Acme Champions

Acme, Inc. is a holding that encompasses many companies worldwide, including Acme Champions, Inc. Their business consists in helping football team's management efficiently for the win.

The goal of this project is to develop a web information system that Acme Champions, Inc. can use to run their business. This document provides an informal requirement specification.

Information requirements

1. The actors of the system are administrators, presidents, managers, and players. For every actor the system must store a name, a surname, an optional photo, an email, an optional phone number and an optional address. Additionally, players are stored in the system with a position that must be: "GOALKEEPER", "DEFENDER", "MIDFIELDER" or "STRIKER" in English and "PORTERO", "DEFENSA", "CENTROCAMPISTA" and "DELANTERO". Also, the system must store in regard to players a squad name, the buyout clause, a squad number from 1 to 99 and whether they are injured, punished or not.
2. Presidents can create a single team. For every team the system must store the name, the address of the institution, the name of the stadium, a badge URL, a track record and an establishment date. A track record is a number of trophies and/or tournaments that the team had won.
3. Presidents can hire a manager to the team and only after that, they as president can sign up to 14 players. Managers may be fired by the president of the team as well as players.
4. Offers of hiring and signing managers or players have a price, a status that must be: PENDING, ACCEPTED, REJECTED. And an optional mandatory comment if its status is REJECTED. Hiring and signing requests can be send to: A player/manager in the case that they haven't got a team or to the president of the team the player/manager's plays. When a team is interested in a player/manager, they should be informed of his or her buyout clause.
5. Presidents have a finder in which they can specify some filters: a single keyword that must appear somewhere in the name or surname of a player or manager; a position to which the player is used to play. The finder stores the players and managers that satisfy that filter for one hour by default.
6. Managers can create trainings. For every training the system must store a start date, an ending date, a place and a description. Managers assign each player of the team to different trainings.
7. Players can manage their histories. A history is composed of personal data, zero or more player records and zero or more sport records. For every personal data the system must store some photos and a link to a social network profile. For every player record the system must store the period of time in which they have been in a club, the salary they had and their squad number. For every sport record the system must store the name of the sport they had played, the period of time they had played that sport and whether it's a team-sport or not.

8. Players have one statistic table. Whenever a statistic table is registered the system must store some information about the player like the number of total yellow and red cards, the goals scored, the amount yellow cards the player has accumulated, and the number of matches played.
9. 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; no other values are expected. Every actor has the following message boxes: in box, out box, trash box, and spam box. When an actor receives a message, it gets to the in box unless the system flags it as spam, in which case it gets to the spam box. When he or she sends a message to another user, it's saved to the out box. When an actor removes a message from a box other than trash box, it is moved to the trash box; when he or she removes it from the trash box, then it is actually removed from the system. The previous boxes are pre-defined and the actors must not be allowed to delete them, to change their names, or to move them. Note that a message may be stored in several boxes and, but the system must keep a unique copy; removing a message from the "trash box" removes it from every other box.
10. There's a new kind of actors in the system: referees, who creates matches.

11. The system must store the following data regarding matches: home team, visitor team, match date and place where the match will be holding which is the name of the home team's stadium.
12. Once that a match has finished, the corresponding referee writes a minutes. A minutes includes score of a match, players who have scored a goal, players who have got yellow card and players who have got red card.
13. Managers can write reports in order to inform presidents about an inappropriate behavior of a player. By doing this, presidents can punish players. Reports contains a publication moment and a description.
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19. There are new kind of actors, sponsor and federations. Sponsors use the system to advertise their company. For federations the system will store its establishment date.
20. Sponsorships are created by sponsors, that way they can sponsor a player, a match or a team. It consists of a banner, and a link to their company both in form of an URL.
21. In order for sponsors to pay for an advertisement they will have to introduce their credit cards to the system. For every credit card, the system must store its holder, the type of credit card which can be by default "VISA" or "MASTERCARD", the number of the credit card, it's expiration month and year and the CVV number.
22. Competitions are organized by federations. For every competition the system will store its start date, end date and the name of the trophy.
23. Federations register teams to open competitions. Matches are generated automatically when the competition is closed.
24. A competition does follow a format of how matches are played. When a federation creates a format, the system will store its type which can be "LEAGUE" or "TOURNAMENT", the number of maximum and minimum teams that can play on a competition that is following that format.

Functional requirements

25. Actors who are not authenticated must be able to:
    1. Register to the system as a player or manager.
    2. Register to the system as a referee.
    3. View next matches as well as the already finished ones.
    4. Register to the system as a sponsor or federation.
26. Actors who are authenticated must be able to:
    1. Do the same as an actor who is not authenticated but register to the system.
    2. Edit their personal data.
    3. Exchange messages with other actors and manage them.

