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Login

Abstract Code

- User populates the *username* (`\$Username`), *password* (`\$Password`) input fields.
- When *Login* button is clicked:

If the *username* or *password* field is empty:

- Stay in <u>Login</u> form, with the message "Username and password are required. Please try again"
- If both *username* and *password* fields are populated:
 - Query the User table with the username value.

```
SELECT password
FROM User WHERE username = `$Username`;
```

- If User record is NOT found:
 - Go back to <u>Login</u> form, with error message "Invalid login. Please try again."
- If User record is found but User.password != `\$Password`:
 - Go back to <u>Login</u> form, with error message "Invalid login. Please try again."
- Else
 - Store login information as session variable `\$UserData`.
 - Go to **User Home** form.

Client Search

Abstract Code

- User populates the clientFirstName (`\$ClientFirstName`) and/or clientLastName
 (`\$ClientLastName`) and/or description (`\$Description`) input fields.
- When Search button is clicked:
 - o If both *clientFirstName* and *clientLastName* and *description* are empty:
 - Stay in <u>Client Search</u> form, with the message "Client first name or last name or description must be populated, please try again."
 - If clientFirstName and/or clientLastName and/or description are populated:
 - Lookup the Client table based on the search criteria(s) provided.

SELECT clientId, firstName, lastName, description FROM Client WHERE firstName = IFNULL(`\$ClientFirstName`,firstName) AND lastName = IFNULL(`\$ClientLastName`,lastName) AND description = IFNULL(`\$Description`,description);

If no Client record is found:

- Go back to <u>Client Search</u> form, with the message "No Client found, please try again."
- If 5 or more Client records are found:
 - Go back to <u>Client Search</u> form, with the message "Too many Clients found, please narrow search criteria(s)."
- Else

 - Go to **Client Search** form to display the search results
- When **Detail** button is clicked (note that **Detail** button is enabled only when a Client record has been selected):
 - Retrieve the Client record from the `\$ClientIdSelected` session variable.

SELECT clientId, firstName, lastName, description FROM Client WHERE clientId = `\$ClientIdSelected`;

Lookup all modifications to Client records.

SELECT clientId, dateTime, fieldModified, previousValue FROM ClientLog WHERE clientId = `\$ClientIdSelected`;

Lookup all services provided to Client.

SELECT clientId, siteId, dateTime, description, note FROM ClientService WHERE clientId = `\$ClientIdSelected`;

- Store modifications and services provided in the `\$ClientData` session variables.
- Go to Client Report form.
- When *Enroll* button is clicked:
 - Go to **Enroll Client** form. No data is required beforehand to enroll a new client.

Enroll Client

- User enters clientFirstName (`\$ClientFirstName), clientLastName (`\$ClientLastName), description (`\$Description), and/or phoneNumber (`\$PhoneNumber`) input fields.
- When the **Enroll Client** button is clicked:
 - o If clientFirstName or clientLastName or description field is empty:
 - Stay in **Enroll Client** form, with a message of both client first name, last name, and description must be provided
 - If both *clientfirstName*, *clientLastName*, and *description* are provided:

■ Lookup *clientFirstName*, *clientLastName*, and *description* values on the Client table

SELECT clientId, firstName, lastName, description FROM Client WHERE firstName = IFNULL(`\$ClientFirstName`,firstName) AND lastName = IFNULL(`\$ClientLastName`,lastName) AND description = IFNULL(`\$Description`,description);

- If one or more Client records exist with *clientFirstName*, *clientLastName*, and *description* values:
 - Go back to <u>Enroll Client</u> form, with a message of Client already exists.
- Else
 - Create a new Client record with clientFirstName, clientLastName, description, and phoneNumber.

INSERT INTO Client (clientId, firstName, lastName, description, phone) VALUE (NULL, `\$ClientFirstName`, `\$ClientLastName`, `\$Description`, `\$PhoneNumber`;

- Store the Client information as a session variable `\$ClientData`.
- Go to **Client Report** form.

