

# Acme T-Shirts

Acme, Inc. is a holding that encompasses many companies worldwide. One of them is Acme T-shirts, Inc., which specialises in sell and production of designs and T-shirts.

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

## Information requirements (C-Level)

1. The system must support four kinds of actors, namely: administrators, customers, producers and designers. It must store the following information regarding them: their names, surnames, postal addresses (optional), phone numbers (optional), and email addresses. In the case of customers, producers and designers the system must also store a pocket with the money they have.
2. Designers make designs. For every design, the system must store an image (URL), a benefit percentage (in a defined range by admins), the benefits that design generates, the mode (draft or final), internal date (only use is classify designs by date) and an optional category of category catalogue. Once in final mode it can't be edited.
3. The system should store information about the T-shirts that customers add to their shopping cart. They can add or remove as many products as they wish. Also they can modify the number of T-shirts they wish. When making the purchase of the cart, it must be cleared.
4. The system should keep information about the T-shirts; price, title, description, discount, a design (in final mode), and shipping costs. The producers manage the T-shirts they have for sale. They can modify their attributes but not eliminate them, although they can be put as not for sale deleting them virtually.
5. When customers buy what they carry in the cart will generate a record with what they have purchased and the value they had at the time of purchase. This record will consist of copies of the T-shirts with the attributes they had at that time. The system must keep information about the date of purchase, the total price, and the purchase date. Each item of the purchase in turn; price, title, description, date of shipment, and may have the status (GENERATED PETITION, PREPARING, SENT, RECEIVED, OPEN INCIDENCE, RESOLVED INCIDENCE).
6. When a customer receives a shipment, in order to assess it, you must first specify the status of the products. If everything is correct you will have the opportunity to write assessments of each T-shirt received. You must specify the value of the score awarded to the T-shirt and optionally a comment explaining it.
7. If a customer does not agree with a T-shirt received can open a refund claim (Refund), in which the system must keep the cause of your discontent and several photos of the T-shirt received (optional, (this photo must be uploaded previously on any platform and provide us with the UR) and the date on which the claim was made. By default the claim will have a status of PENDIENT, waiting for a system administrator to review it. The state can change to DENIED, if the administrator understands T-shirt was correct, or ACCEPTED. At each time the status of the claim changes, the date of the claim must be updated. If the refund is ACCEPTED the money must be returned to

the customer, removing it from producer wallet.

8. The producer must manage the availability of T-shirts that they have of each type. Providing information about its quantity, the colour (which must follow the hexadecimal pattern) and the material from which they are made. These quantities will be used to know the available stock of each producer. He is in charge of having updated these amounts. Each time a purchase request is made for one of your T-shirts, they will be removed from your stock unit by unit. If a Producer does not have availability of a certain type of T-shirt, it will be publicly shown as OUT OF STOCK and the sale of more will be prevented until the producer adds more.

9. Administrators can modify the general system settings, such as the words that are considered spam, the list of materials of the T-shirts, the categories of designs and the maximum and minimum value of the benefit that designers can choose for their designs.

10. All movement of money in the system will be done through the pocket to avoid using credit cards as little as possible. To enter money into the pocket, you must specify a credit card and a quantity. The system will check if it is valid, and save the date and an optional description. You can do the same process to extract money specifying a negative amount, which will take your money out of the pocket to enter it into your credit card.

## Functional requirements (C-Level)

11. An actor who is not authenticated must be able to:

1. Register to the system as a customer.
2. Register to the system as a designer.
3. Register to the system as a producer.
4. Display a list with the T-shirts of system.
5. Display a list with the designs in final mode of system.

12. 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.
2. Edit his or her personal data.

13. An actor who is authenticated as a user must be able to:

1. See the money he or she has in his or her pocket.
2. Add money in his or her pocket with a valid credit card.
3. Extract money from his or her pocket with a valid credit card.

14. An actor who is authenticated as a designer must be able to:

1. Create/edit/delete a design.
2. See the benefits he did with each design.
3. See her or his designs.

15. An actor who is authenticated as a customer must be able to:

1. Add T-shirt to shopping cart.
2. Buy what he has in his shopping cart.
3. See the purchases he did in the system.
4. Mark purchased T-shirts as RECEIVED CORRECTLY.
5. Open refund claims in received incorrectly T-shirts.
6. See the refund claims he has and his states.

