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CBE Auction Database: Its Creation, Explanation and Use

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Date _06-04-99_

CBE AUCTION DATABASE:
Its creation, explanation and use

By,
Jillian Wallach

The CBE Auction Database is the result of an assignment designated by Professor Auer in the College of Business and Economics. At the start of the 1999 Winter quarter Database Development course, Auer announced to the class he was replacing his usual quarterly work load with a sort of "experimental" hands-on assignment. He believed the class would greatly benefit from an opportunity to build a "real-world" database, rather than his trademark textbook assignments. With this goal in mind, Auer requested that the class form groups of four and begin planning a database to accommodate the informational needs of the upcoming College of Business and Economics Auction.

The CBE holds a modest auction each year in hopes of raising funds for each of its academic clubs. Because the clubs in the Business School correlate nicely with the functional areas of business (marketing, management, M.I.S, etc.), each club assumes its role in preparation for the big event. In accordance with its division, M.I.S., and the students within this academic concentration, became responsible for the auction's technological needs.

In the past, the CBE Auction used little technology to assist with the plethora of information the auction entails. Past manual methods tended to result in inefficiency and frustration among the auction coordinators, especially during the commotion of the auction itself. Bearing past difficulties in mind, the 1999 coordinators approached Professor Auer and persuaded him to enlist each of his Database students in the development of a CBE Auction Database. The database is meant to effectively store the vast array of information used by auction coordinators before, during and after the auction occurs.

I, along with three fellow classmates, designed a database according to the specifications the auction committee requested. The resulting database incorporates several useful features. First, the CBE Database is built to work in a client-server setting to accommodate the need for more than one user to access information at the same time. Hence, the back-end, or "server", contains all of the tables and data pertinent to the auction, while the front-end, or "clients", contains the tools necessary to manipulate the data. This separation of data and tools further enhances the database, because the front-end can be designed with an easy-to-use interface. Due to the coordinators' inexperience with databases, the front end uses a simple, hierarchical menuing system with which data-entry forms and reports can be accessed.

The database is composed of 12 forms, or interfaces, that can be used to input and manipulate desired data. Specifically, the database records information regarding the businesses who donate items, the auction items, auction attendee contact information, CBE clubs and coordinators, auction expenses, item storage and receipt, and marketing tactics. Of this information, specific data is inputted before, during, or after the auction. For example, item storage is determined before the auction, auction attendees and purchasing prices are entered in the system during the auction, and donor contacts and expense information is used to thank contributors and pay debts. Data regarding the former information entities defines the scope, or range, of the CBE Database. Any informational needs outside of these areas must be recorded by a mechanism other than this database.

Additionally, each of the 12 forms has been uniquely designed to assist the user when inputting and editing data. Forms used to *edit* existing information appear with a

current record showing, whereas *input* forms appear with a blank, new record ready to be filled. Also, many forms require a user to enter a specific number, such as a Bid Number or Item Number, that may not be known at the time of data entry. In situations like these, each form is equipped with a "find" feature, that will locate the relevant or appropriate number to use. For example, the Donor and Item Information Form requires the user to input a new item number. Because item numbers are chronologically assigned relative to each club, the user needs to know the last number used. In this case, a find button can be used to accomplish this task. Again, these unique features are instituted to provide CBE Database users with the most easy-to-use interface possible.

In addition to data input, the CBE Database accommodates information output. The CBE Database is equipped with eight (8) preformatted reports that can be either previewed or printed from an Auction Report Menu. The nature of these reports result from extended communication with the coordinators concerning their hard-copy information needs. In addition to preformatted reports, the database allows for additional report creation as the output needs of the coordinators changes.

The database design described above is the product of a software development process known as the Systems Development Life Cycle (SDLC). Through use of this cycle, I identified the scope of the database I wanted to create using data specification provided by the auction coordinators. Once the data requirements were delineated, I set out to design a front-end user interface that can be used by anyone, regardless of their technical experience. The limitation of a quarterly class schedule, as well as the upcoming auction date, forced me to complete the SDLC in a more hasty fashion than I would have desired. Nevertheless, I feel the research, preparation and resulting end-

product (database) aptly fulfill the requirements of my Honors Final Project. The experience and knowledge I have gained in the process is a fitting way for me to complete my college career and begin to test my technical skills in a related field.

CBE AUCTION DATABASE

USER MANUAL

Introduction:

At Western Washington University, the College of Business and Economics (CBE) holds an annual auction to help its academic clubs earn money to accommodate their yearly expenses. The CBE Auction Database has been designed to facilitate the needs of this yearly event. When used accordingly, this database effectively stores the vast array of information required to make the CBE auction a success. More specifically, the CBE Auction Database stores information that is used from year to year, information that is specific to the current year's auction, and information obtained both before and during the auction. In addition to data storage, the database is also equipped to produce pre-formatted reports for the user to use before, during and after the event occurs.

What kind of information does this database store?

The CBE Auction utilizes a wide spectrum of information. The database information can best be understood by dividing its data requirements into three components: Pre-auction, during-auction, and post-auction information.

Pre-auction Information: Before the auction occurs, the auction committee will need to record both the companies that have donated items, and information regarding the items they have donated. In many cases, (after the first documented auction) the donor information will already be available in the database. This will include name, contact, and location information, as well as a comments area for users to record any observations they would like others to know about the company. New donors will not already be in the system, and thus, the pertinent information must be entered. Once a user has verified that the donor is correctly entered in the database, the user can enter specific information about the item(s) a business has donated. Also, as preparation for the auction begins, clubs are bound to begin incurring auction-related expenses. These auction expenses can be recorded within the system as either a general "auction" expense, or can be associated with a particular club (e.g. N.H.R.M.A.)

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During-auction Information: A majority of the auction information will be entered during the 3-4 hours that the auction takes place. As they arrive and pay their entrance fee, auction attendees will fill out a form indicating their Bid Number and location information. This data will be entered into the system immediately after their arrival, thus allowing these customers to be eligible to bid for items in either the silent or live auction. Also, after the silent auction is finished and during the entirety of the live auction, information regarding the winning bid prices, the items customers have purchased and the payments customers have made will be entered in the system.
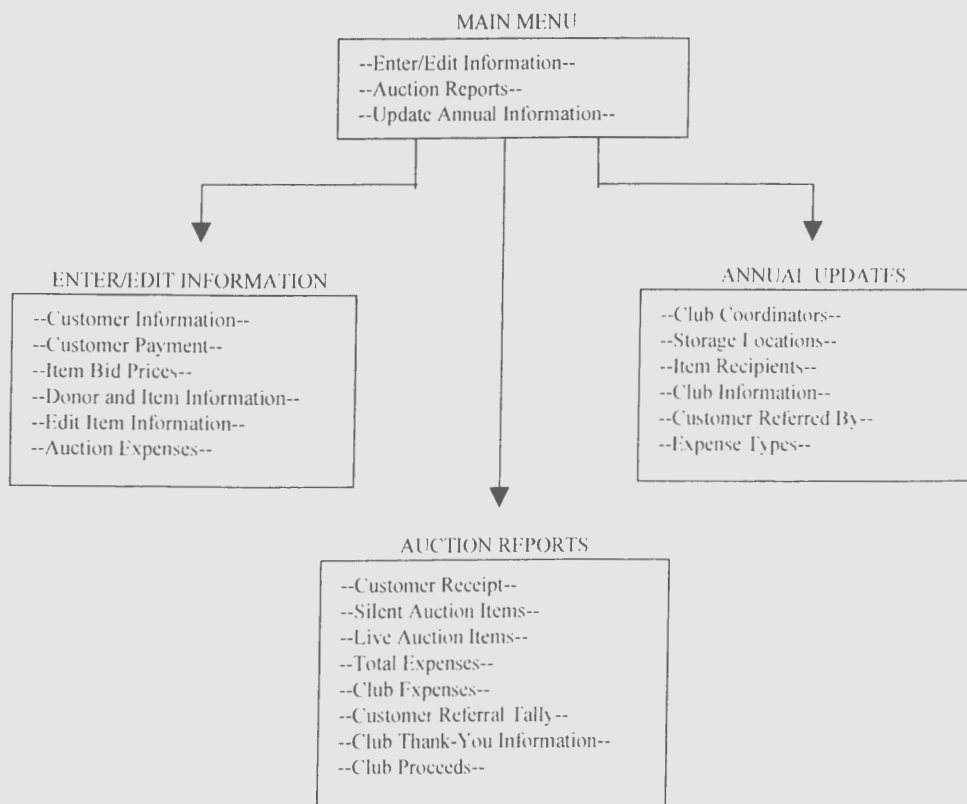
Post-auction information: After the auction is complete, the different CBE clubs will utilize existing donor location information to send each company a Thank-You Letter for their donation. Also, clubs will use the time after the auction, and perhaps throughout the proceeding year, to update any annual information pertaining to the auction. This annual information includes participating clubs, club coordinators, available storage locations for the new auction's items, methods with which customers can hear about the auction, and the different types of expenses the auction can incur. Finally, expenses that occur after the auction, or during the auction, will be recorded in the system at this point in time.

Information the CBE Auction database *does not* contain:

Some details pertaining to the annual CBE auction can not be recorded or assessed through use of this database. Users should note that this database is not designed to be used as any form of a cash machine for monetary transactions during the auction, and it is not designed to provide any form of accounting aid for users trying to determine the auction's financial outcome. More specifically, the database **can** tell the user which items a customer has purchased and paid for and will print out a receipt, but monetary considerations, such as "cash tendered", "cash back", etc., must be accommodated by something other than the database. Similarly, the expenses and what are called "club proceeds" can be recorded, but the profit each club makes is not an offered user option.

