# Group Analysis: Eiffel Group.

## AWS Calculator Link:

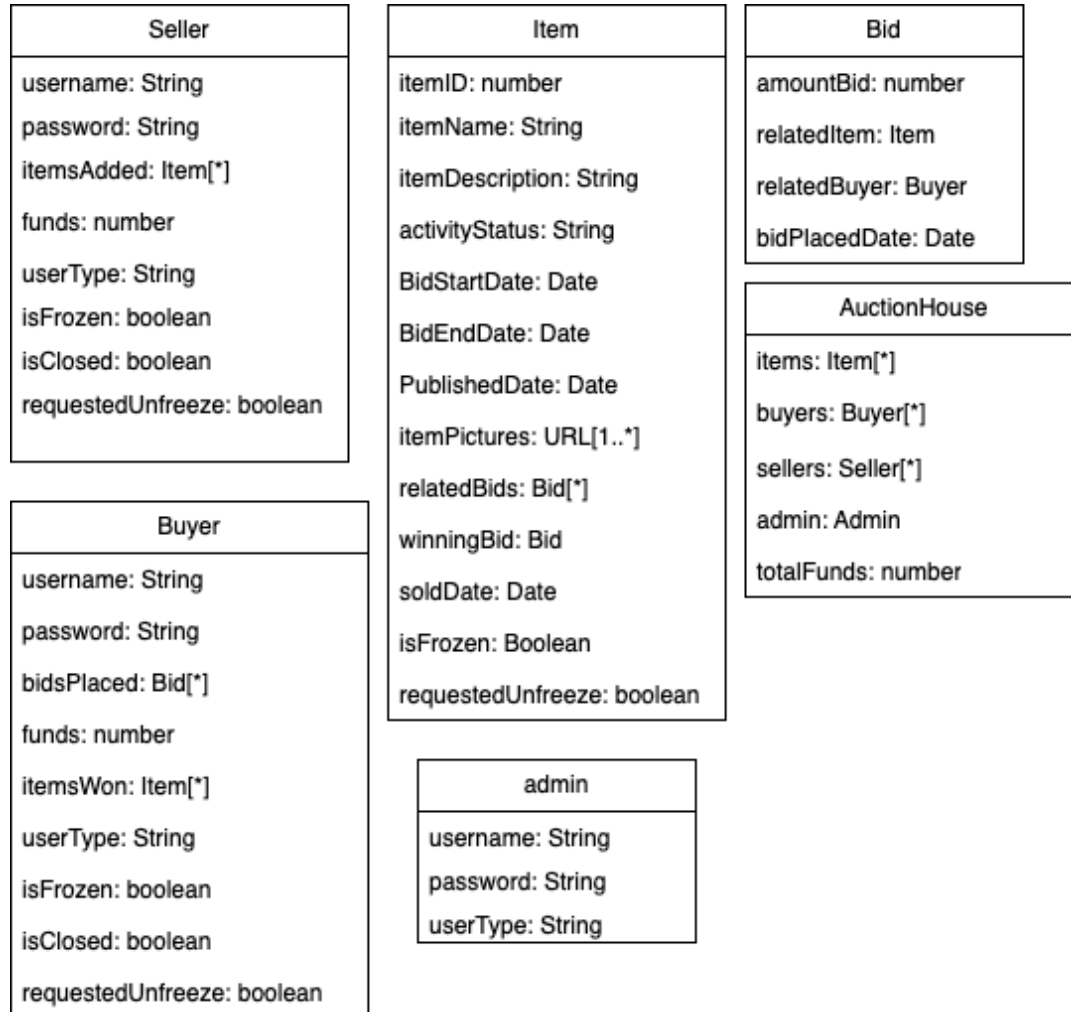http://testcalc1.s3-website.us-east-2.amazonaws.com/calculator.html

## Global Assumptions:

1. Each user is uniquely identified by their username. This means that no seller, buyer, or admin will have the same username.
2. If an item has a bid on it, the price of that item is equal to that item's highest bid +1. If that item does not have a bid on it, then the price of that item is just the price set by the seller.

# Class Diagram

**Seller**

username: String
password: String
itemsAdded: Item[*]
funds: number
userType: String
isFrozen: boolean
isClosed: boolean
requestedUnfreeze: boolean

**Item**

itemID: number
itemName: String
itemDescription: String
activityStatus: String
BidStartDate: Date
BidEndDate: Date
PublishedDate: Date
itemPictures: URL[1..*]
relatedBids: Bid[*]
winningBid: Bid
soldDate: Date
isFrozen: Boolean
requestedUnfreeze: boolean

**Bid**

amountBid: number
relatedItem: Item
relatedBuyer: Buyer
bidPlacedDate: Date

**AuctionHouse**

items: Item[*]
buyers: Buyer[*]
sellers: Seller[*]
admin: Admin
totalFunds: number

**Buyer**

username: String
password: String
bidsPlaced: Bid[*]
funds: number
itemsWon: Item[*]
userType: String
isFrozen: boolean
isClosed: boolean
requestedUnfreeze: boolean

**admin**

username: String
password: String
userType: String

# StoryBoards

## View Items As a Customer

The first page that a user will see when accessing our application is the "View Items As a Customer" page shown below, where they can see all of the published items with their published date, expiration date, and the highest bid.

| Search For Items With Matching Key Words | Enter search keywords here... |
|---|---|

| Search for items with entered Price Range | Enter Minimum Price here... | Enter Maximum Price here... |
|---|---|---|

| Viewing Currently Active Items. Click on an item to view its contents | Login or Signup Here |
|---|---|

| Auction Item #7<br>Published Date:<br>Expiration Date:<br>Highest Bid: $$ | Auction Item #7<br>Published Date:<br>Expiration Date:<br>Highest Bid: $$ | Auction Item #9<br>Published Date:<br>Expiration Date:<br>Highest Bid: $$ | **Sort Items by:** |
|---|---|---|---|
| Auction Item #10<br>Published Date:<br>Expiration Date:<br>Highest Bid: $$ | Auction Item #11<br>Published Date:<br>Expiration Date:<br>Highest Bid: $$ | Auction Item #12<br>Published Date:<br>Expiration Date<br>Highest bid: $$ | Published Date<br><br>Expiration Date<br><br>Price |
| Auction Item #13<br>Published Date:<br>Expiration Date<br>Highest Bid: $$ | Auction Item #14<br>Published Date:<br>Expiration Date<br>Highest Bid: $$ | Auction Item #15<br>Published Date:<br>Expiration Date<br>Highest Bid: $$ | |

Until the user decides to log in to their account, it will be assumed that they are a customer. Hence, to search for items with matching keywords, the user can type in their desired keywords in the provided search bar with the placeholder text, "Enter search keywords here…" and then click the button with the words "Search For Items With Matching Key Words" in it. Additionally, a user may search for items within a specific price range by typing the minimum price of items in the textbox with the placeholder text, "Enter Minimum Price here...", then typing their desired maximum price in the textbox with the placeholder text, "Enter Maximum Price here...", and finally click the button with the label text "Search for items with entered Price Range" to get results for items within the specified price range. Moreover, if a user wants to take a closer look at a specific item, they may click on it. Once they do so, the user will be taken to a "View Item Details" page where they can see the item's name, description, pictures, current highest bid, published date, and expiration date, as shown below.

## View Item Details

| Viewing Details of Item #7 |

| Item Pictures |

| Item Name |
| Price |
| Item Current Highest Bid |
| Item Description |

| Item Description |

| Published Date |
| Expiration Date |

| Continue Viewing Items |

Once the user is done viewing a specific item's details, they may click on the button with the words "Continue Viewing Items" to return to the "View Items As a Customer" page.

In addition to all this functionality, the "View Items As a Customer" page allows a user to sort all the items they can see by specific filters. To be more precise, while all the items on that page are sorted by published date by default, if a user wishes to do so, they may also sort all the visible items by their price or expiration date instead by clicking on the button on the right-hand panel that corresponds to their desired sorting method. It should be noted that when choosing to sort by price, a user is really sorting the items they can see by their current highest bid, which could be the initial starting price if no bids have been placed yet but different if bids have been placed, as they are required to place a higher bid to have a chance to get those items. From this same page, the user can decide to either Login, if they happen to have an existing account, or create a new account if they would like to sign up by clicking the button with the words "Login or Signup Here" inside. Once they do so, they will be taken to the "User Authentication" page shown below.

## User Authentication

| | |
|---|---|
| **Already have an account?** | **No account yet? Create it here** |
| Enter your username | Create your username |
| Enter your password | Create your password |
| | **Select the type of User you are** |
| Login | Buyer     Seller |
| | Create Account |

Continue Viewing Items as a Customer

On the Authentication page, the user can choose to either Login if they already have an account created previously by entering their username, password, and clicking the button with the label text "Login" or they can create a new account by typing in a username, password, selecting their type of User (Buyer or Seller), and then clicking on the button with the label text "Create Account" in it. Additionally, if the user trying to login happens to be the application's administrator, they may enter the secret username and password combination required to access the "Administrator" side of the application. If a user does not wish to log into or register their account, they may click on the button with the words "Continue Viewing Items as a Customer" in it to return to the "View Items As a Customer" page and keep viewing the items as if they were a customer.

If the user logs into a seller account, the first page they will access is the "Review items" page shown below, where they will be able to view and manage all of the items they have previously added.