16. An actor who is authenticated as a producer must be able to:

1. Display a list with his products.

2. Add new products.
  3. Edit and delete his products.
  4. Edit the availability of his products.
  5. Change the status of his or her shipments.
17. An actor who is authenticated as an administrator must be able to:
1. Change the "PENDIENT" status of refund to "DENIED" status.
  2. Change the "PENDIENT" status of refund to "ACCEPTED" status.
  3. Manage the range of designers benefit.
  4. Manage the spam words.
  5. Delete a T-shirt he thinks is inappropriate.
  6. Display a dashboard with the following information:
    - Ratio of T-shirts sold per producer.
    - T-shirt(s) more sold.
    - Ratio of designs in final mode per designers.
    - Ratio of sold T-shirts per customers.
    - Ratio of refunds per sold T-shirts.
    - Average of benefits per designer in final mode.
    - Average of pocket money per user.
    - Ratio of deleted T-shirts per not deleted T-shirts.
    - Ratio of refunds with status DENIED per refunds.
    - Ratio of refunds with status ACCEPTED per refunds.
    - Ratio of refunds with status PENDIENT per refunds.

## Non-functional requirements (C-Level)

18. 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. In addition the system must track all pocket/wallet money movements in a stream.

19. The system must be available in English and Spanish. (The data themselves are not required to be available in several languages, only the messages that the system displays.)

20. Images are not required to be stored by the system, but their URLs to external storage systems imgur or photobucket, to mention a few examples.

21. 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.

22. The system must be as efficient as possible.

23. The "Terms and Conditions" document must make it explicit the reasons why a refund may be considered DENEGATE by an administrator.

## Information requirements (B-Level)

24. Actors can exchange messages. For every message, the system must keep track of the sender, the recipient, the moment when it was sent, the subject, the body, and its priority. Priorities are HIGH, NEUTRAL, or LOW. Actors can create custom folders, which may be arbitrarily nested, and use them to organise their messages.

Furthermore, every actor has the following system folders: "Inbox", "Outbox", "Notificationbox", "Trashbox", and "Spambox". When an actor receives a message, it gets to the "Inbox" unless the system flags it as spam, in which case it gets to the "Spambox". When he or she sends a message to another user, a copy is saved to the "Outbox". When an actor removes a message from a folder other than "Trashbox", it is moved to folder "Trashbox"; when he or she removes it from folder "Trashbox", then it is actually removed from the system. System folders are predefined and the actors must not be allowed to delete them, to change their names, or to move them.

25. The designs can belong to categories. The categories in the system will be managed by admins. They will be ordered in a tree hierarchy in which each design will only belong to one category. There should be default categories: 3D, Abstract, Anime, Cartoon, Cell Shading, Realism, and Retro.

26. Customers can create and delete favourite T-shirt listings. The system must keep information about the name and description of each one. Customers can add/delete as many products as they like to their favourite listings.

27. Designer can do design class, the system must keep information about the date, the name, materials and the price, this price can't be change once created and saved the class. Customers and designers can sign up for design classes that another designers have organized and registered in the system. If the design class in which you want to sign up is for payment, the pocket money will be discounted; in case it is free it will be automatically added to the list of your classes. Customers and designers cant assists a different design classes for a same day. The design classes can be cancelled in whatever moment if this class not begin but only it will be returned a 90% of price to the customer or designer.

28. Customers can vote with +1 or -1 designs so that producers can know which designs are most appreciated by customers.

## Functional requirements (B-Level)

29. An actor who is not authenticated must be able to:

1. See the value from customer votes of a design.
2. See the designs by designer.

30. An actor who is authenticated must be able to:

1. Exchange messages with other actors and manage them, which include deleting and moving them from one folder to another folder.
2. Manage his or her message folders, except for the system folders.
3. See the system categories and browse to the design.
4. See the assessments of a T-shirt and the average value.

