Auction DBMS

The application chosen to create for our project is the Auction Database Management System(ADBMS). The ADBMS allows users to sign up as auctioneers or bidders. Auctioneers will be able to manage their auctions, and bidders can easily track their current bids. The ADBMS will run like a simple auction website. Auctioneers will create an item listing, the highest bid wins the item once the timer has run out.

Application Details

Each user will have their unique username and password that will grant them access to what their account concerns, auctioneers will be able to see their auctions and bidders are able to see the items that they have bid for while the auction is live. The bidding system will be functioning as most auctions do with the top bid taking the item, and a time limit and a base bid the auctioneer chooses. The next big beyond the current top bid on an item will be a certain percentage of the previous top bid. The program will also have admin users to look over the quality assurance of the auctions taking place, keeping all auctions functioning.

Information

For a user to either sell or buy an item on the site, they would have to create an account. The account will contain various attributes such as their userID, name, username, and password. The primary key of a user is their userID, as it will be their unique identifier different from others. The admin account moderates the application, and requires the standard username and password, but also a special adminID that differentiates them. Items will be managed under an auction which contains the userID of the seller, the primary key, and a unique itemID. The items themselves require its primary key, itemID, item name, item description, minimum bid, start date, and buyout price. Item bids are also tracked, and use the itemID, userID of a buyer, and the top bid made by said user, where its primary key is the itemID. After winning a bid a user must ship the item, where the itemID, shipping address, and tracking number are used to keep track of the shipment, its primary key is the itemID. A buyer must pay using their financial details such as their card number, expiry date, billing address, and CVV, all of it identified by their userID, which is the primary key.

Functions

**Shipments** - Auctioneers with an item listing can ship their item to the bidder who won. Information needed is the item number and buyer’s shipping address. A tracking number is created.

**Payments** - Bidder pays auctioneer with credit information

**Bidding** - The auctioneer sets a base bid, during the bidding process other users will be able to bid up for the item based on the current top bid.

**Create Item Listing** - An auctioneer will be able to list an item in their possession for auction at a starting bid of their choice.

**Auction Modification** - Only admins are able to modify auctions in case of inappropriate listings. Admins will have their own special ID for access.

Example Tables\*

| **USER (bidder and auctioneer)** | | | |
| --- | --- | --- | --- |
| User\_ID | Name | Username | Password |
|  |  |  |  |
|  |  |  |  |

| **ADMIN** | | |
| --- | --- | --- |
| Admin ID | Username | Password |
|  |  |  |
|  |  |  |

| **AUCTIONS** | |
| --- | --- |
| User ID | Item ID |
|  |  |
|  |  |

| **ITEMS** | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| Item ID | Item Name | Item Description | Minimum Bid | Start Date | End Date | Buyout Price |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

| **BIDS** | | |
| --- | --- | --- |
| Item ID | User ID | Top Bid |
|  |  |  |
|  |  |  |

| **SHIPPING** | | |
| --- | --- | --- |
| Item ID | Shipping Address | Tracking Number |
|  |  |  |
|  |  |  |

| **FINANCE** | | | | |
| --- | --- | --- | --- | --- |
| User ID | Card Number | Expiry Date | Billing Address | CVV |
|  |  |  |  |  |
|  |  |  |  |  |

\*(Tables and Attributes subject to change)