# Review Items

| Add New Item | Review Items | View Profile | Logout |
|---|---|---|---|

Viewing List Of Added Items. Click on an item to view and manage all its information.

| | | | |
|---|---|---|---|
| Added Auction Item #1 | Added Auction Item #2 | Added Auction Item #3 | **View all Items** |
| Added Auction Item #4 | Added Auction Item #5 | Added Auction Item #6 | *Filter by Activty Status:* |
| | | | Inactive |
| | | | Active |
| | | | Failed |
| Added Auction Item #7 | Added Auction Item #8 | Added Auction Item #8 | Completed |
| | | | Archived |
| | | | Frozen |

Once on the "Review Items" page, the seller can view all of the items they added in a grid list format. All those items are arranged in reverse chronological order by default, starting with the most recently added item. In addition to this, each one of those items also happens to have an activity status associated with it that can be used to filter the items by when the seller clicks on the button with the corresponding activity status that they want to filter the items by on the right hand panel. Once they have clicked on a filter, they will be returned items with that particular activity status only. If they would like to remove their current filtering option and go back to viewing all of the items, they can click on the button with the label text, "View all Items" in order to return to viewing all items regardless of their activity status. If the seller would like to add a new item, they would click on the button with the label text "Add new Item" in order to be taken to the "Add New Item" page which is shown below.

## Add New Item

Add New Item

Insert Item Pictures Here

Enter Item Price Here

Enter Item Description Here

Enter Expiration Date Here

Add New Item

On this page, the seller can enter information related to the new item that they intend to add such as item pictures, item price (minimum of $1), an item description, and an expiration date for when the bid is supposed to end. When the seller has entered their item info to their liking, they can click the "Add New Item" button that will add the new item and redirect them to the "Review Items" page where the newly added item should be the first item they will see in the list.

Back to the "Review Items" page, when the seller clicks on an item, they are brought to a specific type of page that corresponds to the activity status of the item that they clicked on. For instance, if the item that they selected happens to be inactive, they will be taken to the "Manage Inactive Item" page focusing on that item shown below.

# Manage Inactive Item

Viewing and Managing Inactive Added Auction Item #2

Last Item Pictures placed Here

Last Edited Item Price Here

Last Edited Item Description Here

Last Edited Expiration Date Here

Remove Item

Publish Item

Edit Details

Archive Item

View all Items

Once on that page, a user can see their selected inactive item's core details such as its pictures, initial price, description, and expiration date. In terms of functionality, to begin, the "Manage Inactive Item" page focusing on the completed item the user is currently managing allows the user can choose to remove the item they are currently on by clicking the button with the words "Remove Item". Once they do so, the user will be taken back to the "Review Items" page, and the item they removed will not be visible to them. In addition to this, the "Manage Inactive Item" page also allows the user to publish the inactive item they are currently on simply by clicking the button with the words "Publish Item" in it. Once they do so, they will also be taken back to the "Review Items" page, and that item's activity status will switch from being considered "Inactive" to "Active". Moreover, the "Manage Inactive Item" page also allows the user to edit the details of an inactive item simply by clicking the "Edit Details" button. Once they do so, they will be taken to the "Edit Item Details" page where they can edit details such as the item's associated pictures, initial price, description, and expiration date, as shown below:

## Edit Item Details

Edit Item Details

Insert New Item Pictures Here

Edit Item Price Here

Edit Item Description Here

Edit Expiration Date Here

Update Item Details

Once they are done editing the details of their currently managed inactive item they want, the user can finalize that item's updates by clicking the "Update Item Details" button. Once they do so, the user will be redirected back to the "Manage Inactive Item" page focusing on the inactive item they are currently managing.

Now back to the "Manage Inactive Item" page focusing on the inactive item the user is currently managing, on top of all this functionality, the page also allows users to archive the inactive item they are currently managing by clicking the button with the words "Archive Item". Once they do so, the user will be redirected back to the "Review Items" page, and that item's status will switch from "Inactive" to "Archived". One last feature that the "Manage Inactive Item" page focusing on the inactive item the user is currently managing provides is that if the user decides to not do anything besides just taking a closer look at the inactive item they are currently managing, they can return to the "Review Items" page without affecting any of the item's parameters simply by clicking the "View all Items" button.

Now, back to the review page, if the item that they selected happens to be active, they will be taken to the "Manage Active Item" page focusing on that item shown below.

## Manage Active Item



Viewing and Managing Active (Published) Added Auction Item #2

Item Pictures Here

Item Price

Item Description

Published Date

Expiration Date

Unpublish Item

View all Items

| View Active Bids Here (In Reverse Chronological Order) | | |
|---|---|---|
| Buyer Name | Bid Amount | Date The Bid Was Made |
| Buyer Name | Bid Amount | Date The Bid Was Made |
| Buyer Name | Bid Amount | Date The Bid Was Made |
| Buyer Name | Bid Amount | Date The Bid Was Made |

Once on that page, a user can see their selected active item's core details such as its pictures, initial price, description, and expiration date. In addition to all this, the user will also be able to see the details of all of the bids that have been made on the active item they are currently on. These details include the buyer's username, bid amount, and the date the bid was made. In terms of functionality, to begin, the "Manage Active Item" page focusing on the active item the user is currently managing allows the user to unpublish an item that has no associated bids yet simply by clicking the button with the words "Unpublish Item". Once they do so, if the item did not have any bids associated to it, then the user gets redirected to the "Review Items" page and the activity status active item the user is currently managing will switch from "Active" to "Inactive", but if the item did have bids associated to it, then nothing happens at all when the user clicks that button. One more feature that the "Manage Active Item" page focusing on the active item the user is currently managing provides is that if the user decides to not do anything besides just taking a closer look at the active item they are currently managing, they can return to the "Review Items" page without affecting any of the item's parameters simply by clicking the "View all Items" button.

Once the expiration date of an active item has passed, that item's status switches to "completed" if the item had associated bids, or "failed" if it did not have any associated bids. If a user clicks

on an item whose status is "completed,"  they are taken to the "Manage Completed Item" page focusing on that item shown below.

## Manage Completed Item



Viewing and Managing Completed Added Auction Item #2

Item Description Here

Item Pictures Here

Start Date Here

Optional Expiration Date Here

View Winning Bid Here

| Buyer Name | Bid Amount | Date The Bid Was Made |

Fulfill Item

View all Items

Once on that page, a user can see their selected completed item's core details, such as its pictures, initial price, description, and expiration date. In addition to all this, the user will also be able to see the details of the highest bid that has been made on the completed item they are currently on. These details include the buyer's username, bid amount, and the date the bid was made. In terms of functionality, to begin, the "Manage Completed Item" page focusing on the completed item the user is currently managing allows the user to fulfill the completed item they are currently managing simply by clicking the button with the words "Fulfill Item" in it. Once they do so, the buyer who made the winning bid for that item will lose an amount of funds from their account balance that is equal to the value of the bid they made for that item, the buyer who made the winning bid will be considered to be the owner of that item, and the user will be redirected back to the "Review Items" page, and that item's status will switch from "Completed" to "Archived". One more feature that the "Manage Completed Item" page focusing on the completed item the user is currently managing provides is that if the user decides to not do anything besides just taking a closer look at the completed item they are currently managing, they can return to the "Review Items" page without affecting any of the item's parameters simply by clicking the "View all Items" button.

Now, if a user clicks on an item whose status is "failed,"  they are taken to the "Manage Failed Item" page, focusing on that item shown below.

## Manage Failed Item

Viewing and Managing Failed Added Auction Item #2

| Item Pictures Here | Item Description Here |
| | Start Date Here |
| | Expiration Date Here |

View Winning Bid Here
No bids placed

View all Items

Once on that page, a user can see their selected failed item's core details such as its pictures, initial price, description, and expiration date. In addition to all this, the user will also be able to see the fact that no bids were made for the failed item they are currently on. In terms of functionality, on the "Manage Failed Item" page, once the user is done taking a closer look at the failed item they are currently managing, they can return to the "Review Items" page without affecting any of the item's parameters simply by clicking the "View all Items" button.

If the seller selects an item that happens to have an activity status of Archived, they are taken to the "Managing Archived Item" page shown below.

## Managing Archived Item

Viewing and Managing Archived Added Auction Item #2

Item Pictures Here

Item Description Here

Start Date Here

Expiration Date Here

Sold to: Username of the person sold to (Will say "Sold to: No One" if the item was archived while inactive

View all Items

Once on this page, the user can view all of the information associated with the item such as the item picture, a description of the item, the start date for bidding, the expiration date for bidding, and a "Sold to:" field that states the username of the person that won the bid and was sold the item given that the item that was archived was a fulfilled item. However, if the item happens to have been archived while it was an inactive or unpublished item, then the "Sold to:" label will have a value of "No One" to indicate that the item had either failed in terms of garnering any bids or that it was never published for bidding to take place in the first. Finally, once the seller is done viewing all of the information related to the archived item, they can go back to the Review Items page by clicking on the button with the label text, "View all Items."