Modify Client

Abstract Code

- User modifies clientFirstName (`\$ClientFirstName) and/or clientLastName
 (`\$ClientLastName) and/or description (`\$Description`) and/or phoneNumber
 (`\$PhoneNumber`) fields in Client Report form.
- When the **Update** button is clicked:
 - o If clientFirstName or clientLastName or description field is empty:
 - Stay in <u>Client Report</u> form, with a message of both client first name, last name, and description must not be empty.
 - If clientFirstName, clientLastName, and description are populated:
 - If *clientFirstName* was updated:

INSERT INTO ClientLog (clientId, userId, dateTime, fieldModified, previousValue) VALUES

(`\$ClientId`,`\$UserId`,sysdate(),`firstname`,`\$ClientFirstNamePrevious);

■ If *clientLastName* was updated:

INSERT INTO ClientLog (clientId, userId, dateTime, fieldModified, previousValue) VALUES (`\$ClientId`,`\$UserId`,sysdate(),`lastname`,`\$ClientLastNamePrevious);

■ If *description* was updated:

INSERT INTO ClientLog (clientId, userId, dateTime, fieldModified, previousValue) VALUES (`\$ClientId`,`\$UserId`,sysdate(),`description`,`\$DescriptionPrevious);

■ If *phoneNumber* was updated:

INSERT INTO ClientLog (clientId, userId, dateTime, fieldModified, previousValue) VALUES (`\$ClientId`,`\$UserId`,sysdate(),`phonenumber`,`\$PhoneNumberPrevious);

■ If clientFirstName, clientLastName, description, or phoneNumber was updated:

UPDATE Client SET firstName = `\$ClientFirstName`, lastName =
`\$ClientLastName`, description = `\$Description`, phoneNumber =
`\$PhoneNumber` WHERE clientId = `\$ClientId`;

- If update was successful:
 - Lookup Client record using the *clientId* from the `\$ClientData` session variable.

SELECT clientId, firstName, lastName, description, phoneNumber FROM Client WHERE clientId = `\$ClientId`;

- Store Client record into the `\$ClientData` session variable.
- Go back to <u>Client Report</u> form, with the message Client data updated successful.
- If update was successful:
 - Go back to <u>Client Report</u> form, with the message "Unable to save Client data, please try again."

Check-In Client

Abstract Code

- User populates datetime (`\$DateTime) and description (`\$Description`) and/or note
 (`\$Note`) fields in Check-In Client form.
- When the Save button is clicked:
 - o If *datetime* or *description* field is empty:
 - Stay in <u>Check-In Client</u> form, with the message "Date/time and description are required, please try again.".
 - If both datetime and description are populated:
 - Insert into ClientService table with the *datetime*, *description*, and *note* values using *clientId* and *site* values stored session variables.

INSERT INTO ClientService (clientId, siteId, userId, dateTime, description, note) VALUES ('\$ClientId', '\$SiteId', '\$UserId', '\$DateTime', 'Description', '\$Note);

- If update was successful:
 - Lookup Client record using the *clientId* from session variable.

SELECT clientId, firstName, lastName, description, phoneNumber FROM Client WHERE clientId = `\$ClientId`;

Lookup all modifications to Client records.

SELECT clientId, dateTime, fieldModified, previousValue FROM ClientLog WHERE clientId = `\$ClientId`;

Lookup all services provided to Client.

SELECT clientId, siteId, dateTime, description, note FROM ClientService WHERE clientId = `\$ClientId`;

- Store Client data, modifications and services provided in the `\$ClientData` session variables.
- Go to Client Report form.
- If update was successful:
 - Go back to <u>Check-In Client</u> form, with the message "Unable to Check-In, please try again."
- When the **Cancel** button is clicked:

Go back to <u>Client Report</u> form.