How does the database organize all of this information?

As a user, you will find the CBE Auction database quick to learn and easy to use. Movement through the system is accommodated through a series of user-friendly menus. By clicking the button of choice on a menu, users can navigate their way to the form that they need to enter data or the report that they wish to either view or print out. A hierarchy of the menus and associated forms (shown below) provides an overview of the way information is organized:

```
                              MAIN MENU
                        --Enter/Edit Information--
                        --Auction Reports--
                        --Update Annual Information--


   ENTER/EDIT INFORMATION                        ANNUAL UPDATES
   --Customer Information--                       --Club Coordinators--
   --Customer Payment--                           --Storage Locations--
   --Item Bid Prices--                            --Item Recipients--
   --Donor and Item Information--                 --Club Information--
   --Edit Item Information--                      --Customer Referred By--
   --Auction Expenses--                           --Expense Types--


                          AUCTION REPORTS
                        --Customer Receipt--
                        --Silent Auction Items--
                        --Live Auction Items--
                        --Total Expenses--
                        --Club Expenses--
                        --Customer Referral Tally--
                        --Club Thank-You Information--
                        --Club Proceeds--
```

The next portion of this manual is dedicated to providing the user with a detailed description of each menu and form in the CBE Auction Database. The proceeding discussion begins with the first screen a user encounters upon entrance: The Main Menu.
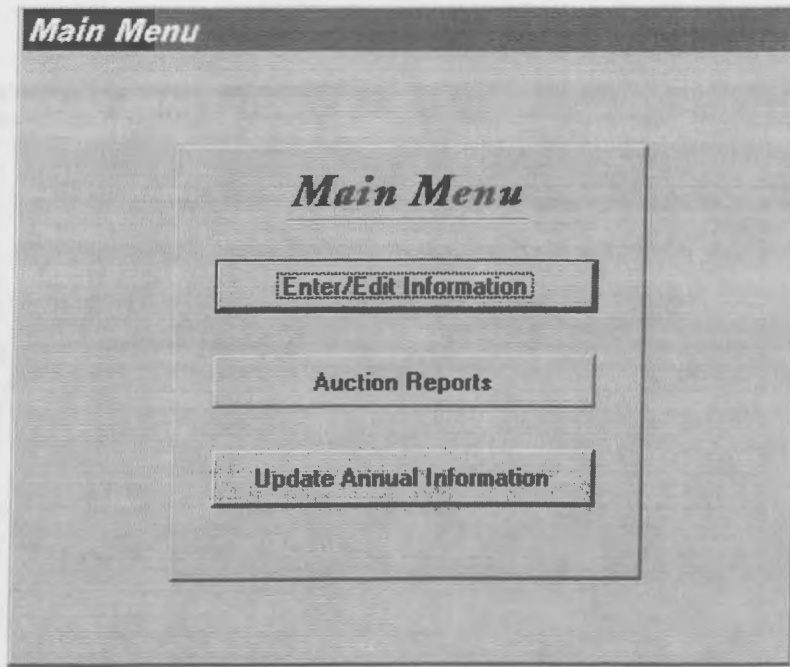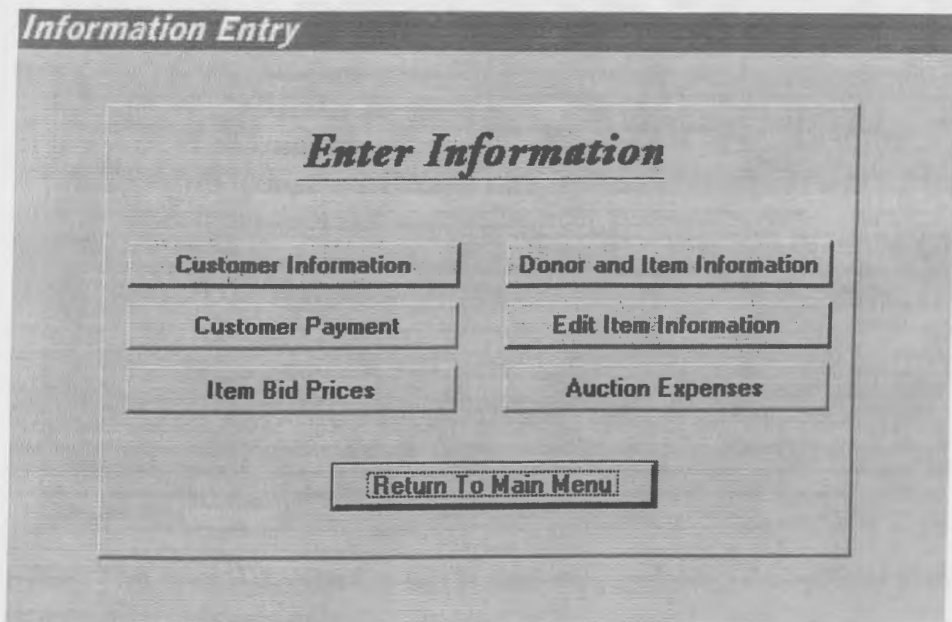
When the database is opened, the main menu will give three choices:

- Enter/Edit Information (See page 5)
- Auction Reports (See page 13)
- Update Annual Information (See page 14)

Each of these choices takes you to other menus with options for data entry and reports.

On each of the forms there are three standard buttons:

- **OK** - Exits the form and returns to the previous menu. This is used to exit the form after any information has been added or deleted.

- **Delete Record** -- Deletes the current record showing on the forms input fields.

- **Return to Main Menu** -- Returns back to the *Main Menu* (shown above). This can be used to exit the form after any information has been added or deleted.

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Information Entry

Enter Information

Customer Information	Donor and Item Information
Customer Payment	Edit Item Information
Item Bid Prices	Auction Expenses

Return To Main Menu

• **Customer Information**: This is where all of the demographic information is entered about the customers at the auction and also where the Bid Numbers are assigned. **(pg.9)**

• **Customer Payment**: Opens a form with the customer information and lists the items they purchased. The verification of the item being paid for as well as the form of payment are both entered here. This is also where the customers receipt can be printed. **(pg. 11)**

•**Item Bid Prices**: This is where the BID Numbers and the Selling Price of each individual item to be entered after an item has been sold. **(pg. 10)**

•**Donor and Item Information**: First a form appears where the *Donor Information* is entered. After information is entered about the donor, items can be added for that donor. The only way to add *new* items is by entering a donor or using a donor that has already been entered into the database. **(pg 6,7)**

•**Edit Item Information**: This is only used if existing items that have already been entered into the system need to be edited. New items cannot be added here, they must be added through the *Donor and Item Information* form. **(pg. 8)**

•**Auction Expenses**: This is where expenses the auction or clubs have incurred are entered. **(pg. 12)**

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Donor Information

Donor and Item Information

Donor ID#:	61

Find Donor

Club Name	MISA ▾	E-mail Address	Billie@Microsoft.com
Donor's Name	Microsoft	Web Address	Microsoft.com
Department	Engineering	O.K. to use Logo?	☑
Contact First Name	Bill	Contacted This Year?	☑
Contact Last Name	Gates		
Street Address 1	One Microsoft Way	Comments	They just love our MISA. He said he loves our bright students
Street Address 2			
City	Redmond		
State	WA		
Zip Code	99263-3762		Add Items for This Donor
Country	United States		
Phone Number	(206) 773-1234		

OK   Delete Record   Return To Main Menu

Record: ⏮ ◀ | 3 | ▶ ⏭ ▶▶ | of 7

• **Donor ID#**: This is an AutoNumber that is randomly assigned. It cannot be changed and is for identification purposes only.

• **Donor's Name**: Enter the name of the institution that donated the item.

• **Department**: Enter the department (if any) of the company that donated the item.

• **Contact First Name**: Enter the first name of the contact person at the institution.

• **Contact Last Name**: Enter the last name of the contact person at the institution.

• **Street Address 1**: Enter the donor's primary street address.

• **Street Address 2**: Enter the donor's secondary street address.

• **City,State, Zip Code, and Country**: Enter this information about where the donor resides.

• **Phone Number**: Enter contact persons business phone number

• **E-mail Address**: Enter the contact persons business e-mail address. (if any)

• **Web Address**: Enter the the institutions Web Site address. (if any)

• **O.K. to use logo?**: Check if it is okay to use the company's logo at the auction. (must receive permission first)

• **Contacted This Year?**: Check if the donor has been contacted this year.

• **Comments**: Enter any additional comments that may be useful in the future.

• **Add Items for This Donor**: Click this to enter the items the donor donated. **There must be donor information entered before any items can be added**. Use the **Find Donor** button to locate a donor that has already been entered in the system.

Add Items

Auction Item

Company: American Express Inc

Item ID#	3001	Received By	Julie Hindman
Retail value	$15.00	Date Received	2/15/99
Auction Type	Live	Storage Location	Julie's House

Description:

🔍 Click Here to find the last Item ID#

OK   Delete Record

Record: 1 of 1

• **Company**: This is for verification purposes only. It can only be changed if you return to *Donor Information* and change it there.

• **Item ID#**: Enter the item number that is next in sequence according to club name. (i.e.. FMA is the 1000 series and MISA is the 3000 series.) If you need to find the next number in the series you can use the **Find the last Item ID#** function. This will show the last number in the series to be used. Just add one and enter that number into this field.

