Inventory Management - Artifact 1

Goals

The goal of this project is to develop an information system with a web interface for inventory management.

We chose sports complexes as our subject, aiming to develop a service where owners can register and manage their organizations and customers can browse for items. We intend to create a centralized place where customers can find an ideal complex with available items, promoting the relationships between owners and potential customers.

This system should allow for customers to search for items according to their needs using filters and rent/reserve them for a period of time (specified by the user). It should also provide an easy way for managers to promote and manage their complexes.

Features and Roles

User

Users can search for sports complexes and their respective items.

Sports complexes can be searched by location, name, availability (date and time) and sport. They can then be filtered by the existence of spaces with a certain type of surface and if it's covered.

Unregistered User

An unregistered user has all the capabilities of a user.

An unregistered user can register himself using username, name, password, email address, phone contact and location. Optionally he can also have a picture.

The unregistered user can also log in to an existent account.

Registered User

A registered user has all the capabilities of a user.

The registered user can log out, turning into a unregistered user.

After finding an item or items they are interested in, registered users can reserve the item(s) for a specific period of time.

He will be able to track his rentals and reservations and after a rental is finished he can rate the

experience and report abnormalities to the complex manager or to the website admins within 24 hours after its conclusion. He will also be able to cancel the reservation at least 24 hours before its start. The registered user's personal information can be changed at any time.

A registered user can register a sports complex on the web application by providing a name, location, opening hours, contact information, PayPal account and a brief description. By doing this he will become manager of the registered sports complex.

Manager

A manager has all the capabilities of a registered user.

He can also add other registered users as managers of his complexes. The added managers will have the same capabilities as the initial manager.

Managers can remove other managers within the same complex.

The manager can add spaces to his sports complexes by providing information regarding the type of floor, coverage and price of rent per hour.

The manager can also add equipment by providing information regarding name, quantity available, sports and price of rent per hour.

The complex, spaces and equipment can also be removed and their information can be edited. This information includes the previously mentioned attributes as well as pictures (optionally) and the items will have information about their current state (free, occupied or for repair).

The manager will also be able to manage reservations, check reports for abnormalities and view statistics. The manager can cancel (at least 24 hours before the reservation's start) and add reservations and have an overview. On check-out, the sports complex manager can check the condition in which the equipment was left and rate the user accordingly.

The manager can add and remove (added by mistake or solved) reports for abnormalities in the system.

The statistics view will have statistics for reservation rate, reservation time length, defect rate, days with most affluence to the sports complex and users with the most reservations. This statistics will be available for each sports complex registered in the web application.

Admin

An admin user will be internally registered. He will be able to block any registered user (including managers), delete sports complexes, change the state of reservations to concluded or suspended and delete reservations. He will also be able to view all the information about the registered users, reservations and complexes. He can view statistics about the number of registered users, registered complexes and reservations made. When viewing reservations, there will be a filter to show only reservations with abnormalities.

Final Notes

A reservation can have the following states:

- **Reserved by the manager:** a reservation made by the manager (the payment is processed offline)
- **Reserved:** a reservation made by a registered user that isn't a manager of the complex
- **Canceled by the user:** money refunded to the user
- **Canceled by the manager:** money refunded to the user
- **Waiting user feedback:** during this time, the user can report to an user
- **Suspended by the admin:** this will only happen in case a conflict needs admin intervention
- **Concluded:** at this stage the money is released to the complex
- **Disabled by the admin:** disabled by the admin

Revision history

Date	Description
2017/02/23	- Grouped up roles and features for better read flow - Unregistered and Registered user roles were better distinguished - Added more options to the search functionality (e.g. search for item characteristics) - Managers now are automatically assigned (without needing authorization from an admin), but they can still be regulated by admins - Added more details to features - Redesigned reservation system (added several states for reservations) - Managers now need to add PayPal information for payment - Admin section now better described - Added final notes section to help understand the reservation system - Glossary moved
2017/03/01	- Added details about the payment system - Mentioned admin's capability to login and log out
2017/03/02	- Added mention of opening hours for the sports complexes
2017/03/15	- Added mention of price per hour for items
2017/05/04	- Added disabled by admin
2017/06/01	- Remove mention of dimensions for spaces

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