Reset Bunk Count

Abstract Code

- View site information from **Site Form**.
- While no buttons are pushed, do nothing.
- When *Update bunk count* button is pushed:
 - o Find the available bunk information(`\$Male, \$Female, \$Mixed`) in Shelter table
 - Display the retrieved bunk count(`\$Male, \$Female, \$Mixed`)
 - o If **Save** button is pushed:
 - Go to **Site Form** and save all the information
 - Go back to site information page
 - If *Cancel* button is pushed:
 - Go back to site information page

SELECT Shelter.Male, Shelter.Female, Shelter.Mixed FROM Shelter
INNER JOIN ClientService
ON ClientService.FacilityId = Shelter.FacilityId
WHERE ClientService.FacilityName = `\$FacilityName`

Report Available Bunks

- The information about available bunks will be updated by system at a daily base.
- Once the updating starts, first inner join the bunk information from Shelter table and detailed shelter information from ClientService table, and store the result into BunkInfoResult
 - o If zero availability of bunks in this shelter:
 - Skip the shelter

SELECT

 $Shelter. Facility Id, \, Shelter. Bunk Count Male, \, Shelter. Bunk Count Female, \,$

 $Shelter. Bunk Count Mixed, \ Client Service. Facility Name, \ Client Service. Eligibility Condition,$

ClientService.HoursOfOperation

FROM Shelter INNER JOIN ClientService

ON Shelter.FacilityId = ClientService.FacilityId

WHERE Shelter.BunkCountMale > 0

OR Shelter.BunkCountFemale >0

OR Shelter.BunkCountMixed >0;

Join SiteId from SiteToService table

SELECT

Shelter.FacilityId, Shelter.BunkCountMale, Shelter.BunkCountFemale,

Shelter.BunkCountMixed, ClientService.FacilityName, ClientService.EligibilityCondition,

ClientService.HoursOfOperation, SiteToService.SiteId

FROM BunkInfoResult

LEFT JOIN SiteToService

ON Shelter.FacilityId = SiteToService.FacilityId;

- store the result into BunkInfoResult
- join site information from Site table

SELECT

Shelter.FacilityId, Shelter.BunkCountMale, Shelter.BunkCountFemale,

Shelter.BunkCountMixed, ClientService.FacilityName, ClientService.EligibilityCondition,

ClientService.HoursOfOperation, Site.LocationStreetAddress, Site.LocationCity,

Site.LocationState, Site.LocationZipCode, Site.phone

FROM BunkInfoResult

LEFT JOIN Site

ON SiteToService.SiteId = Site.SiteId;

■ store the result in **Bunk Report** Form

Report Meals Remaining

• Once the updating starts, first left join the FoodBankToItem table and food category information from Food table, and store the result into ReportMealResult.

SELECT

FoodBankToltem.FacilityId,

FoodBankToltem.ItemId,

FoodBankToItem.AvailableQuantity,

Food.ItemId.

Food.FoodCategory

FROM FoodBankToltem

LEFT JOIN Food

ON FoodBankToltem.ltemId = Food.ltemId;

 Sum up all the numbers of food in all the food banks under different FoodCategory in ReportMealResult, and save in CategoryResult

SELECT

FoodCategory,

SUM (AvailableQuantity)

FROM ReportMealResult

GROUP BY FoodCategory;

SELECT AvailableQuantity into @Veg FROM CategoryResult

WHERE FoodCategory = 'Vegetable';

SELECT AvailableQuantity into @Carb FROM CategoryResult

WHERE FoodCategory = 'Nuts/grains/beans';

SELECT AvailableQuantity into @Protein1 FROM CategoryResult

WHERE FoodCategory = 'Meat/seafood';

SELECT AvailableQuantity into @Protein2 FROM CategoryResult

WHERE FoodCategory = 'Dairy/eggs';