• **Retail Value**: Enter what the donor has specified as the retail value of the item.

• **Auction Type**: This is either *Live* or *Silent*. This field is a combo box with predefined values that cannot be changed.

• **Description**: Enter a brief description of the item here.

• **Received By**: Enter which auction coordinator received the item.

•**Date Received**: Enter the date the item was received by the auction coordinator.

• **Storage Location**: Enter where the item is being stored. This is a combo box with a predefined list of values that cannot be changed.

Hint Items can only be added here. If an item needs to be edited after it is already in the system you must select *Edit Auction Item* from the Enter Information menu. (pg. 8)

Edit Items

Edit Auction Item

Donor ID#: 59

Club ID#: 1000

Find Item

Item ID# 1001

Retail value $57.00

Auction Type Live ▾

Description:

Received By Julie Hindman ▾

Date Received 1/23/99

Storage Location Julie's House ▾

OK   **Delete Record**

Record: |◄| |◄| | 1 |►||►|| |►*| of 13

• **Donor ID#** and **Club ID#** are for verification purposes only. These fields cannot be changed.

• **Item ID#**: This is where the Item Number assigned to the item can be changed.

• **Retail Value**: This is where the retail value of the item can be changed.

• **Auction Type**: This is where the auction type, either *Live* or *Silent,* can be changed. This field is a combo box with predefined values that cannot be changed.

• **Description**: This is where the description of the item can be changed.

• **Received By**: This is where the auction coordinator who received the item can be changed.

•**Date Received**: This is where the date the item was received by the auction coordinator can be changed.

• **Storage Location**: This is where the location of the stored item can be changed. This is a combo box with a predefined list of values that cannot be changed.

The **Find** button can be used to find a customer who has already been entered in the system. It can find BID#,First Name, or Last Name.

• **BID#**: This is a required field. The BID# is given to each person who enters the door. This is the number they will be using to bid on auction items.

• **First Name**: Enter the customer's first name in this field.

•**Last Name**: Enter the customer's last name in this field.

•**Phone Number**: Enter the customer's primary phone number in this field.

•**Street Address 1**: Enter the customer's primary street address in this field.

•**Street Address 2**: Enter the customer's secondary street address in this field. (optional)

•**City**: Enter the city the customer resides in.

•**State**: Enter the state the customer resides in.

•**Zip Code**: Enter the customers zip code. (Defaults to Bellingham)

•**Country**: Enter the customers country. (Defaults to United States)

•**WWU Affiliate?**: Check the box if the customer is a faculty member, student, or alumni of Western Washington University.

•**Referred by**: This is how the customer heard about the auction. It is a predefined list of values that cannot be added to.

First use the **Find Item #** button to locate the item number which was sold.

•**BID#**: Enter the BID# of the customer who purchased the item.

•**Sell Price**: Enter the price at which the item was sold for.

•The rest of the information on this form is for verification purposes only. You cannot updated the *Item Number, Auction Type, or Item Description*, with this form. These can be updated in the *Edit Auction Items* form (pg. 8).

- First use the **Find BID#** button to locate the desired BID#

- The only information that can be edited on this form are the fields **Method of Payment** and **Paid?**

  •**Method of Payment**: Cash or check are the only two options. This information must be entered for each individual item

  •**Paid?**: This box is only checked when the customer has actually paid for an item. Only check the items that the customer pays for. Customers may have numerous items, but only want to pay for selected ones.

•When the *Method of payment* and *Paid?* fields are filled in press the **Print Receipt** button to print a customer invoice.

The rest of the information on this form is for verification purposes only. The fields cannot be updated here.
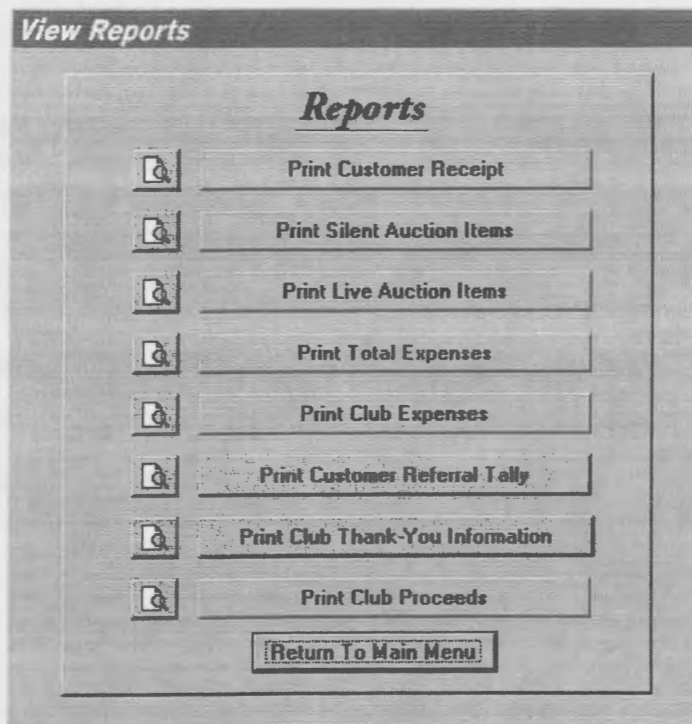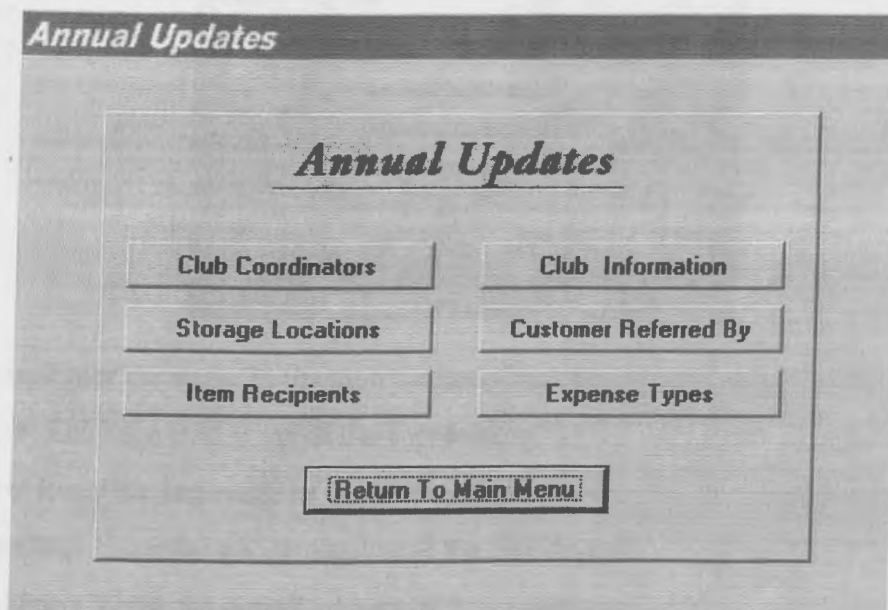
- **Expense ID#**: This is an AutoNumber that is randomly assigned. It cannot be changed and is for identification purposes only.

- **Club Name**: Enter the name of the club that incurred the expense. This is a combo box with a predefined list of values that cannot be changed.

- **Vendor Name**: Enter the name of the institution where the expense was incurred.

- **Expense Amount**: Enter the amount of the the incurred expense.

- **Date Incurred**: Enter the date that the expense was incurred.

- **Expense Type**: Enter the type of expense it was. This is a combo box with a predefined list of values that cannot be changed.

- **Reimbursable?**: Check this box if the expense is a reimbursable expense.

- **Reimbursed?**: Check this box if the expense is reimbursable and the club has indeed been reimbursed.

- **Expense Description**: Enter a description of what the expense was and what it was used for.

- **Comments**: Enter any comments that apply and would be helpful in the future.

View Reports

Reports

- Print Customer Receipt
- Print Silent Auction Items
- Print Live Auction Items
- Print Total Expenses
- Print Club Expenses
- Print Customer Referral Tally
- Print Club Thank-You Information
- Print Club Proceeds

Return To Main Menu

• **Print Customer Receipt**: This is another (other than the customer payment form) place to print a customer receipt. The BID# is needed to print this report.

• **Print Silent Auction Items**: Report that shows all of the silent auction items.

•**Print Live Auction Items**: Report that shows all of the live auction items.

•**Print Total Expenses**: Report that shows all of the expenses the auction incurred.

•**Print Club Expenses**: Report that shows the expenses incurred by each club.

•**Print Customer Referral Tally**: Report that tallies the ways customers heard about the auction.

•**Print Club Thank-You Information**: Report that lists the donors and the items they donated. It is broken down by the club that solicited the donors.

•**Print Club Proceeds**: Report that shows the proceeds earned for each club from the auction.

Hint Click on the magnifying glass to see the report in print preview.

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Annual Updates

Club Coordinators	Club Information
Storage Locations	Customer Referred By
Item Recipients	Expense Types

Return To Main Menu

• **Club Coordinators**: This is where the information about auction coordinators for each club is updated each year. **(pg. 15)**

• **Storage Locations**: This is to update the values assigned to the combo box for possible storage locations. **(pg. 16)**

• **Item Recipients**: This is to update the values assigned to the combo box for the people who will be receiving the items from the participating club solicitors. **(pg. 16)**

• **Club Information**: This is where updates are made to the clubs participating in the auction. **(pg.15)**

• **Customer Referred By**: This is to update the values assigned to the combo box for different ways customers heard about the auction. **(pg. 17)**

• **Expense Types**: This is to update the values assigned to the combo box for possible types of auction and club expenses. **(pg. 17)**

- **Club Name**: Enter the name of the club the coordinator is representing

- **First Name**: Enter the first name of the coordinator.