31. An actor who is authenticated as a designer must be able to:

1. Create/edit a design class
2. Assist to a design class and list them if it didn't start yet.
3. Drop from a design class if it didn't start yet.
4. See all design classes if it didn't start yet.
5. See my designs class creates.

32. An actor who is authenticated as a customer must be able to:

1. Subscribes to a design class and list them.

2. Create, edit and delete a favourite list and list them.
3. Save products in some favourite list create by her or him.
4. Makes assessments about some T-shirts which he or she had bought.
5. Makes a vote whatever design which in final mode
6. Drop form a design class if it didn't start yet.
7. See all design classes if it didn't start yet.
8. Vote a design with +1 or -1.

33. An actor who is authenticated as an administrator must be able to:

1. Manage the categories, which include create, list, edit and delete.
2. Delete an assessment he thinks is inappropriate.
3. Display a dashboard with the following information:
  - Average value of design votes.
  - Average number of assistants to design classes.
  - Average ratio of assistant customers to design classes per assistants designers.
  - Average value of assessments.
  - Average value of design votes per category.

## Non-functional requirements (B-Level)

Intentionally blank.

## Information requirements (A-Level)

34. Customers can follow and unfollow designers. The followed and followers from customer is public. Follow designers is used to see a stream with the designs of those order by date.

35. In the system a new type of actor will be entered, the reporter, that actor can write fashion reports on some of the designs that are in the system as long as this design is in final mode. For each report, the system must store the opinion of the reporter, the date of said post and to which design it belongs and decides if it draft mode or definite mode. Only final mode can be seen by others actors.

36. Reporter may update its reports through updates, for such updates the system must store a text written by the reporter in addition to the date on which the update was made.

37. The sponsors represent brands, which the system must store. They can offer agreements to certain products, offering to pay part of their price so that customers can buy T-shirts at reduced prices in exchange for adding watermarks with the corporate image of the brands they represent. These deals consist of a percentage of what the sponsor is willing to pay, an optional comment, and the image that the producer must add to the T-shirts if he accepts the deal.

38. The producers will receive these offers and will be able to accept or reject them, as well as optionally add a text in the answer. For each product only can there may be an accept deal. By accepting a deal, the price change of the T-shirt will be made instantly. Each time a T-shirt sale is made, the money will be subtracted from the sponsor's pocket automatically. A deal can be cancelled by both parties at the time they wish.

## Functional requirements (A-Level)

39. An actor who is not authenticated must be able to:
  1. Register to the system as a reporter.
  2. Register to the system as a sponsor.
40. An actor who is authenticated must be able to:
  1. See if a T-shirt is sponsored, the sponsor, and the sponsored image.
  2. See the reports in definitive mode and updates of a design.
  3. List the system reports in definitive mode order by date.
  4. See the followers of a designer.
  5. See the followed of a customer.
41. An actor who is authenticated as a designer must be able to:
  1. See the reports and updates of his designs.
42. An actor who is authenticated as a customer must be able to:
  1. Follow/Unfollow a designer.
  2. See a stream with designs from his followed designers order by date.
43. An actor who is authenticated as a sponsor must be able to:
  1. Make deals to producers in his T-shirts.
  2. See his deals and the answers.
44. An actor who is authenticated as a producer must be able to:
  1. Accept/Deny deals in his T-shirts.
  2. See his deals and the answers.
45. An actor who is authenticated as a reporter must be able to:
  1. Write a report about designs.
  2. Put a report in final mode.
  3. Make updates to his or her reports.
  4. See the designs in which he had posted a report.
  5. See the designs in which he hadn't posted a report.
46. An actor who is authenticated as an administrator must be able to:
  1. Remove an answer of deal that he or she thinks is inappropriate
  2. Remove a report or some updates that he or she thinks is inappropriate
  3. Display a dashboard with the following information:
    - Average of definitive reports per reporters.
    - Average of update per reports.
    - Percentage of accepted deals.
    - Percentage of each kind of user in the system

## Non-functional requirements (A-Level)

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### (A+ Level)

47. Make an additional evaluation of the publication published on the official Facebook page of the application, thus consuming the Facebook API to make the post.