If the seller selects an item that happens to have an activity status of Frozen, they will be taken to the "Viewing Frozen Item" page as shown below.
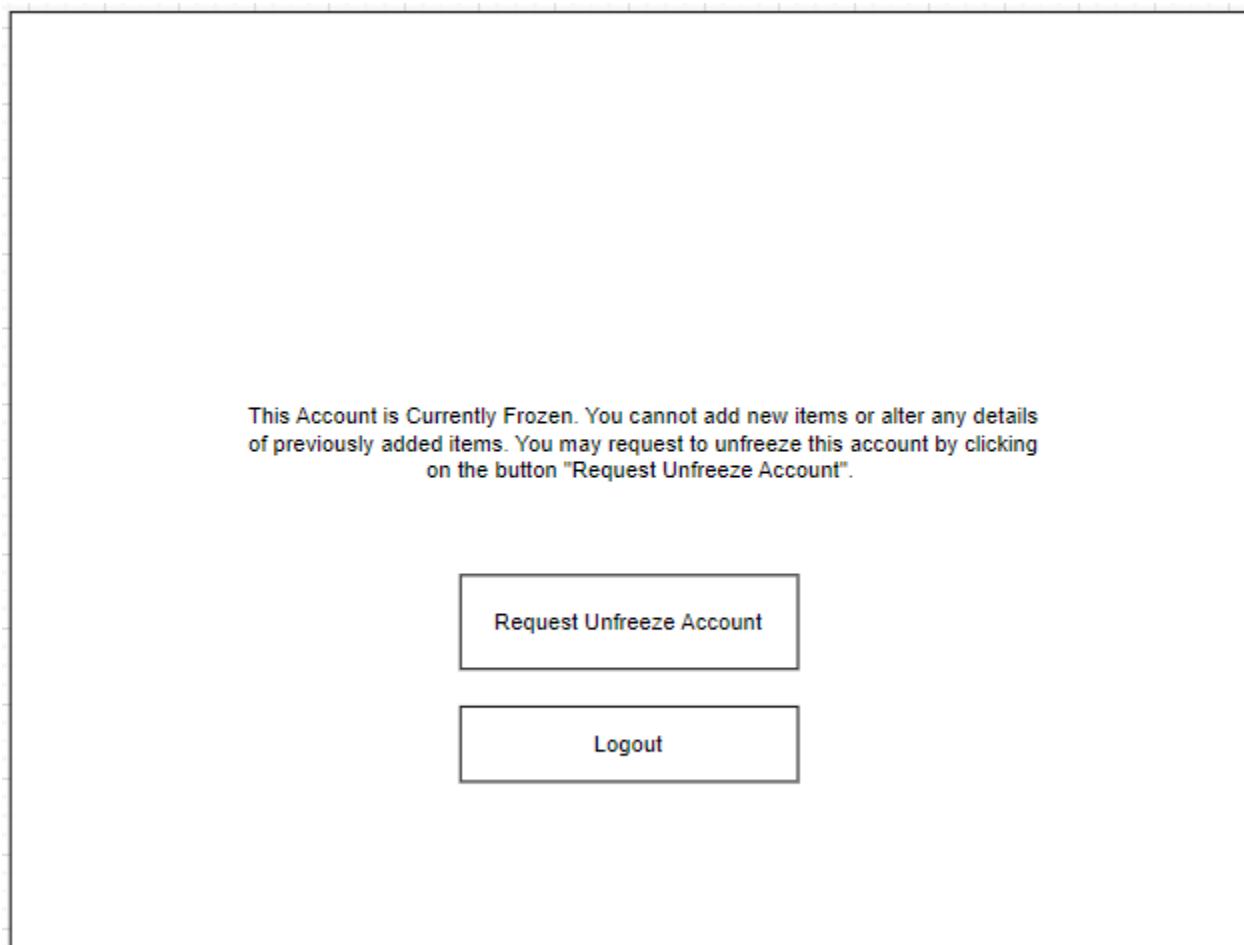
## Viewing Frozen Item

Viewing Frozen Added Auction Item #2

Item Pictures Here

Item Price

Item Description Here

Start Date Here

Expiration Date Here

Request Unfreeze Item

View all Items

Once on this page, the seller will be able to view the item pictures, item price, item description, the start date of the bidding, the expiration date of the bidding. The seller has the option to request to unfreeze the item by clicking on the button with the label text "Request Unfreeze Item" in order to request that the item be unfrozen. If the seller is done viewing all of the information related to the frozen item and has requested to unfreeze the item if they would like to do so, then they can return to the Review Items page by clicking the button with the label text, "View all items."

If the seller's account is frozen, they will be met with the following "Frozen Account" page shown below immediately upon successfully logging into their account.

## Request UnFreeze account

This Account is Currently Frozen. You cannot add new items or alter any details
of previously added items. You may request to unfreeze this account by clicking
on the button "Request Unfreeze Account".

Request Unfreeze Account

Logout

Once on this page, the seller can read the information text label regarding their account being frozen and the limitations placed on their account due to this reason. The seller is informed that they cannot add any new items or edit any details of previously added items. Additionally, they are informed that they can potentially unfreeze their account by requesting to unfreeze their account by clicking on the button with the label text "Request Unfreeze Account." After reading the details regarding their account freeze and what they should do in order to request that their account be unfrozen, the seller can choose to simply logout by clicking on the button with the label text "Logout" upon which they will be redirected to the User Authentication page.

At any point after the user has created a seller account, perhaps after utilizing their account to auction a few of their personal items, they may decide for whatever reason that they no longer need an account and that they would like to close their account. On the Review Items page, the seller will see a button on the top right-hand side of the page with the label text, "View Profile", which when clicked will bring the seller to their Account Profile page as shown below.