- **Last Name**: Enter the last name of the coordinator.

- **Phone Number**: Enter the phone number of the coordinator.

- **E-mail Address**: Enter the e-mail address of the coordinator.

- **Primary Coordinator**: Check this box if this coordinator is the primary coordinator representing the club. Leave the box blank if this coordinator is one of the secondary coordinators representing the club.

- **Coordinator ID#**: This is an AutoNumber that is randomly assigned. It cannot be changed and is for identification purposes only.

- **Club ID#**: This is the number series assigned to the club.

- **Club Name**: This is the name of the club.

Storage Lookup

Storage Location

Storage Location | Julie's House

OK   **Delete Record**

Record: |◄| |◄| | 1 |►| |►I| |►*| of 1

• **Storage Location**: Enter the storage locations for the auction here. Make sure to delete any of the older storage locations that are not still in use. This is used to add values to the *Storage Location* combo box.

Received By Lookup

Item Recipients

Item Received By: | Julie Hindman

OK   **Delete Record**

Record: |◄| |◄| | 1 |►| |►I| |►*| of 2

• **Item Received By**: Enter the persons who will be receiving items for the auction. Make sure to delete any of the older recipients that are not still in use. This is used to add values to the *Received by* combo box.

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Customer Referral Information

Customer Referral

Customer Referred By?   Newspaper

OK   **Delete Record**

Record: |◀ ◀ | 1 | ▶ | ▶| |▶*| of 6

• **Customer Referred By?**: Enter the referred by locations for the auction here. Make sure to delete any of the older values of *referred by* that are not still in use. This is used to add values to the *Customer referred by* combo box.

Expense Type Lookup

Expense Types

Expense Type: Advertising

OK   **Delete Record**

Record: |◀ ◀ | 1 | ▶ | ▶| |▶*| of 5

• **Expense Type**: Enter the expenses types for the auction here. Make sure to delete any of the older expense types that are not still in use. This is used to add values to the *Expense type* combo box.

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CBE AUCTION DATABASE

TECHNICAL MANUAL

Technical Manual Contents

Introduction:

At Western Washington University, the College of Business and Economics (CBE) holds an annual auction to help its academic clubs earn money to meet their yearly expenses. The CBE Auction Database has been designed to facilitate the needs of this event. When used accordingly, this database effectively stores the vast array of information required to make the CBE auction a success. The following manual is designed to provide future auction database administrators with documentation regarding the design and construction of the CBE Auction Database. Before referring specifically to the design of the database objects, however, a brief overview of the system's data components is required.

The CBE Auction utilizes a wide spectrum of information. The database information can best be understood by dividing its data requirements into three components.

1) **Pre-auction Information**
2) **During-auction Information**
3) **Post-auction Information**

Pre-auction Information: Before the auction occurs, the auction committee will need to record both the companies that have donated items, and information regarding the items they have donated. In many cases, (after the first auction) the donor information will already be available in the database. This will include name, contact, and location information, as well as a comments area for user to record any observations they would like others to know about the company. New donors will not already be in the system, and thus, the pertinent information must be entered. Once a user has verified that the donor is correctly entered in the database, the user can enter specific information about the item(s) a business has donated. Also, as preparation for the auction begins, clubs are bound to begin incurring auction-related expenses. These auction expenses can be recorded within the system as either a general "auction" expense, or can be associated with a particular club (e.g. N.H.R.M.A.)

During-Auction Information: A Majority of the auction information will be entered during the 3-4 hours that the auction takes place. As they arrive and pay their entrance fee, auction attendees will fill out a form indicating their Bid Number and location information . This data will be entered into the system immediately after their arrival, thus allowing these customers to be eligible to bid for items in either the silent or live auction. Also, after the silent auction is finished and during the entirety of the live auction , information regarding the winning bid prices, the items customers have purchased and the payments customers have made will be entered in the system.

Post-Auction Information: After the auction is complete, the different CBE will utilize existing donor location information to send each company a Thank-You letter for their donation . Also, clubs will use the time after the auction, and perhaps throughout the proceeding year, to update any annual information pertaining to the auction. This annual information includes participating clubs, club coordinators, available storage locations for the new auction's items, mehtods with which customers can hear about the auction, and the different types of expenses the auction can incur. Finally, expenses that occur after the auction, or during the auction, will be recorded in the system at this point in time.

The scope of the CBE Auction database encompasses the above mentioned information. It is important to note some of the information this database **does not** accommodate. At present, the database can not be used as any form of a cash machine for monetary transactions during the auction, and it is not designed to provide any form of accounting aid for users trying to determine the auction's financial outcome. More specifically, the database can tell the user which items a customer has purchased and paid for and will print out a receipt, but monetary considerations, such as "cash tendered", "cash back", etc., must be accommodated by agents other than the database. Similarly, the expenses and what we call "club proceeds" can be recorded, but the profit each club makes is not an offered user option.

Now that you have an understanding of the purpose and scope of the system, a general technical overview is needed to help you become familiar with the way we have chosen to implement the database.
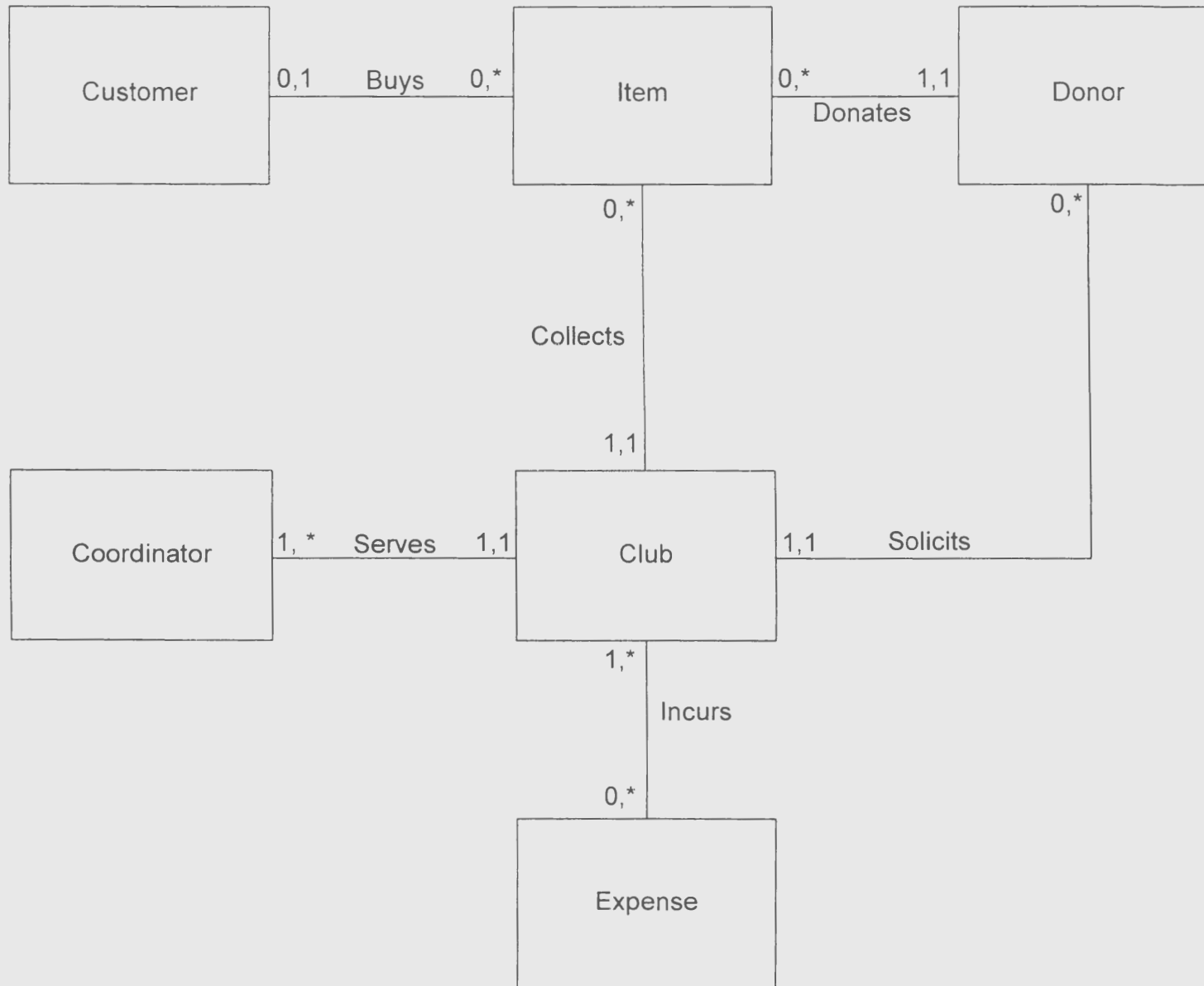
Technical Overview

This Database is implemented in Microsoft's Access 97. It is designed to be run in a client/server environment. There are actually two different databases, a front end, and a back end. The back end will be stored on a server, and the front end will be stored on client machines. The back end database is comprised of tables where the information is held. The front-end database does not hold any information. It does contain all the forms for input, queries and reports for output, and a menu system for ease of use.

