

DESIGN OF SOFTWARE SYSTEMS CS 509

Fall 2024

Provisional Use Cases Start : **TO REVIEW TUESDAY SEP-19th**

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Auction House Context

- [Auction](#) Wikipedia definition
- A **seller** of an **item** gives permission to the **auction house** to auction it off and take 5% of the sales price
 - A **customer** browses **auction house** to locate **items** of interest
 - If a **customer** wants to place a bid, they must become a **buyer**
- **Admin** is responsible for managing **auction house**
- Total of 35 use cases to complete
- Simplifications
 - No credit card/\$\$: Assume all financial transactions succeed
 - No shipping costs for auction: Assume that in all successful auctions, the item is shipped to the buyer
 - No need to alert buyer (or seller) when auction ends. Seller is responsible for fulfilling all successful auctions

Seller Use Cases (13)

- Create account
- Close account
- Login account
- Add item
- Remove inactive item
- Edit item
- Publish item
- Review items
- Fulfill item
- Unpublish item
- Archive item
- Request unfreeze
- Request unfreeze item

A closed account is disabled for activity and then cannot be logged in again

Add item uploads item for seller, but it is not “active” until **seller publishes** the item. **seller** can remove an *inactive* item and edit details about an *inactive* item

A **seller** can review their items to see which ones are *inactive* (not yet published), *active* (waiting for more bids), *sold* (time has expired with a winning bid), *failed* (time has expired without any bids), *completed* (time has expired with bids) and *archived* (item has been fulfilled)

seller is responsible for fulfilling an item whose ending time has expired. Funds are withdrawn from winning **buyer**

seller can unpublish an active item that does not have any current bids

seller can archive an *inactive* item

Customer (3)

- Search items
- Sort items
- View item

customer can search all active items using keywords, price ranges

customer can sort all active items by price, date (published date and expiration date)

customer can view an active item (but not any of its bids)

Buyer Use Cases (11)

- Open account
- Close account
- Login account
- Add funds
- Search recently sold
- Sort recently sold
- View item
- Place bid
- Review active bids
- Review purchases
- Request unfreeze

When a **buyer** views an item, the **buyer** can see all bids on the item (date made, value, buyer id)

A **buyer** can search through all recently sold items (in past 24 hours) and view the items and bidding history

buyer can sort all recently sold items by price, date (published date and expiration date)

buyer can place a higher bid on an item whose time has not expired. **buyer** can review list of all active items on which they have a bid.

buyer can review all past purchases where they were the successful bidder

buyer can request to unfreeze their account (if it was frozen)

Admin Use Cases (8)

- Freeze/Unfreeze buyer
- Freeze/Unfreeze seller
- Freeze/Unfreeze item
- Generate Auction Report
- Generate Forensics Report

admin can freeze a **buyer** account; once frozen, that **buyer** can only login to their account where they can request to be unfrozen

admin can freeze a **seller** account; once frozen, that **seller** can only login to their account where they can request to be unfrozen

admin can freeze an item that is currently on sale; a frozen item cannot receive any new bids. A frozen item cannot be fulfilled but it can be archived. When time expires for a frozen item it becomes a *failed* auction and all bids are canceled

Auction report contains the total \$\$ earned from 5% commissions on all sales