- Sum up total number of(`\$Protein1`)Meat/seafood and (`\$Protein2`)Dairy/eggs as one category(`\$Protein`)
- Compare the total numbers of three food category Vegetable(`\$Veg`),
 Nuts/grains/beans(`\$Carb`), and Meat/seafood OR Dairy/eggs(`\$Protein`) and find the minimum of the three
- Store and display the minimum number as the number of the meals remaining in inventory in all food banks in the ASA system
- Store and display the food category which has the minimum number as type of donations are most needed to provide more meals

Modify Service

- View site information from **Site Form**. Populate service list dropdowns.
- While no buttons are pushed, do nothing.
- When **Add** button is pushed:
 - If the selected service matches any value of ServiceList(`\$ServiceList`) of the site:
 - Error message of existing service
 - Else:
 - Insert the service into ServiceList (`\$ServiceList`) of the site
 - Display the **Service-Info** form with the selected service
 - If **Save** button is pushed:
 - Go to Service table and save all the information
 - Go back to site information page
 - If *Cancel* button is pushed:
 - Go back to site information page

```
IF EXISTS (SELECT * FROM SiteToService WHERE ServiceList = `$ServiceList`)
BEGIN
       --Error Message
END
ELSE BEGIN
       IF `$ServiceList` == `FoodBank` then
         INSERT INTO Service (facilityId) VALUES (NULL);
         Save last inserted value into $FacilityId;
         INSERT INTO ClilentService
(facilityId,facilityName,eligibilityCondition,hoursOfOperation) VALUES
(`$FacilityId`,`$FacilityName`,`$EligibilityCondition`,`$HoursOfOperation`);
         INSERT INTO FoodBank (facilityId) VALUES (`$FacilityId`);
         INSERT INTO SiteToService(siteId, facilityId) VALUES (`$SiteId`,`$FacilityId`);
       IF `$ServiceList` == `FoodPantry` then
         INSERT INTO Service (facilityId) VALUES (NULL);
         Save last inserted value into $FacilityId;
         INSERT INTO ClientService
(facilityId,facilityName,eligibilityCondition,hoursOfOperation) VALUES
(`$FacilityId`,`$FacilityName`,`$EligibilityCondition`,`$HoursOfOperation`);
         INSERT INTO FoodPantry (facilityId) VALUES (`$FacilityId`);
         INSERT INTO SiteToService(siteId, facilityId) VALUES (`$SiteId`,`$FacilityId`);
       IF `$ServiceList` == `Shelter` then
         INSERT INTO Service (facilityId) VALUES (NULL);
         Save last inserted value into $FacilityId;
         INSERT INTO ClientService
(facilityId,facilityName,eligibilityCondition,hoursOfOperation) VALUES
```

- When *Edit* button is pushed:
 - Display the original <u>Service-Info</u> form retrieved from <u>Service</u> table for editing
 - If Save button is pushed:
 - Go to Service table and save all the information
 - If the service is a shelter.

```
IF `$ServiceList` == `Shelter` THEN
UPDATE ClientService SET facilityID = `$facilityID`, facilityName =
`$facilityName`, eligibilityCondition = `$eligibilityCondition`, hoursOfOperation =
`$hoursOfOperation`;
UPDATE Shelter SET facilityID = `$facilityID`, bunkType = '$bunkType',
maleBunkCount = '$maleBunkCount, femaleBunkCount',
mixedBunkCount = '$mixedBunkCount'
IF `$ServiceList` == `FoodPantrv` THEN
UPDATE ClientService SET facilityID = `$facilityID`, facilityName =
`$facilityName`, eliqibilityCondition = `$eliqibilityCondition`, hoursOfOperation =
`$hoursOfOperation`;
IF `$ServiceList` == `SoupKitchen` THEN
UPDATE ClientService SET facilityID = `$facilityID`, facilityName =
`$facilityName`, eligibilityCondition = `$eligibilityCondition`, hoursOfOperation =
`$hoursOfOperation`;
UPDATE SoupKitchen SET facilityID = `$facilityID`, seatCount = '$seatCount';
```