View Profile
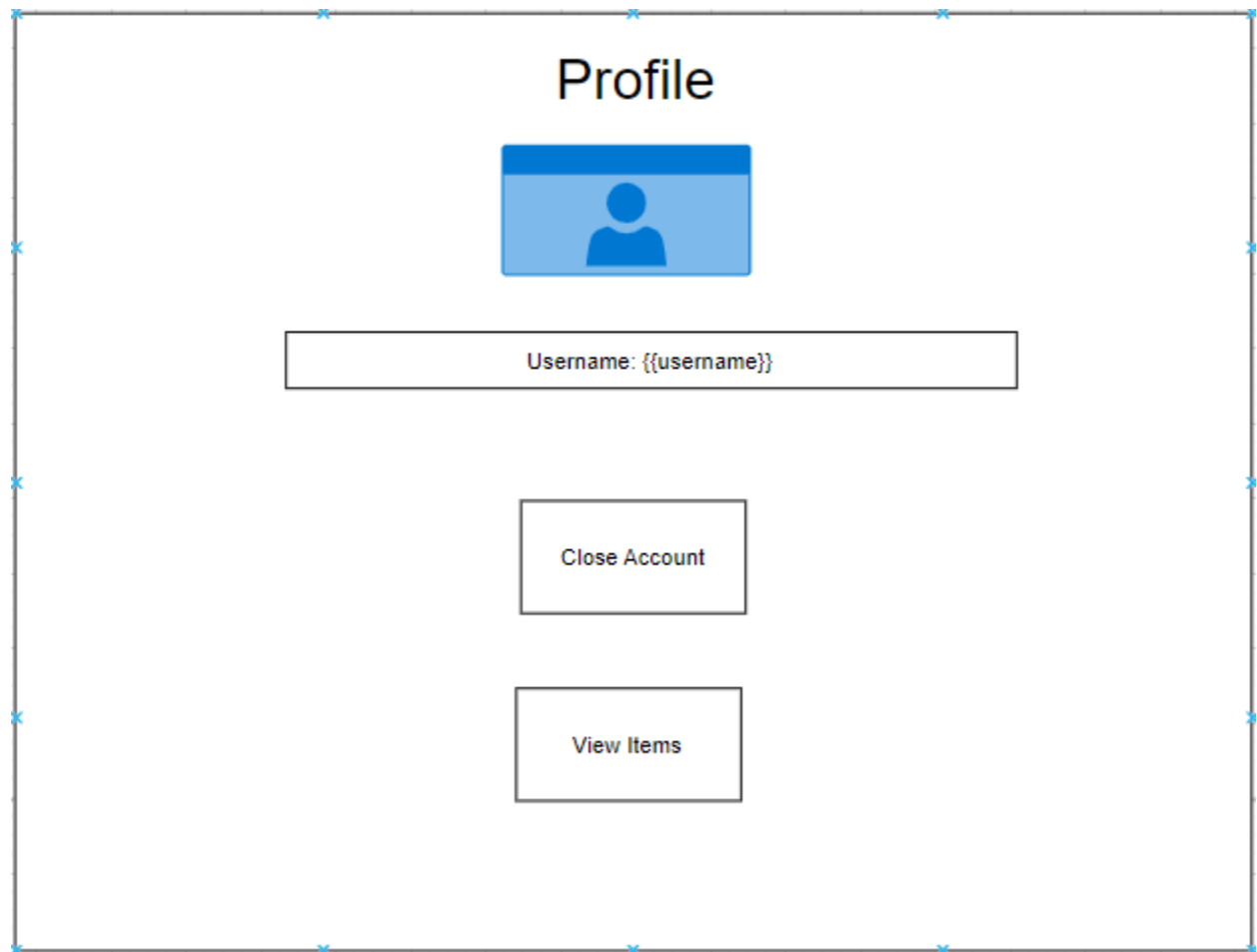


On this page, the seller will be able to view the silhouette of their profile icon and their username. In order to close the account, they can click on the button with the label text "Close Account" in order to begin the process to close their account. Upon clicking the "Close Account" button, they will be prompted by a confirmation dialog such as the one shown below.
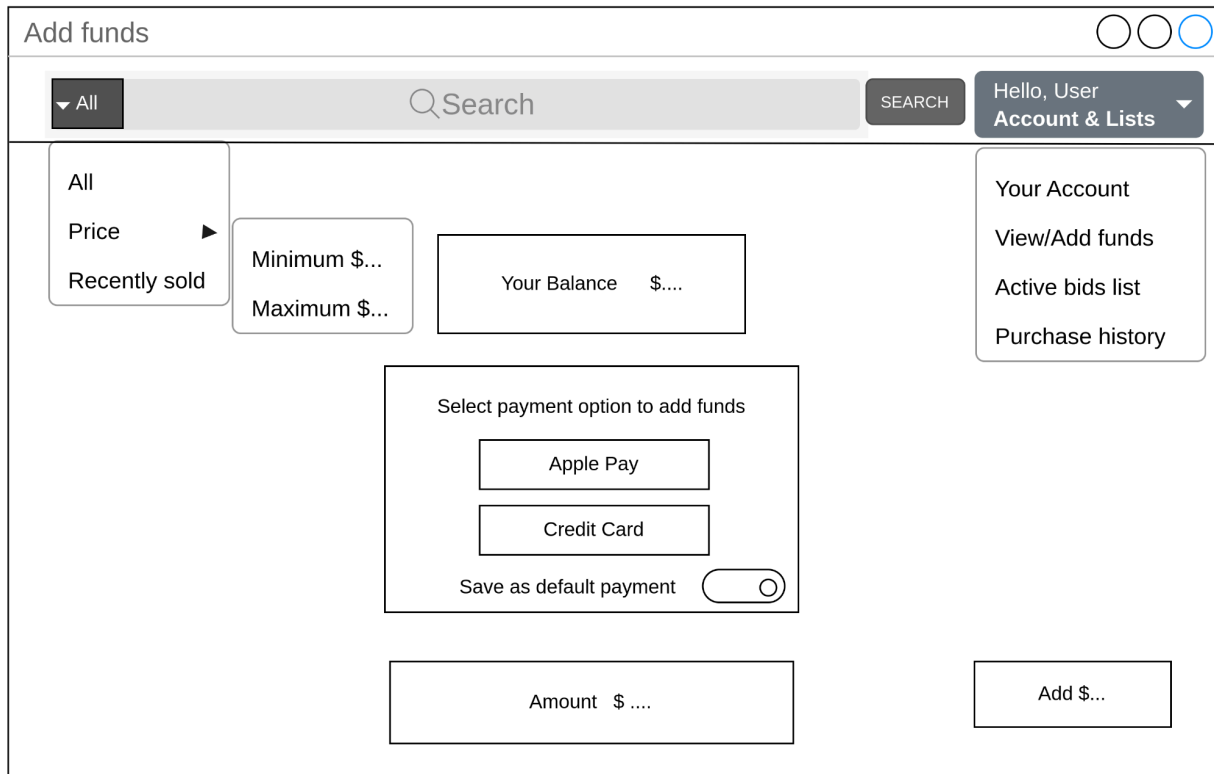
Close Account Confirmation Dialog



Profile

Are you sure you want to close your account?

Cancel        Confirm

View Items
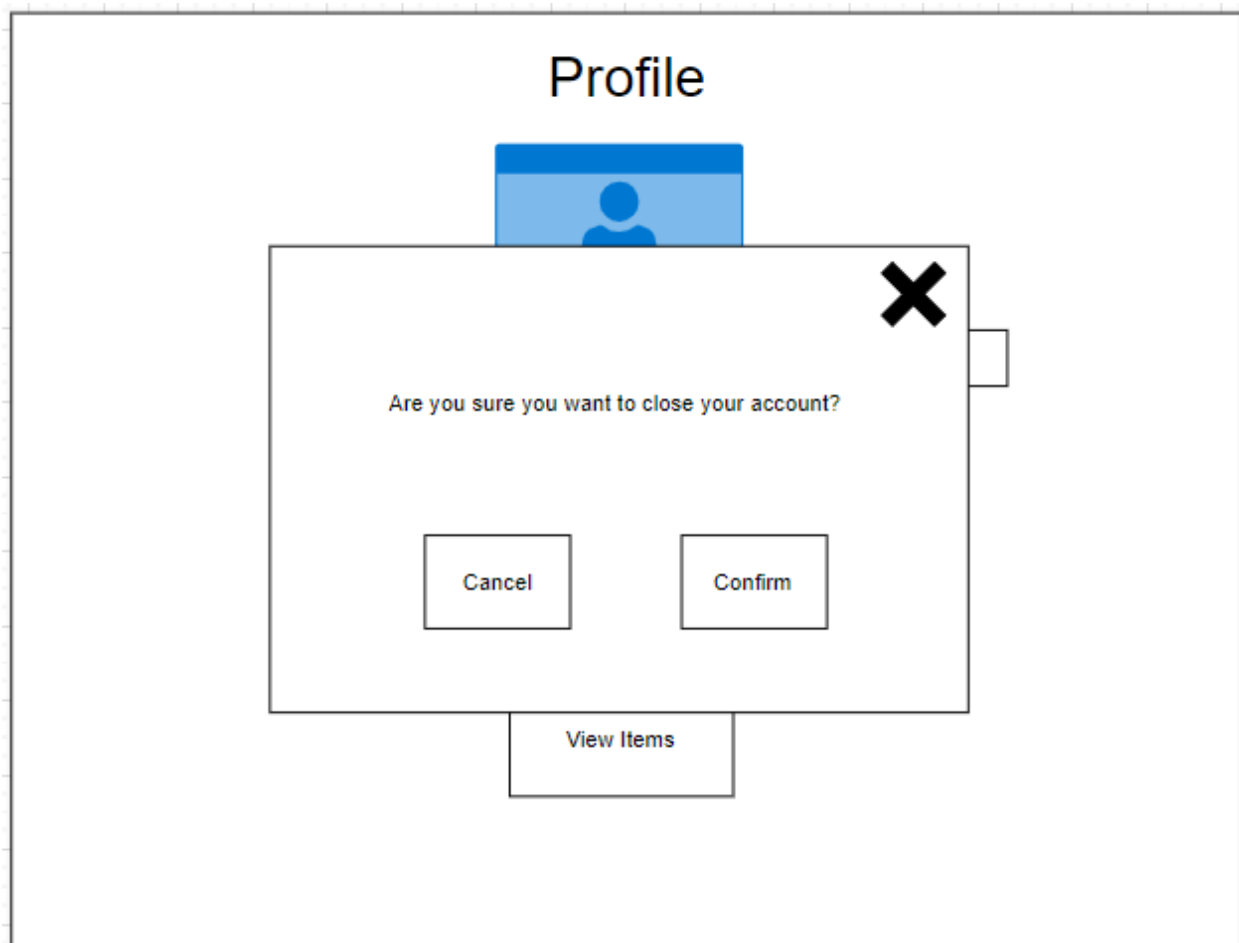
This confirmation dialog allows the seller to carefully reconsider their decision and provides them with the opportunity to cancel the process to close their account in case they happen to change their mind. The user can decide to cancel their decision by clicking on either the "Cancel" button or the "X" icon on the top right-hand corner of the dialog. However, if the user is certain that they would like to close their account, they can press the button with the label text "Confirm" and that will close their account and redirect them to the "User Authentication" page if the user had no active items or bids, but if they did have either bids or active items, then nothing will happen when they click the button with the label text "Confirm".

If they would instead like to exit from their profile page and return to the Review Items page, the seller can click on the button with the label text "View Items" on the Account Profile page.

## Add funds:



After logging into their account as a buyer, they can navigate through the site via the Navbar at the top of the page. The buyers click on the Account & Lists dropdown in the Navbar. This dropdown provides access to view or add funds to their account. Buyer is directed to the **Add Funds page**, where they can view their balance, select a payment method, input an amount, and confirm the addition of funds.

Navbar:

- "Search" bar,  "Account & Lists" dropdown.
- Description:
    - The search bar allows buyers to search for all items, price ranges, or recently sold items (in past 24 hours).
    - The Account & Lists dropdown provides the buyers access to their account, viewing or adding funds, viewing active bids, and purchase history.

Balance Information:

- "Your Balance" section.
- Description:
    - This text shows the buyer's current available funds. Buyers need to ensure they have sufficient funds before placing any bids and also check their available balance before adding funds.

Select Payment Option:

- Apple Pay button, Credit Card button, and the toggle switch to save the payment method.
- Description:
  - The buyers can select a payment method by clicking on Apple Pay or the Credit Card button to add funds to their account.
  - The Save as default payment toggle allows the buyer to store their preferred payment option for future use, simplifying the process for repeat transactions.

Amount Input Field:

- Input for amount.
- Description:
  - The buyers can enter the amount they wish to add to their balance.

Add Funds Button:

- "Add $" button.
- Description:
  - Once the amount and payment method are selected, the buyer can click this button to add the selected funds to their account.

## Search recently sold:

The buyers can navigate to the **Search recently sold page** by selecting the Recently Sold option from the "All" dropdown in the "Search bar." The buyers can use the search bar to look for specific items or keywords that match the recently sold items within the last 24 hours and can sort the search results using the "Sort item by" dropdown, which allows them to organize items by price, expiration date, or published date. The buyers can scroll through the list of items displayed on the page, and by clicking on any item, they can get more details about it.

Navbar:

- "Search" bar, "Account & Lists" dropdown.
- Description:
    - The search bar allows buyers to search for all items, price ranges, or recently sold items (in past 24 hours).
    - The Account & Lists dropdown provides the buyers access to their account, viewing or adding funds, viewing active bids, and purchase history.

Sort Item By Dropdown:

- "Sort item by" dropdown menu with options for "Price," "Expiration date," and "Published date."
- Description:
    - This Sort dropdown allows buyers to sort the recently sold items by different criteria:
        - Price: Items can be sorted by the final sold price.
        - Expiration date: Items can be sorted by when the auction expired.
        - Published date: Items can be sorted by the date it was originally listed for auction.
    - If the items are sorted, at the top of the item the sorted option is written in the " sorted by: …" text box.

Recently Sold Items Display:

- Item cards display item information (Item image, item name, item description, published date, sold date, and sold price).
- Description:
    - Each item card shows essential details about the recently sold item, including:
        - Item Image: Each item must have at least one image.
        - Item name and description: A brief overview of the item that was sold.
        - Published date: The date when the auction was first published.
        - Sold date: The date when the auction ended and the item was sold.
        - Sold price: The final price at which the item was sold.
    - Buyers can click on these item cards to view additional information about the sale or auction.

Pagination Controls:

- "Previous"," page numbers", and "Next" buttons.