Two databases are needed for a client/server environment. The front-end database has linked tables that point to the tables in the back end database. This allows information to be input into the front end and stored in the back end. Any changes made to a table in the front end are automatically reflected in the back end. In order for more than one person to access the information at a time, the data must be separated from the interface. This allows users to be working on more than one machine while the auction is taking place. For example, two customers can purchase their goods at the same time.

The tables in the back end database are linked through a series of relationships. The proceeding ER diagram illustrates the major entities we have included in the system and how they are related. The database schema displays the tables, attributes and keys the system is composed of.

Entity Relationship Diagram

Customer — 0,1 Buys 0,* — Item — 0,* Donates 1,1 — Donor

Item — 0,* Collects 1,1 — Club

Donor — 0,* — Club (1,1 Solicits)

Coordinator — 1, * Serves 1,1 — Club

Club — 1,* Incurs 0,* — Expense

Database Schema

Customer (<u>BID#</u>, CustFirstName, CustLastName, CustPhone, CustStreetAdd1, CustStreetAdd2, CustCity, CustState, CustZipCode, CustCountry, CustRefferedBy, WWUAffiliate)

Item (<u>ItemID#</u>, RetailVal, SellPrice, AucType, ItemDesc, Paid)
   Foreign Key: BID# references BID# in Customer.
               ClubID# references ClubID in Club.
               DonorID# references DonorID in Donor.

Donor (<u>DonorID</u>, DonName, DonDept, DonStreetAdd1, DonStreetAdd2,
        DonCity, DonState, DonZipCode, DonCountry, ContFirstName, ContLastName, ContPhone,
        ContEmail, ContCurrentYr, Comments)
   Foreign Key: ClubID# references ClubID# in Club.

Club (<u>ClubID#</u>, ClubName, CoordFirstName, CoordLastName, CoordPhone, CoordEmail, AltFirstName,
       AltLastName, AltPhone, AltEmail)

Expense (<u>ExpID#</u>, ClubID#, Vendor, ExpAmount, DateIncurred, ExpType, Reimbursable, Reimbursed,
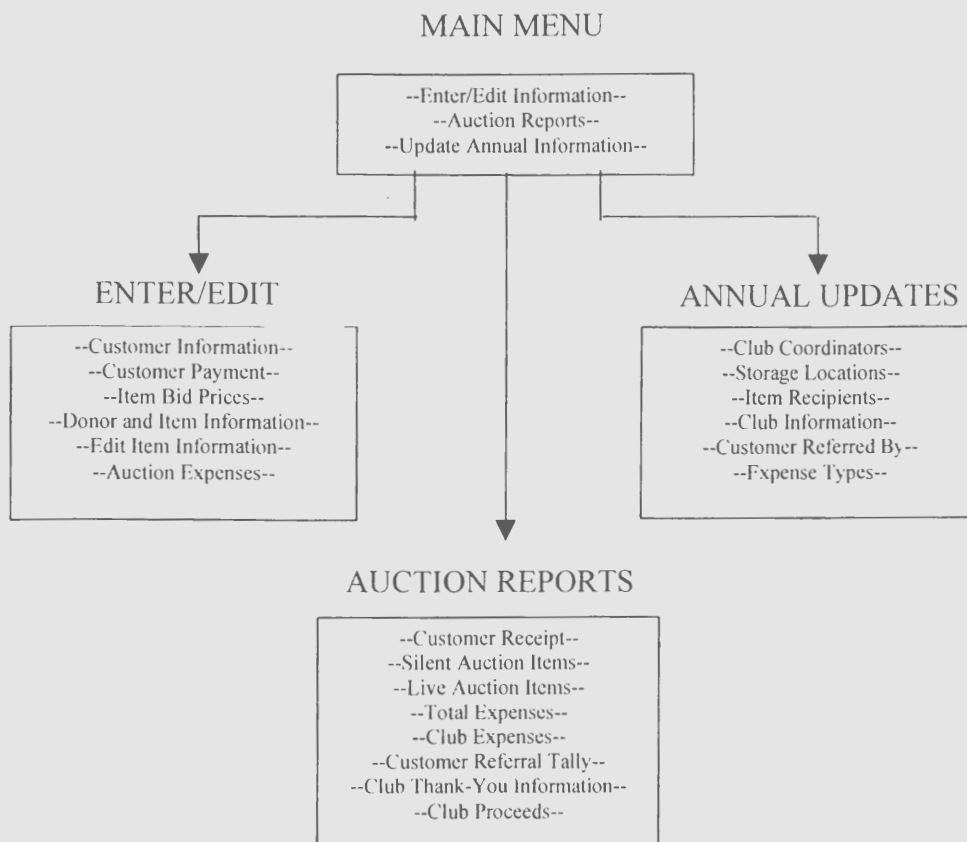   ExpDesc, Comments)
   Foreign Key: ClubID# references ClubID# in Club.

Coordinator (<u>CoordID#</u>, ClubID#, CoordFirstName, CoordLastName, Phone, Email, Primary)
   Foreign Key: ClubID# references ClubID# in Club.
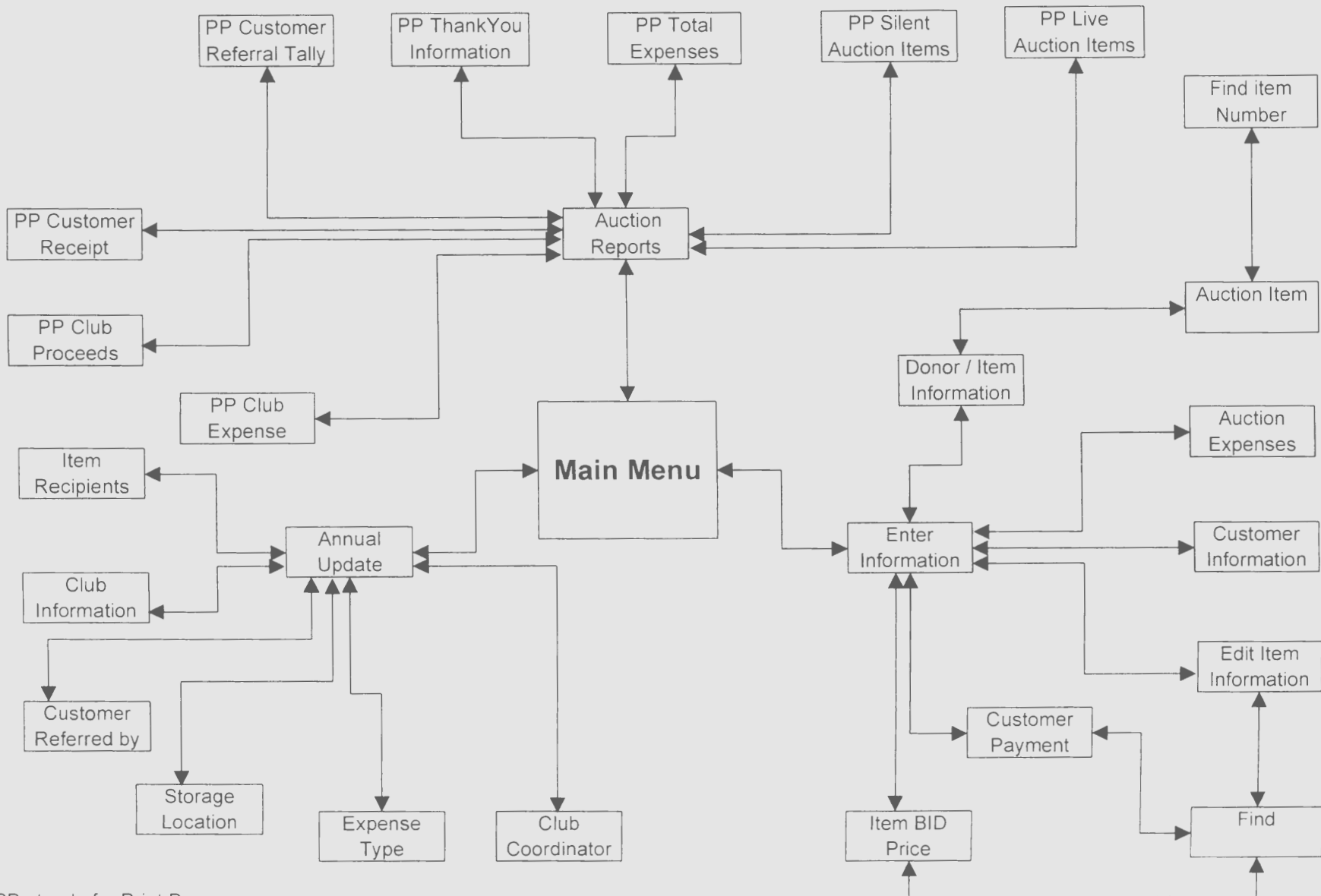
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CBE Auction Menu System

The CBE Auction Database allows users to utilize a series of user-friendly menus to navigate their way through the system. This method of access allows the users to both update and maintain data, and view or print out desired reports. The menu system consists of a main menu and three sub-menus. Each of these sub-menus has corresponding forms or reports linked to it. The first sub-menu offers a choice of forms for inputting, or editing information about the current auction, e.g. customers, donors, items etc. The second sub-menu provides a list of predefined reports. The third sub-menu presents a list of forms for inputting and editing annual information, e.g. club coordinators, storage locations, etc. A hierarchy of the menus and associated forms (shown below) provides an overview of the way information is organized.

