

# Acme Raffle 2.0

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Acme Raffle, Inc. is requesting maintenance of their project. This document provides an informal description of their requirements; ask your lecturers for clarifications and details.

## C-level requirements

### Information requirements

1. Managers have to pay for their raffles. Acme Raffle, Inc. charges them a fee of € 99.95 per raffle that has been active. That is: a manager who has registered a raffle is not charged the fee until it starts; if he or she changes the publication time or deletes it before it becomes active, then Acme Raffle, Inc. doesn't charge any fees.

### Functional requirements

2. An actor who is authenticated as a manager must be able to:
  1. Pay his or her bills by attaching a valid credit card to them.
3. An actor who is authenticated as an administrator must be able to:
  1. Start a process that computes the bills that every manager must pay. The input to the process must be the month and the year for which the bills must be generated. Note that the system must prevent the administrator from running the process on a month or a year for which it's already been run. By default, the system must propose the current month and year as input to the process.
  2. Show a listing of default debtors. A manager is considered a default debtor when he or she has at least three unpaid bills.
  3. Ban default debtors, which prevents them from logging in to the system and users from participating in their raffles.
  4. Display a dashboard with the following information:
    - The minimum, the average, and the maximum number of bills per manager.
    - The minimum, the average, and the maximum number of unpaid bills per manager.
    - The minimum, the average, and the maximum number of paid bills per manager.
    - A listing of managers in decreasing order unpaid bills.
    - The ratio of default debtors.

### Non-functional requirements

4. Administrators must be allowed to change the default fee that is charged to managers.
5. 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 seven days ahead).

## B-level requirements

### Information requirements

6. Auditors can register their curricula to the system, which must store the following information: their names (mandatory), specialities (optional), education records (optional), and work experience (optional).

### Functional requirements

7. An actor who can display the profile of an auditor must be able to:
  1. Browse his or her curriculum.
8. An actor who is authenticated as an auditor must be able to:
  1. Manage his or her curriculum, which includes displaying and editing it.
9. An actor who is authenticated as an administrator must be able to:
  1. Display a dashboard with the following information:
    - The minimum, the average, and the maximum number of specialities per auditor.
    - The ratio of auditors who have filled in the education record and/or the work experience in their curricula.

### Non-functional requirements

10. Every time that an auditor writes an audit report and finalises it, the system must automatically add a line to the work experience section of his or her curriculum. The line must read as follows: "<year> <month>: Audited raffle <title>", where "<year>" and "<month>" refer to the year and the month when the report is finalised and "<title>" to the title of the raffle.

## A-level requirements

### Information requirements

Intentionally blank.

### Functional requirements

11. Every actor who can display a raffle must be able to:
  1. See the corresponding Hall of Fame, which consists of a listing with the winners and the users who have entered at least 75% the average number of codes entered by the users of the system.

### Non-functional requirements

Intentionally blank.

## A+-level requirements

### Information requirements

Intentionally blank.

### Functional requirements

Intentionally blank.

## Non-functional requirements

12. The communications must be secured by using HTTPS where appropriate. A short report to explain how this A<sup>+</sup> has been implemented is required.
13. The system must allow to upload the pictures with the logos of the raffles. That is, the pictures must not be stored in external services like Pinterest.com or Tumblr.com; they must be stored in Acme's database. The students can select a third-party component to implement this requirement and they must produce a report in which they explain how they've done it.