- Description:
  - The pagination controls allow buyers to navigate through multiple pages of recently sold items. They can click "Previous" to go to the previous set of items, select a specific page number, or click "Next" to move to the next set of items. If there is only one page, all buttons are deactivated, and only page number 1 is active. If there is no previous page or no next page, the Previous button or the Next button is deactivated, respectively.

## View Item:

VIew Item

All | Search | SEARCH | Hello, User **Account & Lists**

**Item Name**

Item description

**$ ....**

**Auction dates**

Starts:
Ends:

**Bidding history**

| Bid value | Date made | Buyer ID |
|---|---|---|
| Bid value | Date made | Buyer ID |
| Bid value | Date made | Buyer ID |

**Current bid** .... 

**Your maximum bid** ....

Place $1 higher bid | $ Enter your custom maximum bid .00 | Place bid

After logging into their account, buyers reach the "View Item page" by selecting an item from the auction listings in the first page through a search of All, or from a Recently sold search. The buyers can view the item's name, description, image, and price to understand its condition and value before placing a bid. The buyer checks the auction start and end dates to confirm if there's enough time to place a bid. The buyer can see previous bids made on the item by clicking on the Bidding history dropdown. The Bid value, Date made, and Buyer ID columns allow them to understand how competitive the bidding has been. The buyer can see the current highest bid and, based on their available funds, view the maximum bid they can place. This helps the buyer determine if they have sufficient funds to place a competitive bid. If the buyer has enough funds, they can choose one of two bidding options: Click the Place $1 higher bid button to bid exactly $1 more than the current highest bid or enter a custom maximum bid in the input field and click Place bid to submit a bid of their choice. The Place bid button will be active when the buyer enters their custom bid. If the buyer does not have enough funds to cover the current bid or their custom bid, both the Place $1 higher bid and Place bid buttons will be deactivated. Once the buyer successfully places a bid, they will see a confirmation message on the screen that their bid has been submitted. Their bid amount will update the current bid until someone else places a higher bid.

If the item has already been sold or the auction has expired, a stamp will be displayed on the item, indicating its status as sold or expired. In this case, all action buttons, including Place $1 higher bid and Place bid, will be deactivated, preventing any further bidding.

**Navbar**:

- "Search" bar, "Account & Lists" dropdown.
- Description:
  - The search bar allows buyers to search for all items, price ranges, or recently sold items (in past 24 hours).
  - The Account & Lists dropdown provides the buyers access to their account, viewing or adding funds, viewing active bids, and purchase history.

## Item information:

- Item image, item name, description, and price.
- Description:
  - The item image, name, description, and price display information about the auctioned item. This helps the buyer review the details before making a bidding decision.

## Auction Dates:

- Auction start and end dates.
- Description:
  - This text section shows the auction start and end dates so the buyer can track how much time is left to place a bid.

## Bidding History Dropdown:

- Bidding history dropdown.
- Description:
  - Buyers can click on the Bidding history dropdown icon to view previous bids made on the item, including dates, bid amounts, and buyer IDs.

## Current Bid and maximum Bid:

- The Current bid and Your maximum bid text sections
  - The buyer can see the current highest bid and see the maximum bid they can place based on their available funds.

Place the $1 Higher Bid Button:

- "Place $1 higher bid" button.
- Description:
  - If the buyer has enough funds, they can click this button to automatically place a bid that is exactly $1 higher than the current highest bid. If the buyer does not have enough funds, this button will be deactivated.

Custom Maximum Bid Input:

- Input field for entering a custom bid amount.
- Description:

○ If the buyer wants to set a higher bid amount (instead of the default $1 higher), they can enter a custom maximum bid in the input field.

Place Bid Button:

- "Place bid" button.
- Description:
    ○ After entering a custom bid amount, if the buyer has enough funds, this button becomes active, and the buyer can click the Place bid button to confirm their bid.

Sold or expired item stamp:

- "Sold" or "Expired" stamp.
- Description:
    ○ If the item has been sold or the auction has expired, a Sold or Expired stamp will appear on the item, indicating that no further bids can be placed. Place a $1 higher bid, and the Place bid will be deactivated to prevent any further interaction, and the buyer cannot enter any amount in the custom maximum bid input field. The bidding history is the only option that is active after the item is sold or expired.

## Review Active bids



The "Review Active Bids page" allows the buyer to review their current bids and the status of those bids in ongoing auctions. After logging into their account, buyers can navigate to this page

from the Account & Lists dropdown by selecting the option to active bids list. The buyer sees a table listing all their current bids, organized by: Item image and name for context. Their bid amount and the highest bid to quickly assess if they need to increase their bid. Time remaining in the auction, helping the buyer prioritize which bids may need urgent attention. Status, indicating whether they are still the highest bidder or if they've been outbid. Taking Action on Bids: If the buyer needs more details on an auction or wants to review the bidding history, they can click Item Detail to return to the View Item page. If the buyer has been outbid, they can increase their bid and stay competitive. If there are more active bids than can be displayed on one page, the more... link will allow the buyer to view the next set of them.

Navbar:

- "Search" bar, "Account & Lists" dropdown.
- Description:
  - The search bar allows buyers to search for all items, price ranges, or recently sold items (in past 24 hours).
  - The Account & Lists dropdown provides the buyers access to their account, viewing or adding funds, viewing active bids, and purchase history.

Current Bids Table:

This table displays all the active bids that the buyer has placed, including relevant details like their bid amount, the highest current bid, time remaining in the auction, their bidding status, and the action.

- Columns in table:
  - Item Image
  - Description:
    - Shows a small image representing the item the buyer is bidding on, giving visual context.
  - Item Name
  - Description:
    - Displays the name of the item being auctioned, allowing the buyer to identify the auction in which they are participating.
  - Your Bid
  - Description:
    - Displays the current bid amount placed by the buyer. This column helps the buyer keep track of their bid for each auction.
  - Highest Bid
  - Description:
    - Displays the highest bid currently placed in the auction. This allows the buyer to see whether their bid is still the highest or if they've been outbid.
  - Time Remaining
  - Description:
    - Shows how much time is left before the auction closes. This helps the buyer decide if they need to increase their bid before the auction ends.
  - Status

- ○ Description:
  - ■ Displays the buyer's current status in the auction:
    - ■ Outbid: Indicates that the buyer's bid is no longer the highest.
    - ■ Highest Bidder: Indicates that the buyer currently holds the highest bid.
- ○ Actions: Item Detail
- ○ Description:
  - ■ Item Detail: This link takes the buyer to the View Item page, where they can view the full item details, and auction history, and place further bids if needed.

## Review Purchases
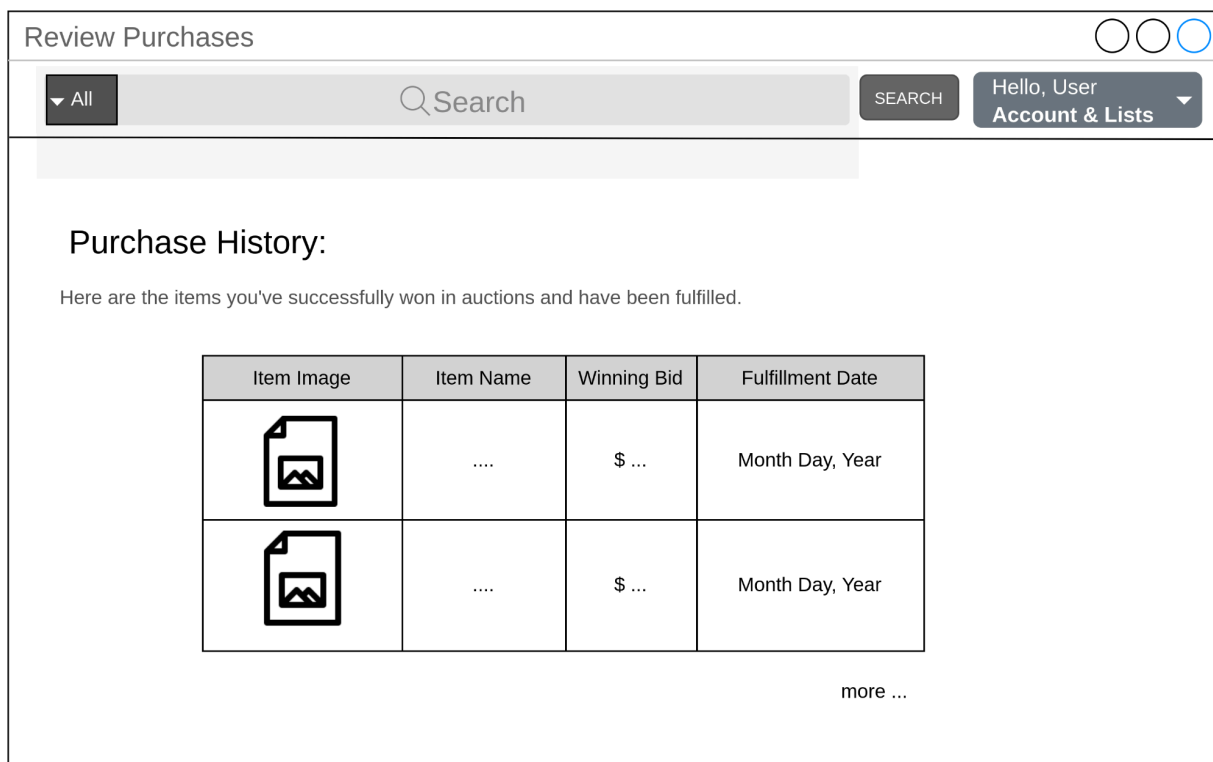


Buyers can review their purchases after winning auctions where items have been fulfilled by selecting Review Purchases from the Account & Lists dropdown in the navbar. The buyer can see a list of all items they've successfully won in auctions and that have been fulfilled. For each item, they can view the item image, item name, winning bid, and fulfillment date (indicating when the item was processed or delivered). If there are more purchases than can be displayed on one page, the more... link will allow the buyer to view the next set of purchases, helping them navigate through their purchase history.