MAIN MENU

```
--Enter/Edit Information--
--Auction Reports--
--Update Annual Information--
```

ENTER/EDIT

```
--Customer Information--
--Customer Payment--
--Item Bid Prices--
--Donor and Item Information--
--Edit Item Information--
--Auction Expenses--
```

ANNUAL UPDATES

```
--Club Coordinators--
--Storage Locations--
--Item Recipients--
--Club Information--
--Customer Referred By--
--Expense Types--
```

AUCTION REPORTS

```
--Customer Receipt--
--Silent Auction Items--
--Live Auction Items--
--Total Expenses--
--Club Expenses--
--Customer Referral Tally--
--Club Thank-You Information--
--Club Proceeds--
```

The following page displays the State Transition Diagram for the CBE Auction Database. It identifies the method with which users can access every available form and report.

State Transition Diagram

PP Customer Referral Tally

PP ThankYou Information

PP Total Expenses

PP Silent Auction Items

PP Live Auction Items

Find item Number

PP Customer Receipt

Auction Reports

Auction Item

PP Club Proceeds

Donor / Item Information

PP Club Expense

Main Menu

Auction Expenses

Item Recipients

Annual Update

Enter Information

Customer Information

Club Information

Edit Item Information

Customer Referred by

Customer Payment

Storage Location

Expense Type

Club Coordinator

Item BID Price

Find

*PP stands for Print Preview.

*All screens hava a return to main menu option

The next portion of this manual is dedicated to providing the database administrator with a detailed description of the settings and macros used in each database from.

Overview

The **Customer Information** form provides the user with access to the **Customer** table. It is intended for data entry and editing of auction attendee data during and after the auction. A unique *BID* number is assigned by the user to each **Customer**. Navigation Buttons at the bottom of the form allow the user to scroll through the table, as well as create a new record for a **Customer**. If preferred, a *Find* button has been included to allow the user to find a customer by any field in the form. The form is opened in the Edit mode.

Macros

- OK_CustomerInfo
- Delete Record
- Return To Main Menu
- Find

Donor Information

Donor and Item Information

Donor ID#:	65		**Find Donor**
Club Name	MBAA ▾	E-mail Address	JReed@Amer.com
Donor's Name	American Express Inc	Web Address	American.com
Department	Financial Planning	O.K. to use Logo?	☑
Contact First Name	Jim	Contacted This Year?	☑
Contact Last Name	Reed		
Street Address 1	2323 Redmond Way	Comments	None
Street Address 2			
City	Redmond		
State	WA		
Zip Code	98226-2827		**Add Items for This Donor**
Country	United States		
Phone Number	(206) 736-8282		

OK   **Delete Record**   **Return To Main Menu**

Record: |◄ ◄ | 7 | ► ►| ►* | of 7

Overview

The **Donor and Item Information** form allows the user to create, read, and update auction donor data, which is held in the **Donor** table. The form is opened in the Add mode to discourage inadvertent deletions. Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records. Clicking the delete record button deletes the currently displayed record. *Donor ID#* field is updated via Auto-Number and cannot be edited via this form. Selecting *Add Items for this Donor* brings up the **Item Information** form. This form is only accessible through the **Donor and Item Information** form.

Macros

Find

AddItem

OK_DonorInfo

Delete

Return To Main Menu

Add Items

Auction Item

Company: American Express Inc

Item ID# 1001
Retail value $25.00
Auction Type Live

Received By Julie Hindman
Date Received 2/26/99
Storage Location Julie's House

Description:
Second copy of Financial Planning for You.

🔍 Click Here to find the last Item ID#

OK   Delete Record

Record: |◄ ◄ | 1 | ► ►| ►* | of 1

Overview

The **Auction Item** form gives users access to the **Item** table. *Item ID#* is updated via an Auto-Number routine. The form is opened in the Add mode to reduce the chance of inadvertent deletion of data. Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records. The last Item ID# that has been used for the currently active **Club** is made available to the user by clicking the *Click Here to find the last Item ID#* button. The *Company* field uses the **Donor Information** form as a control source and is not available for editing. Editing of items after they are in the **Item** table is accomplished via the **Edit Item Information** form.

Macros

- Return to Donor
- Find Item Number
- Delete

Item Bid Prices form — Bid Price window

Overview

The **Item Sale** form is used during the auction itself to record the sell prices of items that have been sold. *Item Number, Auction Type*, and *Item Description* fields are updated by the form and are not editable by the user. Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records. A *Find Item* # button allows the user to locate the desired the item in the database by its ID number. The form is opened in Edit mode.

Macros

- OK_ItemSale
- Return to Main Menu
- Find

Customer Payment

Customer Payment

Name:	Wallach	Jillian	
Address:	2020 Mill Ave #101		
	12117 N. River Wood Drive		
	Bellingham	WA	

Bid Number: 1

Find BID#

Item ID	Item Description	Sell Price	Method of Payment	Paid?
1001		$250.00		☐
2001	They donated an old version of Win 3.1	$245.00		☐
4001	A couple of frequent flyer coupons	$230.00		☐
6001		$175.00		☐

Total: $900.00

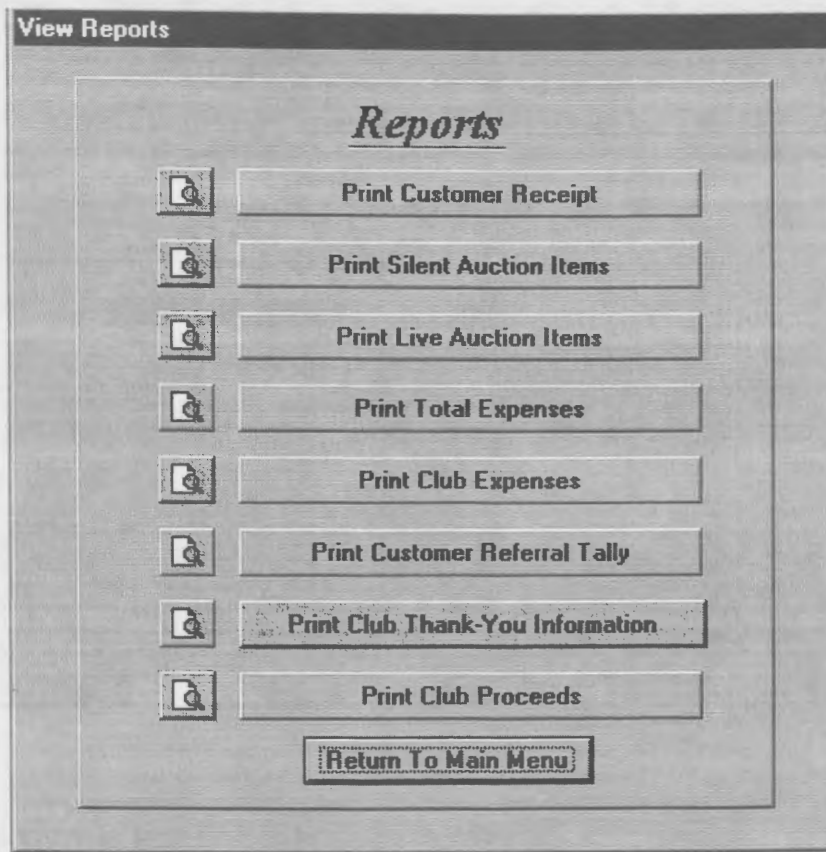| OK	Return To Main Menu	Print Receipt

Record: 1 of 4

Overview

The **Customer Pay** form is used when collecting payment from Auction customers during and after the Auction. It has been designed to allow *Customers* to pay for as many items at a time as they wish. The only fields that are available for editing are *Method of Payment* and *Paid?* The *Total* field returns a total of all items displayed, regardless of the status of the *Paid?* field. *Item ID, Item Description, Sell Price, Method of Payment*, and *Paid* are displayed by a subform called **Customer Pay Sub.** Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records. The form is opened in the Edit mode.

Macros

- OK_Customer Payment
- Return to Main Menu
- Find
- Print Customer Purchase Receipt From Cust Pay Form

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Reports

🔍	**Print Customer Receipt**
🔍	**Print Silent Auction Items**
🔍	**Print Live Auction Items**
🔍	**Print Total Expenses**
🔍	**Print Club Expenses**
🔍	**Print Customer Referral Tally**
🔍	**Print Club Thank-You Information**
🔍	**Print Club Proceeds**

Return To Main Menu

Overview

The **Report Menu** form is to be used for compiling data for the Auction. Each report command button is accompanied by a *Print Preview* button.

Macros

- Return to Main Menu
- Print_Customer Purchase Receipt
- PP_Customer Purchase Receipts
- Print_Silent Auction Items
- PP_Silent Auction Items
- Print_Live Auction Items
- PP_Live Auction Items
- Print_Total Expenses
- PP_Total Expenses
- Print_Club Expenses
- PP_Club Expenses
- Print_Customer Referrals

- Print Thank you List
- Print_Club Thank You Letters
- PP_Club Thank You Letters
- Print_Club Proceeds
- PP_Club Proceeds
- PP_Customer Referrals

Overview

The **Auction Expenses** form is used to create, update and delete expenses incurred by each **Club** and record them to the **Expense** table. All fields are editable from this form with the exception of the *Expense ID#*, which is of the data type Auto-Number. Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records. The form is opened in the Edit mode.