27. Actors that are authenticated as a president must be able to:
    1. Manage their team which includes creating, editing a team and showing its data.
    2. Browse managers and players via finder, hire managers and sign players to join the team.
    3. List all the players that are joined to the team.
    4. Fire team's players or manager.
28. Actors that are authenticated as a manager must be able to:
    1. Manage their trainings which includes listing, showing, creating, updating and deleting them.
    2. Train the team in which they are. That is, assign each player to a training.
    3. Manage the offers that they receive to join a team if they are not already been hired by another team.
    4. Manage the players of the team they are in, which includes listing and showing the player and all the player's data.
    5. Mark a player as injured or recovered.
    6. Manage the reports he has written. That is creating, listing and deleting them.
    7. See a prediction of the next matches. The prediction is just an average of the goals of each team in the previous matches played.
29. Actors that are authenticated as a player must be able to:
    1. List all the trainings that the manager has assign them.
    2. If they aren't in any team, they must manage the offers they receive which includes listing and accepting or rejecting them.
    3. Manage their history, which includes, displaying, listing, creating, updating and deleting its records.
    4. Manage their statistic table, which includes, displaying its data.
30. Actors that are authenticated as administrators must be able to:
    1. Create user accounts for new administrators.
    2. Create user accounts for new presidents.
    3. Have a dashboard with the following information:
        - The average, the minimum, the maximum, and the standard deviation of trainings per manager.
        - The average, the minimum, the maximum and the standard deviation of the length of the trainings on the system.
        - The average, the minimum, the maximum, and the standard deviation of results per finder.
        - The ratio of player per position.
        - The ratio of managers without a team.
        - The listing of teams that have got at least 10% more players than the average.
        - The average, the minimum, the maximum, and the standard deviation of matches per referee.
        - The average, the minimum, the maximum, and the standard deviation of yellow card per player.
        - Top 5 of players in terms of scored goals.

- The average, the minimum, the maximum, and the standard deviation of teams per competition.
- The oldest federation.

31. Actors that are authenticated as a referee must be able to:
    1. Manage the matches they have created. This includes creating, listing, showing, updating and deleting them. Note that a match cannot be deleted or updated after the match date.
    2. Write minute to a match only after the match date has passed.
32. Actors that are authenticated as a sponsor must be able to:
    1. Manage their sponsorships which includes creating, listing and showing them.
    2. Introduce their credit card. After that, they can show and update.
33. Actors that are authenticated as a federation must be able to:
    1. Manage their competitions which includes creating new competitions and listing them.
    2. Inscribe teams to their competitions.
    3. Manage their formats which includes creating, showing, listing, updating and deleting them.

Non-functional requirements

34. The system must be available in English and Spanish. (Unless otherwise stated, the data are not required to be available in several languages, only the messages that the system displays).
35. The system must be easy to customize at run time. The customization includes: the name of the system (it's "Acme Champions" by default); the banner shown at the header; the message that is shown on the welcome page ("Welcome to Acme Champions! We never surrender" is the default welcome message in English; "¡Bienvenidos a Acme Champions! Nunca nos rendimos") is the default message in Spanish.
36. Presidents can create just one team. In order for the team to be functional that is to be able to play games, it must comply with the following requirement: There must be a minimum of 5 players on a team and be managed by one manager.

37. Players must be shown to the president according this color schema: Players that have a team are show in palegreen, players that already have a team are shown in papayawhip.
38. Players must be shown to the manager according this color schema: Players that are injured are show in lightsalmon, players that aren't are shown in palegreen.

39. When the number of yellow cards exceeds 5 it restores back to 0 and the player is punished.

40. Photos are not required to be stored in the database, but links to external systems like Pinterest.com or Flickr.com, just to mention a couple of examples.

41. Phone numbers should adhere to the following patterns: "+CC (AC) PN", "+CC PN", or "PN": "+CC" denotes a country code in range "+1" up to "+999", "(AC)" denotes an area code in range "(1)" up to "(999)", and "PN" denotes a number that must have at least four digits. Phone numbers with pattern "PN" must be added automatically a default country, which is a parameter that can be changed by administrators. Note that phone numbers should adhere to the previous patterns, but they are not required to. Whenever a phone number that does not match this pattern is entered, the system must ask for confirmation; if the user confirms the number, it then must be stored.

42. Email addresses must adhere to any of the following patterns: "identifier@domain", "alias <identifier@domain>"; administrators may have email addresses of the form "identifier@", or "alias <identifier@>". The identifier is an alpha-numeric string, the domain is a sequence of alpha-numeric strings that are separated by dots, and the alias is a sequence of alpha-numeric strings that are separated by spaces.

43. All the players that had perceived a red card or has accumulated 5 yellow cards, are punished. A punished player shouldn't play the next match.
44. Punished players are automatically restored back to normal when a new minutes is created by the referee in a match where their teams are involved.
45. Whenever a match, player or team is displayed to a user, its sponsorship must be selected and its banner shown, if any. Banners must be shown as little intrusively as possible.
46. Sponsorships must not be deleted once they are created, so a confirmation message should be shown.
47. The default list of type of competitions is "LEAGUE" and "CHAMPIONSHIP" in English and "LIGA" and "CAMPEONATO" in Spanish.