Navbar:

- ● "Search" bar,  "Account & Lists" dropdown.

- Description:
  - The search bar allows buyers to search for all items, price ranges, or recently sold items (in past 24 hours).
  - The Account & Lists dropdown provides the buyers access to their account, viewing or adding funds, viewing active bids, and purchase history.

Purchase History table:

This table displays a list of the buyer's completed purchases with information about the item image, item name, the winning bid, and the fulfillment date.

- Columns in the table:
  - Item Image
  - Description:
    - Displays an image of the item that was purchased in the auction. This helps the buyer quickly identify the items they have successfully purchased.
  - Item Name
  - Description:
    - Displays the name of the item, helping the buyer identify what they won in the auction.
  - Winning Bid
  - Description:
    - Shows the winning bid amount that the buyer placed for the item. This helps the buyer recall how much they paid for each item.
  - Fulfillment Date
  - Description:
    - Displays the date when the item was fulfilled (delivered or processed). This lets the buyer track when their item was successfully fulfilled.

# Request Unfreeze Account
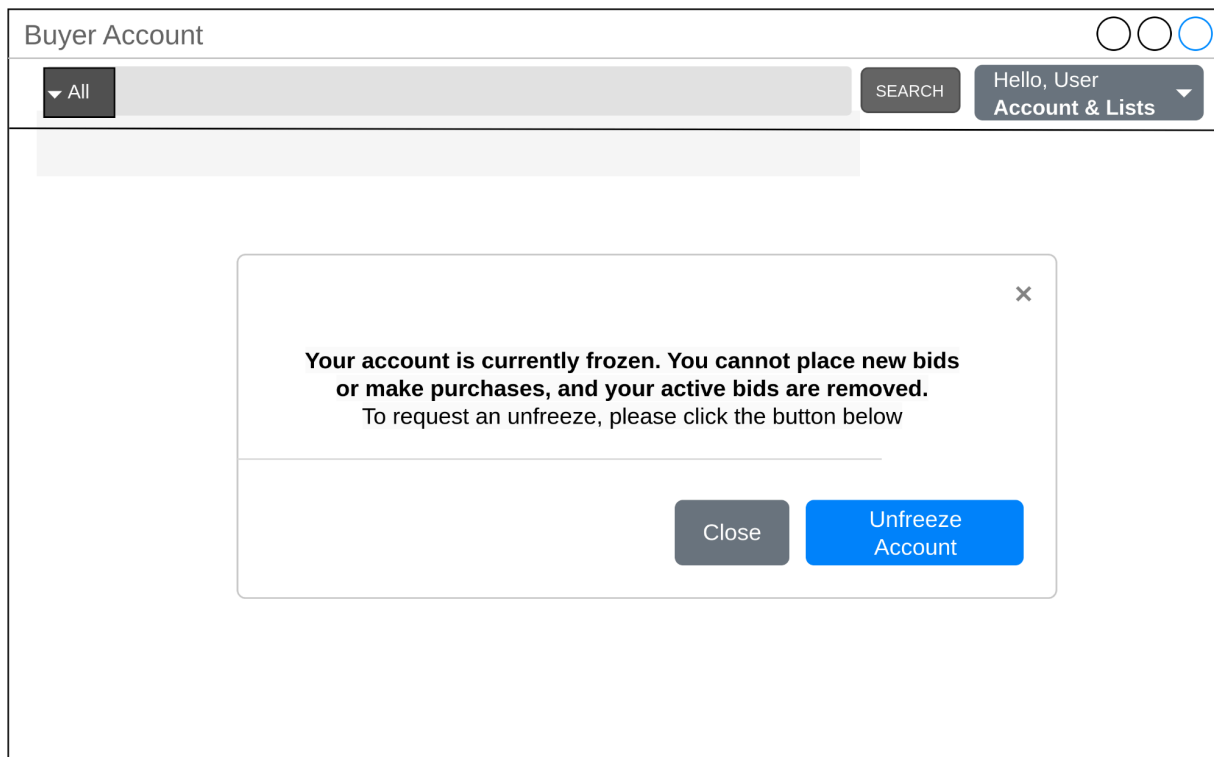


This popup is shown when a buyer's account is frozen, preventing the buyer from placing new bids or making purchases. The popup informs the buyer about their account status and provides a clear option to request an unfreeze. When the buyer account is frozen, all buttons, even the search bar, are deactivated. The buyer's active bids are also removed.

- Popup message for unfreeze account instruction:
    - Text displaying the frozen status of the account.
    - Description: This section informs the buyer that their account is currently frozen, and they cannot place new bids, or make purchases, and their active bids are removed. It also reassures the buyer that they can request an unfreeze.
- Unfreeze Account Button:
    - "Unfreeze Account" button
    - Description: Clicking this button sends a request to the admin to unfreeze the buyer's account, allowing them to do new bidding and purchasing activities.
- Close Button:
    - "Close" button
    - Description: The close button allows the user to exit the popup if they do not wish to take any action.

# Buyers Management



Now, if a user logs in as the auction house's admin, they will be redirected to this page above, the admin dashboard. We have a navigation bar at the top so the admin can navigate between different views and manage each individual entity.

Search buyer

● This search box can filter the buyers based on the name.

Filter dropdown:

● This can filter to show only frozen buyer that have been requested an unfreeze

Buyers List

● Freeze button: This button will freeze the specific buyer's account.
    ○ This button will be disabled if the buyer is already frozen.
● Unfreeze button: This button will unfreeze the specific buyer if it was frozen previously
    ○ This button will be disabled if the user is not frozen.

The pagination at the button will help us to iterate over the buyers.

## Item Management



This page is the admin dashboard. We have a navigation bar at the top so admins can navigate between different views and manage each individual entity.

Search items

- This search box can filter the item based on the name.
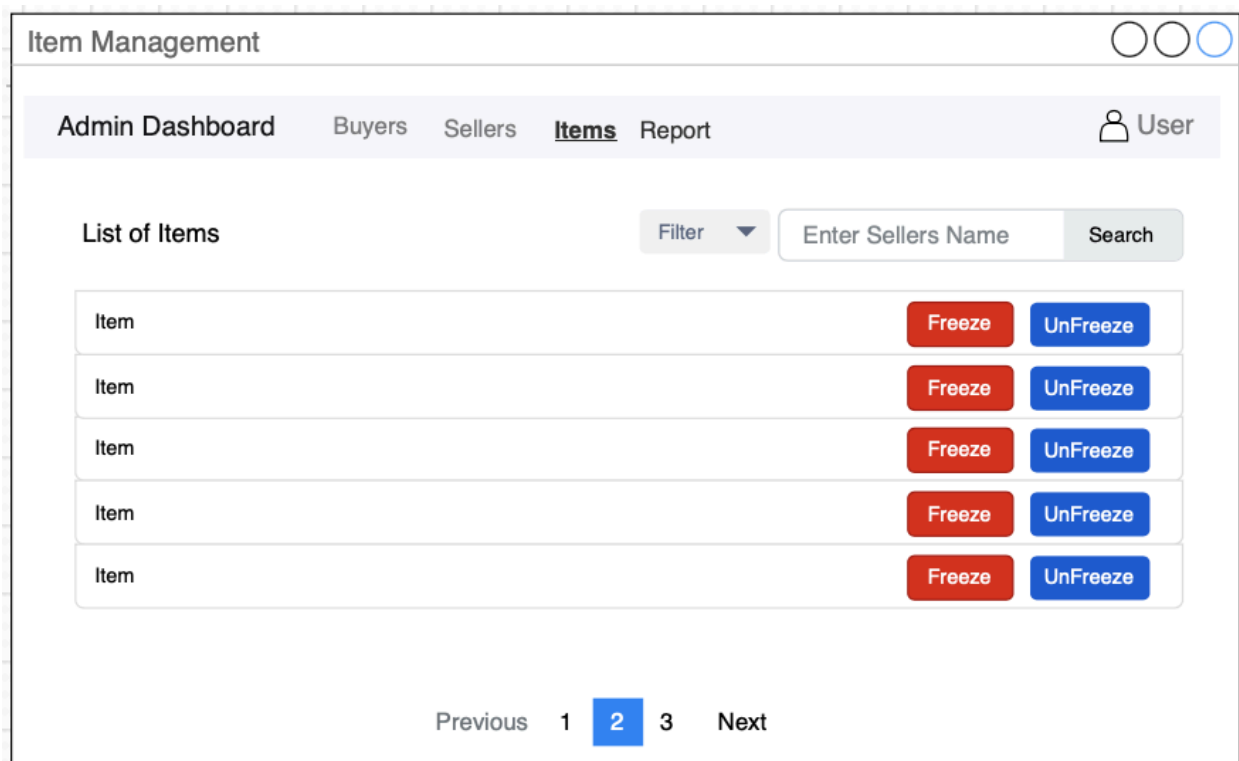
Filter dropdown:

- This can filter to show only frozen items or items that have been requested an unfreeze

Buyers List

- Freeze button: This button will freeze the specific item's account.
  - This button will be disabled if the item is already frozen.
- Unfreeze button: This button will unfreeze the specific item if it was frozen previously
  - This button will be disabled if the item is not frozen.

The pagination at the button will help us to iterate over the items.

# Seller Management



Search sellers

- This search box can filter the seller based on the name.

Filter dropdown:

- This can filter to show only frozen sellers that have been requested an unfreeze

Buyers List

- Freeze button: This button will freeze the specific seller's account.
  - This button will be disabled if the seller is already frozen.
- Unfreeze button: This button will unfreeze the specific seller if it was frozen previously
  - This button will be disabled if the seller is not frozen.

