I. Create accounts of users; login, logout.

**- I’ve used cookie-based session authentication for logging in and logging out. Furthermore, I hash passwords using SHA-256.**   
  
II. Auctions (Manual)  
   [] seller creates auctions and posts items for sale

[] set all the characteristics of the item

[] set closing date and time

[] set a hidden minimum price (reserve)

* **A user can create an auction via the “Sell your Item” Call to Action on the home page. Uploaded images are uploaded to Google Cloud Storage and their respective links are stored in the db.**
* Graphical user interface, application

  Description automatically generated

[] a buyer should be able to bid

[] let the buyer set a new bid

[] alert other buyers of the item that a higher bid has been placed

* **Manual bids are permitted for everyone except the seller.Graphical user interface, application

  Description automatically generated**

  [] define the winner of the auction

[] when the closing time has come, check if the seller has set a reserve

[] if yes: if the reserve is higher than the last bid none is the winner.

[] if no: whoever has the higher bid is the winner

[] alert the winner that they won the auction

* **When an auction expires, either a winner will be assigned (top bid >= reserve) or the listing will close (topbid < reserve). Alerts are sent to users who are watching, the winner, and the loser.**

Graphical user interface

Description automatically generatedGraphical user interface, application

Description automatically generated

III Auctions (Automatic)

[] a buyer should be able to set an automatic bidding

[] set a secret upper limit

[] set a bid increment (put in the database a higher bid automatically for the user in

case someone bids higher)

[] alert buyers in case someone bids more than their upper limit

* **A user can place an automatic bid as well as update it mid-way through the auction. Alerts will be given when out-bidded and upper-limit is surpassed. Alerts for winner, loser, and watchers remain the same.Graphical user interface, application

  Description automatically generatedGraphical user interface, text, application, chat or text message

  Description automatically generated**

   [] define the winner of the auction

[] when the closing time has come, check if the seller has set a reserve

[] if yes: if the reserve is higher than the last bid none is the winner.

[] if no: whoever has the higher bid is the winner

[] alert the winner that they won the auction

* **Same process as noted above.**

IV Browsing and advanced search functionality  
    [] let people browse on the items and see the status of the current bidding

[] sort by different criteria (by type, bidding price etc.)

[] search the list of items by various criteria.

[] a user should be able to:

[] view all the history of bids for any specific auction

[] view the list of all auctions a specific buyer or seller has participated in

[] view the list of "similar" items on auctions in the preceding month (and auction information about them)

[] let user set an alert for specific items s/he is interested

[] get an alert when the item becomes available



* **Search by item, category, and user (both items their selling and auctions they’ve bidded on).**

Chart, waterfall chart

Description automatically generated

* **Shop by category breakdown (including custom categories created by user)**

Graphical user interface, website

Description automatically generated

* **Filter by price, filter by end time, sort by name, show specific amount, and sub-search query.**

**Application

Description automatically generated with low confidence**

* **Alerts for new items in specific categories can be triggered by clicking on the star next to the category of choosing.**

**Graphical user interface

Description automatically generated**

* **Alerts for a specific item can be done through the listing page, namely “Watch Auction”**

V Admin and customer rep functions

[] Admin (create an admin account ahead of time)

[] creates accounts for customer representatives

[] generates sales reports for:

[] total earnings

[] earnings per:

[] item

[] item type

[] end-user

[] best-selling items

[] best buyers

* **Utilizes role-based access control to restrict features by Admin and by Mod. (Expected page authentication is included)**
* **Admin View:**

Graphical user interface, chart

Description automatically generated

* **Mod View**

Chart

Description automatically generated

**Table

Description automatically generatedTable

Description automatically generated**Table

Description automatically generated

**every admin event is logged** Table

Description automatically generated **Table

Description automatically generated**

[] Customer representative functions:

[] users browse questions and answers

[] users search questions by keywords

[] users post questions to the customer representatives (i.e. customer service)

[] reps reply to user questions

[] edits and deletes account information

[] removes bids

[] removes auctions

* **FAQ Page:**

Graphical user interface, application

Description automatically generated

* **Customer Service answer question: Graphical user interface

  Description automatically generated with medium confidence**
* **Manage Listings (edit and delete)Graphical user interface

  Description automatically generated**
* **An admin, moderator, and seller can manually remove bids. (price is updated respectively).**
* **Table

  Description automatically generated**
* **Admins can modify/delete mods and users**
* **Mods can modify/delete users**Graphical user interface, table

  Description automatically generatedTable

  Description automatically generated