

CS1555 Term Project: MyAuction

Group 4

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Compilation

After logging into `unixs.cis.pitt.edu`, open the directory where all files are stored and set the source to `~panos/1555/bash.env`. Open `sqlplus` and run the `generate.sql` file (`@generate`). After running the file, exit `sqlplus` and compile `MyAuction.java` (`javac MyAuction.java`). Simply execute `MyAuction` afterwards (`java MyAuction`). It is important to note that a `db.config` file must exist in the same directory as `MyAuction.java` in order to properly connect to the Oracle database. This file consists of two lines: a username and password for the database.

Main Menu

Upon running `MyAuction`, users will be presented with a main menu that consists of three options. The format of this menu is used throughout the electronic auctioning system and can be used by entering the number of the desired menu option. For example, the first option can be chosen by entering the number '1'. The first option, *Administrator login*, enables users to login to the electronic auctioning system as an administrator given that they provide a valid administrator username and password. The second option, *User login*, enables users to login to their basic customer account given that they provide a valid username and password. Finally, the third option provides users with the ability to exit the program.

Administrator Menu

Once logged in as an administrator, users have the option to create a new user account, change the system time, view product statistics, view administrator statistics, or log out.

- Choosing to register a new user asks the current user input the new user's name, address, email address, login name, password, and whether or not they are an administrator. If all information is currently entered and the desired login name does not already exist, then the new user will be created.
- Selecting the option to update the system date creates a simple prompt where users are asked to input their new date in the correct format. The date is then adjusted accordingly.
- The product statistics option allows users the option to enter a username and see product statistics for that specific user, or they can leave the field blank and see general product statistics.
- If the general statistics option is chosen, the user will be taken to another menu where they are asked whether they want to view statistics on highest volume leaf categories, highest volume root categories, most active bidders, or most active buyers. After

choosing an option, the user will be asked to enter how many previous months to include in the statistics, as well as the maximum number of results to display. The statistics will be instantly generated afterwards

- Logging out from the administrator menu brings the user back to the main menu.

User Menu

The user menu gives users the option to browse products, search products, auction a product, bid on a product, sell a product, show suggestions, or logout.

- If browse products is selected, the user will be taken through a series of menus to narrow down their search from a root category to a leaf category, where they will then be able to choose how they would like their search results to be sorted.
- Searching for a product prompts the user to enter up to two keywords to search by, which they can enter on the same line separated by a space. If more than two keywords are included, only the first two keywords will be used.
- Auctioning a product has users input a product name, description (optional), categories (multiple categories can be entered on the same line separated by commas), auction length, and minimum price (optional). Invalid categories (i.e. the category does not exist or the category is not a leaf category) will be disregarded when auctioning the product; however, the product *will* be categorized by any valid categories included in the list. The auction will then be created.
- Bidding on a product simply brings up a prompt for the auction ID of the product, followed by the bid amount. If the product is still under auction and the amount is valid (greater than the previous bid), the bid will be placed successfully.
- Choosing to sell a product that has ended and been marked as 'closed' will bring up a prompt to ask the user if they want to sell or withdraw the product. If a product does not have any bids, the auction will be withdrawn automatically. If the user does not have any closed auctions, the system will tell them and no prompt will be shown.
- Selecting the suggestions will simply display the generated suggestions and bring the user back to the menu with no input necessary.
- Finally, logging out will bring the user back to the main menu.