor who is authenticated as an administrator must be able to:
  1. Display a dashboard with the following information:
    - The average, the minimum, the maximum, and the standard deviation of the number of records per history.
    - The brotherhood with the largest history.
    - The brotherhoods whose history is larger than the average.

### Non-functional requirements

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## B-level requirements

### Information requirements

5. There's a new kind of actor in the system: chapters. For every chapter, the system must store its title. Every chapter co-ordinates an area and, thus, the parades organised by the brotherhoods in that area. No area can be co-ordinated by more than one chapter.
6. Parades can now have paths, which are composed of segments. For every segment the system must store its origin and its destination (using GPS co-ordinates), the approximate time at which the parade is expected to be reaching the origin, and the approximate time at which it's expected to be reaching the destination. The segments must be contiguous, that is: the destination of a segment must be the origin of the following segment (if any). When a parade is saved in final mode, it must be kept in status "submitted" until the corresponding chapter makes a decision on accepting or rejecting it. Only parades that have status accepted can be shown publicly.

### Functional requirements

7. An actor who is not authenticated must be able to:
  1. Register to the system as a chapter.
2. An actor who is authenticated as a chapter must be able to:
  1. Self-assign an area to co-ordinate. Once an area is self-assigned, it cannot be changed.
  2. Manage the parades that are published by the brotherhoods in the area that they co-ordinate. This includes listing them grouped by status and making decisions on the parades that have status submitted. When a parade is rejected by a chapter, the chapter must jot down the reason why.
3. An actor who is authenticated as a brotherhood must be able to:
  1. List their parades grouped by their status.
  2. Make a copy of one of their parades. When a parade is copied, a new ticker is generated, its status is cleared, the rejection reason is cleared, and it changes to draft mode.
  3. Manage the paths of their parades, which includes listing, showing, creating, updating, and deleting them.
8. An actor who is authenticated as an administrator must be able to:
  1. Display a dashboard with the following information:
    - The ratio of areas that are not co-ordinated by any chapters.
    - The average, the minimum, the maximum, and the standard deviation of the number of parades co-ordinated by the chapters.
    - The chapters that co-ordinate at least 10% more parades than the average.
    - The ratio of parades in draft mode versus parades in final mode.
    - The ratio of parades in final mode grouped by status.

### Non-functional requirements

9. Parades that are saved in final mode must be shown according to the following colour scheme: parades whose status is submitted must be shown in grey, parades whose status is accepted must be shown in green, and parades whose status is rejected must be shown in red.

## A-level requirements

### Information requirements

10. There's a new kind of actor in the system: sponsors.
11. Sponsors can sponsor accepted parades. For every sponsorship, the system must store a banner, a target URL, a valid credit card, and, obviously, its corresponding parade.
12. Chapters can publish proclaims. For every proclaim, the system must store the moment when it's published and a piece of text that can't be longer than 250 characters.
13. The system must store the following information regarding credit cards: a holder, a make, a number, an expiration month, an expiration year, and a card verification value (CVV).

### Functional requirements

14. An actor who is not authenticated must be able to:
  1. List the chapters that are registered in the system, navigate to the areas that they co-ordinate, to the brotherhoods that have settle in those areas, and to the parades that they organise.
  2. Browse the proclaims of the chapters.
15. An actor who is not authenticated must be able to:
  1. Register as a sponsor.
16. An actor who is authenticated as a sponsor must be able to:
  1. Manage his or her sponsorships, which includes listing, showing, creating, updating, and removing them. Note that removing a sponsorship does not actually delete it from the system, but de-activates it. A de-activated sponsorship can be re-activated later.
17. An actor who is authenticated as a chapter must be able to:
  1. Publish a proclaim. Note that once a proclaim is published, there's no way to update or delete it, so double confirmation prior to publication is a must.
18. An actor who is authenticated as an administrator must be able to:
  1. Launch a process that automatically de-activates the sponsorships whose credit cards have expired.
  2. Display a dashboard with the following information:
    - a. The ratio of active sponsorships.
    - b. The average, the minimum, the maximum, and the standard deviation of active sponsorships per sponsor.
    - c. The top-5 sponsors in terms of number of active sponsorships.

### Non-functional requirements

19. The system must accept the following credit card makes: VISA, MCARD, AMEX, DINNERS, and FLY. Other makes are expected to be accepted in future. The administrator should be able to easily manage the list of accepted credit card makes.
20. Every time a parade with sponsorships is displayed, a random sponsorship must be selected and its banner must be shown as little intrusively as possible. Every time a sponsorship's selected, the system must charge a flat fare to the corresponding sponsorship. The fare must include the current VAT percentage. Both the fare and the VAT percentage must be easily customisable by the administrator.