Macros

- OK_Expense Info
- Delete
- Return to Main Menu

Edit Items

Edit Auction Item

Donor ID#:   59
Club ID#:   1000   **Find Item**

Item ID#   1001   Received By   Julie Hindman ▼
Retail value $57.00   Date Received   1/23/99
Auction Type   Live ▼   Storage Location   Julie's House ▼
Description:

                                            OK   **Delete Record**

Record: |◄ ◄   1 ► ►| ►* of 13

Overview

The **Edit Item Information** form provides access to the **Item** table for creation, updating and deletion of records. Navigation Buttons allow scrolling though records sequentially, and a *Find* button searches the table for specific records. *Donor ID#* and *Club ID#* are not editable through this form. Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records. The form is opened in the Edit mode.

Macros

- OK_Edit Item Information
- Delete
- Find

Coordinator

Club Coordinator

Club Name	FMA
First Name	Rob
Last Name	Benson
Phone Number	(361) 672-9123
E-mail Address	rbenson@hothead.com
Primary Coordinator	☑
Coordinator ID#	5

OK   Delete Record

Record: I◄ ◄   1   ► ►I ►* of 1

Overview

The **Club Coordinator** form provides access to the **Coordinator** table for creation, updating and deletion of records. Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records. Form is opened in the edit mode.

Macros

- OK_Coordinator
- Delete

Overview

The **Storage Lookup** form accesses the **Storage Lookup** table. Creation, deletion and updating of storage locations is done here for access by the *Storage Location* attribute in the **Item** table. Form is opened in the Edit mode. Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records.

Macros

- OK_StorageLocation
- Delete

Received By Lookup

Item Recipients

Item Received By: Paul Marzolf

    OK   Delete Record

Record: |◄ ◄ | 2 | ► ►| ►* | of 2

Overview

Provides access to the **Received By Lookup** table for creation, updating and deleting of records. The *Received By* attribute in the **Item** table refers to this lookup table. Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records. Form is opened in the Edit mode.

Macros

- OK_Item Recipients
- Delete

Overview

Used to create, update and delete records in the **Club** table. Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records. Form opens in the Edit mode.

Macros

- OK_Update Club Info
- Delete

Customer Referral Information

Customer Referral

Customer Referred By?   Newspaper

| OK | Delete Record |

Record: |◀| |◀| | 1 | |▶| |▶|| |▶*| of 6
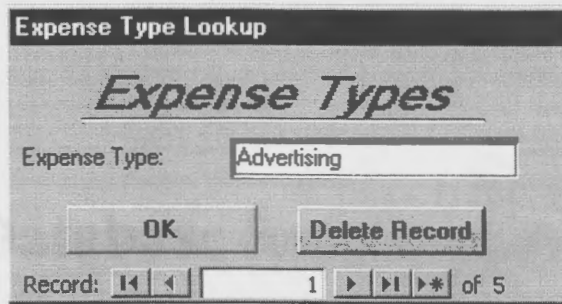
Overview

The **Customer Referral Information** form allows creating, updating, and deleting of records in the **Cust Referred By Lookup** table. Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records. Form opens in the Edit mode.

Macros

- OK_Customer Referrals
- Delete

Overview

The **Expense Type Lookup** form provides access to the **Expense Type Lookup** table for creating, updating, and deleting of records. Access standard Navigation Buttons at the bottom edge of the form allow the user to scroll through all records as well as create new records. Form opens in the Edit mode.

Macros

- Expense Types
- Delete

Database Relationships
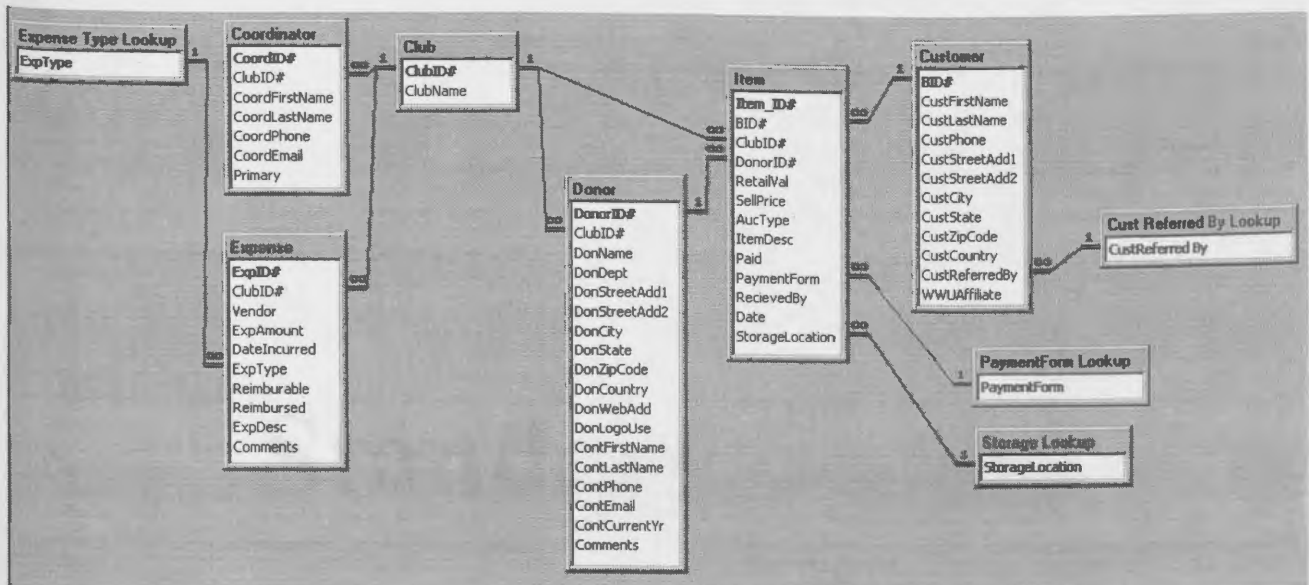
The relationship shown above is a more elaborate representation of how the ER diagram looks in Microsoft Access. This diagram includes the addition of "lookup" tables.

In the following two sections (Standard Tables and Lookup Tables) we will examine each table. The Field Name, Data Type and Field Description is shown for each table as it appears in Microsoft Access.

Standard Tables

Club Table

	Field Name	Data Type	Description
🔑	ClubID#	Text	A numeric code to specify each club.
	ClubName	Text	The name of each club, this is an acronym

Club : Table

The "Club" table holds information about the clubs participating in the auction. It includes an ClubID# which is the primary key and is manually assigned by the user.

Coordinator Table

Coordinator : Table

	Field Name	Data Type	Description
🔑	CoordID#	AutoNumber	The number that uniquely identifies each auction coordinator.
	ClubID#	Text	A numeric code to specify each club.
	CoordFirstName	Text	The first name of the auction coordinator.
	CoordLastName	Text	The last name of the auction coordinator.
	CoordPhone	Text	The phone number of the coordinator.
	CoordEmail	Text	The e-mail address of the coordinator.
	Primary	Yes/No	Whether or not this auction coordinator is the primary or alternate.

The "Coordinator" table is for storing information about the annual auction coordinators for each participating club. CoordID# is an AutoNumber which is used as the primary key.

Customer Table

Field Name	Data Type	Description
BID#	Number	A number that identifies each customer at the auction. This number is also the customer's bid
CustFirstName	Text	The first name of the customer.
CustLastName	Text	The last name of the customer.
CustPhone	Text	The phone number of the customer.
CustStreetAdd1	Text	The street address of the customer.
CustStreetAdd2	Text	A second street address of the customer if needed.
CustCity	Text	The city in which the customer lives.
CustState	Text	The state in which the customer lives.
CustZipCode	Text	The zip code that corresponds with the location of the customers home.
CustCountry	Text	The country in which the customer lives.
CustReferredBy	Text	How did the customer hear about the auction.
WWUAffiliate	Yes/No	Wether or not the customer is affiliated with WWU.

The "Customer" table is for storing information about the customers that attend the auction. It includes BID# which is the primary key, and is manually assigned.

Donor Table

Field Name	Data Type	Description
DonorID#	AutoNumber	A number that identifies each donor.
ClubID#	Text	A numberic code that specifies each club.
DonName	Text	The name of the donor.
DonDept	Text	The specific department within a company that was contacted.
DonStreetAdd1	Text	The street address for the location of the donor.
DonStreetAdd2	Text	A second street address if needed.
DonCity	Text	The city in which the business is located.
DonState	Text	The state in which the business is located.
DonZipCode	Text	The numeric code that corresponds to the location of the business.
DonCountry	Text	The country in which the donor operates.
DonWebAdd	Text	The company's website address.
DonLogoUse	Yes/No	Is it okay to use the company's logo at the auction.
ContFirstName	Text	The first name of the person who was contacted at the business.
ContLastName	Text	The last name of the person who was contacted at the business.
ContPhone	Text	The phone of the person who was contacted.
ContEmail	Text	The email address of the contact person.
ContCurrentYr	Yes/No	Whether or not contact has been made with the donor in the current year.
Comments	Memo	Any comments that are relavent about the donor.

The "Donor" table is for storing information about the institutions which donated items to the auction. DonorID# is an AutoNumber which is used as the primary key.

Expense Table

Field Name	Data Type	Description
ExpID#	AutoNumber	A number that uniquely identifies each expense.
ClubID#	Text	A numberic code that specifies each club.
Vendor	Text	The name of the vendor that the expense was paid to.
ExpAmount	Currency	How much was the expense.
DateIncurred	Date/Time	The date that the expense was incurred.
ExpType	Text	The type of expense that was incurred.
Reimburable	Yes/No	Whether or not the expense is reimbursable.
Reimbursed	Yes/No	Whether or not the expense has been reimbursed.
ExpDesc	Memo	A short description of the expense.
Comments	Memo	Any relavent comments about the expense incurred.