The pagination at the button will help us to iterate over the seller.

# Generate Auction Report

Admin Dashboard     Buyers    Sellers    Items |    **Report**                      👤 User

### Generate Report

| Auction ⇕ |    Calculate

$ 0

On this page, the admin can generate reports of the system. We have a drop-down menu where the admin can select a specific type of report that they want to generate; for example, if we select auction report and press the calculate button, the admin will see the total $$ earned.

# Generate Forensics Report

| Generate Report | | | | | | ○○○ |

## Generate Report

| Admin Dashboard | Buyers | Sellers | Items | | **Report** | | 👤 User |

### Generate Report

| Forensics ⇕ | **Calculate** |

| | bid | seller's Name | Buyer's Name | SoldDate | Total #bid | Lowest Bid |
|---|---|---|---|---|---|---|
| Item | | | | | | |
| item | | | | | | |
| item | | | | | | |

**Total Bid: $$**     **Total #Bid: 10**

If we select forensics from the dropdown and then press calculate, the user will generate a forensics report in the form of a table with reports on the items. and we will also provide the total amount of bids that have been made.

---

# JSON Payloads:

# Customer JSON request payloads:

# /viewAllItems

POST

{"activity-status": "Active"}

200 success:

{"items": [{"item-name": "Item1", "published-date": "12/06/2023 15:43:11", "end-date": "12/22/2023 11:59:59", "highest-bid" : "500", "price" : "501"},
...]}

400 Failure:

{"error": "could not fetch the items"}

## /searchItems

POST

{"filter-options": {"price-range" : ["min-price" : "50", "max-price" : "150"],
"key-words" : ["word1", "word2",...]}}

200 Success:

{"items" : [{"item-name": "Item1", "published-date": "12/06/2023 15:43:11",
"end-date": "12/22/2023 11:59:59", "highest-bid" : "75", "price" : "501"},
...]}

400 Failure:

{"error": "could not fetch the items"}

## /sortItems

POST

{
"sort-option" : "price"  // price can also be either "startdate" or "enddate"
}

200 Success:

{"items" : [{"item-name": "Item1", "published-date": "12/06/2023 15:43:11",
"end-date": "12/22/2023 11:59:59", "highest-bid" : "75", "price" : "501"},
...]}

400 Failure

{"error": "could not fetch the items"}

## /viewItem

POST:

{"item-id" : "item001"}

```
200 Success:

{"items" : [{"item-name": "item001", "item-description" : "some description"
"published-date": "12/06/2023 15:43:11", "end-date": "12/22/2023 23:59:59",
"highest-bid" : "75", "price" : "501", "pictures" : ["URL1", "URL2", …]},
...]}

400 Failure:

{"error": "could not view this item"}
```

# Seller JSON request payloads:

## /createAccount

```
POST:
{"username":"newUsername", "password": "123", user-type: "seller"}

200 Success:
{"success": "Account creation successful"}

400 Failure:
{"error" : "Account creation unsuccessful"}
{"error" : "Username entered is already in use"}
```

## /closeAccount

```
POST:
{"username": "testUser", "password": "123"}

200 Success:
{"success": "Account closed successfully"}

400 Failure:
{"error" : "Close account unsuccessful"}
```

## /loginAccount

```
POST:
{"username" : "testUser", "password" : "123", user-type: "seller"}
```

```
200 Success:
{ "success" : "Log in successful" }

400 Failure:
{ "error" : "username or password is incorrect" }
```

## /addItem

```
POST:
{"username" : "somename", "password" : "pwd", "item-id" : "item001",
"pictures" : ["URL1", "URL2", …], "price" : "36", "item-description" : "some
description",, "end-date": "12/22/2023 23:59:59"}

200 Success:

{"item-id" : "item001", "item-name": "item001", "item-description" : "some
description", "activity-status" : "Inactive" "published-date": "null",
"end-date": "12/22/2023 23:59:59", "highest-bid" : "0", "price" : "36",
"pictures" : ["URL1", "URL2", …]", "associated-bids" : [], "created-by" :
"somename"}

400 Failure:

{"error": "could not add this item"}
```

## /removeInactiveItem

```
POST:

{"username" : "somename", "password" : "pwd", "item-id" : "item001" }

200 Success:
{"success" : "successfully deleted item"}

400 Failure:

{"error": "could not delete this item"}
```

## /reviewItems

```
POST:
```

{"username" : "somename", "password" : "pwd"}
200 Success:

{"items" : [{"item-id" : "item1", "item-name": "item001", "item-description" : "some description", "activity-status" : "Active", //could vary based on the item's //activity status
 "published-date": "12/06/2023 15:43:11", "end-date": "12/22/2023 23:59:59", "associated-bids" : [{"amount-bid" : "50", "relatedBuyerName" : "somebuyername1", "bid-placed-date" : "12/10/2023 18:23:19"}, …, {"amount-bid" : "120", "relatedBuyerName" : "somebuyername2" :  "bid-placed-date" : "12/14/2023 14:57:12"}], "winning-bid" : {"amount-bid" : "120", "relatedBuyerName" : "somebuyername2" :  "bid-placed-date" : "12/14/2023 14:57:12"}, "price" : "36", "pictures" : ["URL1", "URL2", …]", "created-by" : "somename"}, ...]}

400 Failure:

{"error": "items could not be shown"}

## /viewItem

POST:

{"username" : "somename", "password" : "pwd", "item-id" : "item001"}

200 Success:

{"item-id" : "item001", "item-name": "item001", "item-description" : "some description", "activity-status" : "Active", //could vary based on the item's //activity status
 "published-date": "12/06/2023 15:43:11", "end-date": "12/22/2023 23:59:59", "associated-bids" : [{"amount-bid" : "50", "relatedBuyerName" : "somebuyername1", "bid-placed-date" : "12/10/2023 18:23:19"}, …, {"amount-bid" : "120", "relatedBuyerName" : "somebuyername2" :  "bid-placed-date" : "12/14/2023 14:57:12"}], "winning-bid" : {"amount-bid" : "120", "relatedBuyerName" : "somebuyername2" :  "bid-placed-date" : "12/14/2023 14:57:12"}, "price" : "36", "pictures" : ["URL1", "URL2", …]", "created-by" : "somename"}, ...], "soldto" : "somebuyer2"}

400 Failure:

{"error": "item could not be shown"}

# /publishItem

POST:

{"username" : "somename", "password" : "pwd", "item-id" : "item001"}

200 Success:

{"item-id" : "item001", "item-name": "item001", "item-description" : "some description", "activity-status" : "Active" "published-date": "12/06/2023 15:43:11", "end-date": "12/22/2023 23:59:59", "associated-bids" : [], "winning-bid" : {}, "price" : "36", "pictures" : ["URL1", "URL2", …]", "created-by" : "somename"}

400 Failure:

{"error": "could not publish this item"}


# /editItem

POST

{
"username" : "somename", "password" : "pwd", "item-id" : "item001", "price" : "46","end-date": "12/27/2023 23:59:59" //only includes the fields the seller
//wants to modify
}

200 Success:

{"item-id" : "item-001", "item-name": "item001", "item-description" : "some description", "activity-status" : "Active" "published-date": "12/06/2023 15:43:11", "end-date": "12/27/2023 23:59:59", "associated-bids" : [], "winning-bid" : {}, "price" : "46", "pictures" : ["URL1", "URL2",...]", "created-by" : "somename"}

## /fulfillItem

POST
{"username" : "testSeller", "password" : "123", "item-id": "item001"}

200 Success:
{"item" :{ "item-id" : "item001", "item-name" : "item001", "item-description" : "some description", "activity-status" : "Archived", "published-date": "12/06/2023 15:43:11", "end-date": "12/27/2023 23:59:59", "associated-bids" : [{"amount-bid" : "50", "relatedBuyerName" : "somebuyername1", "bid-placed-date" : "12/10/2023 18:23:19"}, …, {"amount-bid" : "120", "relatedBuyerName" : "somebuyername2" : "bid-placed-date" : "12/14/2023 14:57:12"}], "winning-bid" : { "amount-bid" : "200", "related-item" : "item001", "related-buyer" : "testBuyerUsername", "bid-placed-date" : "12/06/2023 16:43:11" }, "price" : "46", "pictures" : ["URL1", "URL2", ...], "created-by" : "testSeller",  "soldto" : "somebuyer2"}, "itemj"}

400 Failure:
{ "error" : "Item could not be fulfilled at the moment" }


## /unpublishItem

POST
{"username" : "testSeller", "password" : "123", "item-id" : "item001" }

200 Success:
{ "item-id" : "item001", "item-name" : "item001", "item-description" : "some description", "activity-status" : "Inactive", "published-date": "12/06/2023 15:43:11", "end-date": "12/27/2023 23:59:59", "associated-bids" : [], "winning-bid" : {}, "price" : "46", "pictures" : ["URL1", "URL2", ...], "created-by" : "testSeller" }

400 Failure:
{ "error" : "Failed to unpublish item" }

## /archiveItem

POST
{"username" : "testSeller", "password" : "123", "item-id" : "item001" }

200 Success:
{ "item-id" : "item001", "item-name" : "item1", "item-description" : "some description", "activity-status" : "Archived", "published-date": "null", "end-date": "12/27/2023 23:59:59", "associated-bids" : [], "winning-bid" : {}, "price" : "46", "pictures" : ["URL1", "URL2", ...], "created-by" : "testSeller" }