The "Expense" table is for storing information about all expenses incurred by the auction. ExpID# is an AutoNumber which is used as the primary key.

Item Table

Field Name	Data Type	Description
Item_ID#	Number	A number that uniquely identifies each item in the acution.
BID#	Number	A number that identifies each customer at the auction. This is also the customer's bid number
ClubID#	Text	A numeric code to specify each club.
DonorID#	Number	A number that identifies each donor.
RetailVal	Currency	The retail value of the item donated.
SellPrice	Currency	The price at which the item was baught.
AucType	Text	Which auction the item was sold at. (silent, live)
ItemDesc	Memo	The description of the donated item.
Paid	Yes/No	Whether or not the item has been paid for.
PaymentForm	Text	What form of payment was used.
RecievedBy	Text	Who recieved the item when it was donated.
Date	Date/Time	The date the item was recieved.
StorageLocation	Text	Where the item is being stored.

The "Item" table is for storing information about the items that have been donated to the auction. The primary key is Item_ID#. This number is manually assigned based upon the club which solicited the item.

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Lookup Tables

Auction Type Lookup Table

Auction Type Lookup : Table		
Field Name	**Data Type**	**Description**
Auctype	Text	Silent or Live auction item.

The "Auction Type" lookup table is for storing the list of values used in the "Auction Type" combination box. The values in the list indicate which auction the items will be placed in (i.e. silent, live).

Customer Referred By Lookup Table

Cust Referred By Lookup : Table		
Field Name	**Data Type**	**Description**
CustReferred By	Text	List of values for how the customer heard about the auction.

The "Customer Referred By" lookup table is for storing the list of values used in the "Customer Referred By" combination box. The values in the list indicate how the customer heard about the auction (i.e. flyer, radio, poster).

Expense Type Lookup Table

Expense Type Lookup : Table		
Field Name	**Data Type**	**Description**
ExpType	Text	A list of values for the differnt types of expenses the auction can incurr.

The "Expense Type" lookup table is for storing the list of values used in the "Expense Type" combination box. The values in the list indicate the different types of expenses incurred (i.e. entertainment, rentals).

Payment Form Lookup Table

PaymentForm Lookup : Table		
Field Name	**Data Type**	**Description**
PaymentForm	Text	Did the customer pay with cash or check.

The "Payment Form" lookup table is for storing the list of values used in the "Payment Form" combination box. The values in the list indicate the form of payment used by the customer when paying for the items (i.e. check, cash).

Received By Lookup Table

| Received By Lookup : Table		
Field Name	**Data Type**	**Description**
ReceivedBy	Text	The names of the auction coordinators who receive the items.

The "Received By" lookup table is for storing the list of values used in the "Received By" combination box. The values in the list are used to indicate who will be receiving the items before the auction. This will be an auction coordinator's name.

Storage Location Lookup Table

Storage Lookup : Table		
Field Name	**Data Type**	**Description**
StorageLocation	Text	The name of the auction coordinator(s) who is storing the items

The "Storage Location" lookup table is for storing the list of values used in the "Storage Location" combination box. The values in the list are used to indicate who will be storing the items before the auction. This will be a person's name.

Next is a description of the queries use to create the CBE Auction Reports.
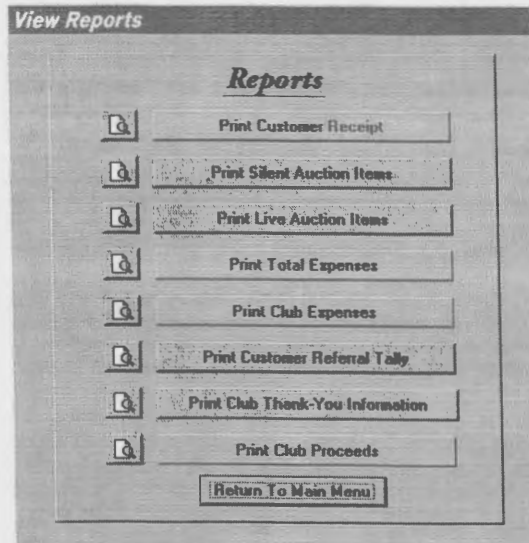
- **Print Customer Receipt**: This prints the "Customer Purchase Receipt" report. This report uses the "Customer Purchase Receipt" query.

- **Print Silent Auction Items**: This prints the "Silent Auction Items" report. This report uses the "Silent Auction Items" query.

- **Print Live Auction Items**: This prints the "Live Auction Items" report. This report uses the "Live Auction Items" query.

- **Print Total Expenses**: This prints the "Total Expenses" report. This report uses the "Total Expenses" query.

- **Print Club Expenses**: This prints the "Club Expenses" report. This report uses the "Club Expenses" query.

- **Print Customer Referral Tally**: This prints the "Customer Referrals" report. This report uses the "ReferredbyCusotomer" query.

- **Print Club Thank-You Information**: This prints the "Club Thank You Letters" report. This report uses the "Club Thank You Letters" query.

- **Print Club Proceeds**: This prints the "Club Proceeds" report. This report uses the "Club Proceeds" query.

Project Format

The forms are all designed using the "Standard" Auto Format in the Access Form Wizard. There were also some changes made to the properties of each form. The properties that need attention are as follows:

• **Caption**: Provide a good, meaningful caption

• **Scroll Bars**: Neither

• **Record Selectors**: No

• **Dividing Lines**: No

• **Auto Resize**: No

• **Auto Center**: Yes

• **Border Style**: Dialog

• **Control Box**: No

• **Min Max Buttons**: None

• **Close Button**: No

• **Font Size**: 8

• **OK Macro Button**: 1" Wide by 0.25" High

• **Delete Record Button**: 1" Wide by 0.25" High

CBE AUCTION DATABASE

SAMPLE REPORTS

Customer Purchase Receipt

Customer Name: Jillian Wallach

BID #: 1

Club ID	Item ID #	Item Description	Bid Price
1000	1001	4 Microsoft Office Classes (4 hrs. each)	$250.00
2000	2001	Dinner for 4 at Cliff House	$245.00
4000	4001	A couple of frequent flyer coupons	$230.00
6000	6001	Signed Sonic's B-ball	$175.00
		Total Cost =	**$900.00**

Silent Auction Items

Item ID#	Donor Name	Description	Retail value
6001	American Express Inc	Signed Sonic's B-ball	$50.00
2002	Microsoft	A cool microsoft lava lamp	$99.00
1003	Microsoft	Women's Burton Snowboard	$135.00
4002	MTG Consulting	This is a free 2 hours of consultation	$75.00
3002	Safeco	An old used printer that is still in new condition	$150.00
5002	Visio Corporation	A team signed Sonics basketball	$27.00

Live Auction Items

Item ID#	Donor Name	Description	Retail value
1004	Hewlett Packard	Printer software package for WinNT	$122.00
2001	Microsoft	Dinner for 4 at the Cliff House	$25.00
1001	Microsoft	4 Microsoft Office Classes (4 hrs. each)	$57.00
1002	Microsoft	Manicure and Massage at Salon Eva	$100.00
4001	MTG Consulting	A couple of frequent flyer coupons	$200.00
3001	Safeco	Tommy Girl Perfume Gift Set	$75.00
5001	Visio Corporation	Wine Tasting for 8 at Mt. Baker Vineyards	$100.00

Total Expenses

Date	Vendor	Date	Amount	Type	Description
January 1999					
	WWU KUGS	1/20/99	$35.00	Advertising	Radio advertisements (play 5 times per week)
	McDonald's	1/25/99	$25.00	Food	Coordinators Lunch
	Bob's Burgers and Brew	1/25/99	$300.00	Food	Vegetable trays and hamburger entries
				Subtotal	$360.00
February 1999					
	Printing Etc.	2/23/99	$137.53	Programs	200 Auction Programs
	WWU	2/25/99	$150.00	Viking Union	Rental fee for the area where the auction is held
				Subtotal	$287.53
March 1999					
	Party ETC.	3/1/99	$25.00	Other	Balloons used at the main enterance of the auction
				Subtotal	$25.00
				Grand Total	$672.53

Club Expenses

FMA

Expense ID#	Amount	Vendor	Date	Expense Description
6	$25.00	Party ETC.	3/1/99	Balloons used at the main enterance of the auction
10	$25.00	McDonald's	1/25/99	Coordinators Lunch

Total Expenses = $50.00

Customer Referrals

Referral Type:	Total:
Newspaper	2
On Campus Flyer	2
Other	1
Word of mouth	1

Club Thank-You Letter Information

FMA

Hewlett Packard (Paul Ausserer)

23882 Richmond Way, Seattle,WA 992532626

      1004   Printer software package for WinNT

Microsoft (Betsy Smith)

One Microsoft Way, Redmond,WA 992676771

      1001   4 Microsoft Office Classes (4 hrs. each)

      1002   Manicure and Massage at Salon Eva

      1003   Women's Burton Snowboard

Club Proceeds

FMA

Item ID #	Description	Selling Price
1001	4 Microsoft Office Classes (4 hrs. each)	$250.00
1002	Manicure and Massage at Salon Eva	$75.00
1003	Women's Burton Snowboard	$125.00
1004	Printer software package for WinNT	$100.00
	Total:	**$550.00**