400 Failure:
{"error" : "Item could not be archived successfully at the moment" }

## /requestUnfreeze

POST
{ "username" : "testUser", "password" : "123" }

200 Success:
{ "success" : "Request to unfreeze account placed successfully" }

400 Failure:
{ "error" : "Request to unfreeze account could not be successfully placed at the moment" }

## /requestunfreezeItem

POST
{ "username" : "testSeller", "password" : "123" }

200 Success:
{ "success" : "Request to unfreeze the specified item has been placed successfully" }

400 Failure:
{ "error" : "Request to unfreeze the specified item could not be successfully placed at the moment" }

# Buyer JSON request payloads:

## /createAccount

POST:
```
{"username": "newUsername", "password": "pwd", user-type: "buyer"}
```

200 Success:
```
{"success": "Account creation successful"}
```

400 Failure:
```
{"error": "Account creation unsuccessful"}
{"error": "Username entered is already in use"}
```

## /closeAccount

POST:
```
{"username": "testUser", "password": "123"}
```

200 Success:
```
{"success": "Account closed successfully"}
```

400 Failure:
```
{"error": "Close account unsuccessful"}
```

## /loginAccount

POST:
```
{"username": "testUser", "password" : "123", user-type: "buyer"}
```

200 Success:
```
{ "success": "Login successful" }
```

400 Failure:
```
{ "error": "username or password is incorrect" }
```

## /addFunds

POST
```
{"username": "testUser", "password" : "123", "payment-method": "Credit Card",
"amount": "50","save-as-default": "true"}
```

200 Success:

{"message": "Funds added successfully", "new-balance": "150"}

400 Failure:

{"error": "Invalid payment method or insufficient funds", "current-balance": "100"}

## /viewRecentlySold

POST
{"username": "testUser", "password" : "123"}

200 Success:

{"message": "Search results found", items": [{ "item-id": "item001", "name": "3-Bedroom Family House", "description": "Spacious family house with a large backyard", "published-date": "09/09/2024 13:43:16", "sold-date": "09/18/2024 21:15:52", "sold-price": 750000, "pictures" : ["URL1", "URL2", ...] }, { "item-id": "002", "name": "Modern 2-Bedroom Apartment", "description": "Contemporary design in a high-rise building", "published-date": "09/09/2024 16:41:22, "sold-date": "09/17/2024 13:43:16", "sold-price": "500000", "pictures" : ["URL1", "URL2", ...] },... ]}

400 Failure:

{"error": "Bad Request", "message": "Required fields are missing or invalid: 'search-query'." }

## /searchRecentlySold

POST

{"username": "someuser", "password" "pwd", "search-key": "key"}

200 Success:

{"items" : [{"item-name": "Item1", "published-date": "12/06/2023 15:43:11", "end-date": "12/22/2023 11:59:59", "winning-bid" : "75"}, ...]}

400 Failure:

{"error": "could not fetch the items"}

## /sortRecentlySold

POST

```
{"username": "testUser", "password" : "123",
"sort-option" : "price",
// could also be "publish-date":"Date", "expiration-date":"date"
}
```

200 Success:

```
{"items" : [{"item-name": "Item1", "published-date": "12/06/2023 15:43:11",
"end-date": "12/22/2023 11:59:59", "winning-bid" : "75"}, ...]}
```

400 Failure

```
{"error": "could not fetch the items"}
```

# /viewItem

POST

```
{"item-id" : "item001", "username": "testUser", "password" : "123"}
```

200 Success:

```
{"item-id": "item001", "name": "3-Bedroom House", "description": "A spacious
house located in the city center.", "starting-price": 500000, "current-bid":
600000, "published-date": "12/06/2023 15:43:11", "end-date": "12/22/2023
11:59:59", "pictures" : ["URL1", "URL2", ...],"bidding-history": [{
"bid-value": "600000", "date-made": "2024-10-09", "buyer-id": "buyer456" }, {
"bid-value": "550000", "date-made": "2024-10-07", "buyer-id": "buyer789"}]},
"user-max-bid": "610000", "available-funds": "1200000" }
```

400 Failure:

```
{"error": "could retrieve item information."}
```

# /placeBid

POST

```
{"username" : "somename",  "password" : "pwd", "item-id": "item001",
"bid-amount": "1200", "available-funds": "1500"}
```

200 Success:

```
{"message": "Bid placed successfully", "new-bid-amount": 1200,
"new-current-bid": "1200", "user-max-bid": "1200", "remaining-funds": "300"}
```

400 Failure:

```
{"error": "Insufficient funds", "message": "Your available funds are
insufficient to place this bid.", "current-bid": "800", "required-funds":
```

"1200", "available-funds": "900"}
{"error" : "could not place bid"}

## /reviewActiveBids

POST

{"username" : "somename",  "password" : "pwd"

200 success:

{"item-list":[{"pictures" : ["URL1", "URL2", ...], itemID":"item001", "itemName":"name", "userBid":"300", "highestBid":"500", "timeRemain":"time", "status":"ActivityStatus"},...]}

400 Failure:

{"error": "Failed to get the bids"}

## /reviewPurchases

POST

{"username" : "someuser", "password" : "pwd"}

200 success:

{"item-list":[{"pictures" : ["URL1", "URL2", ...], itemID":"item004", "itemName":"name", "winning-bid":"500","fullfilment-date":"12/29/2023 20:23:06" },...]}

400 Failure:

{"error": "Failed to get the items"}

## /requestUnfreeze

POST

{"username": "someadmin", "password": "pwd"}

200 success:

{"success": "request has been created"}

400 Failure:

{"error": "Failed to request unfreeze"}

## Admin JSON request payloads:

## /searchBuyer

POST

{"username": "someadmin", "password": "pwd", "search-key":key}

200 success:

```
{
"buyerUsername": "username1",
"isFrozen" : "true" //could be "false" is the buyer is not frozen
}
```

400 Failure:

{"error": "Failed to find the buyer"}

## /listBuyersAdmin

POST

{"username" : "someadmin", "password" : "pwd"}

200 success:

```
{"All-buyers: [{"buyerUsername":"username1",
"isFrozen" : "true" //could be "false" is the buyer is not frozen
},...]}
```

400 Failure:

{"error": "Failed to get the buyers"}

## /freezeBuyer

POST

{"username": "someadmin", "password" : "pwd", "buyerToFreeze" : "username"}

200 Success:

```
{"frozen-buyer-user" : "someBuyer", isFrozen: "true"}
```

```
400 Failure:
```

```
{ "error" : "Unable to freeze the specified buyer at the moment." }
```

## /freezeSeller

```
POST
```

```
{"username": "someadmin", "password" : "pwd", "sellerToFreeze" : "username"}
```

```
200 Success:
```

```
{"frozen-seller-user" : "someSeller", isFrozen: "true"}
```

```
400 Failure:
```

```
{ "error" : "Unable to freeze the specified seller at the moment." }
```

## /unfreezeBuyer

POST
{"username" : "someadmin", "password" : "pwd", "buyerToUnfreeze" : "someBuyer" }

200 Success:
{"unfrozen-buyer-user" : "someBuyer" , "isFrozen": "false"}

400 Failure:
{"error" : "Unable to unfreeze the specified buyer at the moment" }

## /unfreezeSeller

```
POST
```

```
{"username": "someadmin", "password" : "pwd", "sellerToUnfreeze" : "username"}
```

```
200 Success:
```

```
{"unfrozen-seller-user" : "someSeller", isFrozen: "false"}
```

```
400 Failure:
```

```
{ "error" : "Unable to unfreeze the specified seller at the moment."}
```

## /listItemsAdmin

POST

{"username" : "someadmin", "password" : "pwd"}

200 success:

{"All-items: [{"ItemID":"ID", "itemName":"item1", "isFrozen": "true"},...],
"auth-key":"key"}

400 Failure:

{"error": "Failed to get the items"}

## /freezeItem

POST

{"username": "someadmin", "password" : "pwd", "itemToFreeze" : "itemID"}

200 Success:

{"frozen-item" : "itemID", "isFrozen": "true"}

400 Failure:

{ "error" : "Unable to freeze the specified item at the moment." }

## /unfreezeItem

POST

{"username": "someadmin", "password" : "pwd", "itemToUnfreeze" : "itemID"}

200 Success:

{"frozen-item" : "itemID", "isFrozen": "false"}

400 Failure:

{ "error" : "Unable to unfreeze the specified item at the moment." }

## /searchItem

POST

{"username": "someadmin", "password": "pwd", "search-key": "key"}

200 success:

{
"itemID":"ID", "itemName":"item1",
"isFrozen": "true" //could be "false" if the item is not frozen
}

400 Failure:

{"error": "Failed to request unfreeze"}

# /listSellersAdmin

POST

{"username" : "someadmin", "password" : "pwd"}

200 success:

{"All-sellers:
[{"username":"username1",
"isFrozen": "true" //could be "false" if the seller is not frozen
},...]}

400 Failure:

{"error": "Failed to get the sellers"}

# /searchSeller

POST

{"username": "someadmin", "password": "pwd", "search-key":key}

200 success:

{"item":
{"username":"username1",
"isFrozen":true //could be "false" if the seller is not frozen
}}

400 Failure:

{"error": "Failed to request unfreeze"}

# /generateAuctionReport

POST

{"report":"Auction", "username" : "someadmin", "password" : "pwd"}

200 success:

{"Profit": "250"}

400 Failure:

{"error": "Failed to generate the auction report"}


# /generateForensicsReport

POST

{"report: "Forensics", "username" : "someadmin", "password" : "pwd"}

200 success:

{"forensics": {"items" : [{"itemid" : "item003", "itemName":"name", "sellerName":"name", "buyerName":"name", "winning-bid": "100", "sold-date": "12/26/2023 21:50:57", "totat-number-of-bids":"10", "lowest-bid":"0"},...], "totalBid":"1000", "number-of-bids":"10"}}

400 Failure: {"error": "Failed to generate the forensics report"}