■ Go back to site information page

- o If *Cancel* button is pushed:
 - Go back to site information page
- When **Delete** button is pushed:
 - If number of element of ServiceList (`\$ServiceList`) equals to one:
 - Error message of one service remaining
 - Else:
 - Message of confirmation for service deleting
 - If **Save** button is pushed:

-

```
IF `$ServiceList` == `FoodBank` then
DELETE FROM FoodBank
WHERE SiteId = `$SiteId`
AND FacilityId = `$FacilityId`;
IF `$ServiceList` == `Shelter` then
DELETE FROM Shelter
WHERE SiteId = `$SiteId`
AND FacilityId = `$FacilityId`;
IF `$ServiceList` == `SoupKitchen` then
DELETE FROM SoupKitchen
WHERE SiteId = `$SiteId`
AND FacilityId = `$FacilityId`;
IF `$ServiceList` == `FoodPantry` then
DELETE FROM FoodPantry
WHERE SiteId = `$SiteId`
AND FacilityId = `$FacilityId`;
```

- If Cancel button is pushed:
- Go back to site information page

Add Item

Abstract Code

• Click **Add Item** button from **Item Add** form

•

INSERT INTO Item (Name, StorageType, ItemType, ExpirationDate) VALUE

(`\$Name`, `\$StorageType`, `\$ItemType`, `\$ExpirationDate`);

Request Item

Abstract Code

- Click **Request Item** button from **Item Report** form. Jump to **Request Item** task.
- Add a request record in Request Table that stores the source (Food Bank), user and other request attributes.

INSERT INTO Request (RequestId, ItemId, Status, QuantityRequested, QuantityFulfilled)
VALUE
('\$RequestId', '\$ItemId', '\$Status', '\$QuantityRequested', '\$QuantityFulfilled');

Item Search

Abstract Code

- Click **Search Item** button from **Item Search** form. Jump to **Search Item** task.
- User specify food bank (`\$foodBank`) they want to search items from. It can be wildcard.

0

SELECT

Item.itemID, Item.name, Item.storageType, Item.expirationDate, FoodBankToItem.FacilityName, FoodBankToItem.availableQuantity FROM FoodBankToItem INNER JOIN Item
ON FoodBankToItem.itemID = Item.itemID
WHERE FoodBankToItem.availableQuantity > 0;

- The system will do a join on table FoodBankToItem and Item as above, and store the result into ItemSearchResult for the following queries on item params.
- User specify filters of expiration date (`\$expirationDate`), storage type (`\$storageType`),
 Food/Supply (`\$foodSupply`), individual category (`\$individualCategory`) or keyword of
 item name/ description (`\$name`). Based on what user specify, look up all Food Bank
 tables to return a list of items.
 - If user specifies filter of name (`\$name`)

SELECT itemID, name, storageType, expirationDate FROM ItemSearchResult WHERE name = IFNULL(`\$name`, name);

If user specifies filter of expiration date (`\$expirationDate`)

SELECT itemID, name, storageType, expirationDate FROM ItemSearchResult WHERE expiration = IFNULL(`\$expirationDate`,expiration);

If user specifies filter of storage type (`\$storageType`)

SELECT itemID, name, storageType, expirationDate FROM ItemSearchResult WHERE storageType = IFNULL(`\$storageType`, storageType);

If user specifies filter of "Food"

SELECT

Item.itemID, Item.name, Item.storageType, Item.expirationDate, Food.foodCategory

FROM ItemSearchResult

LEFT JOIN Food

ON Item.itemID = Food.itemID;

If user specifies filter of "Supply"

SELECT

Item.itemID, Item.name, Item.storageType, Item.expirationDate, Supply.supplyCategory

FROM ItemSearchResult

LEFT JOIN Supply

ON Item.itemID = Supply.itemID;

- If user specifies filter of individual category (`\$individualCategory`)
 - If `\$individualCategory` is one of food category

SELECT

Item.itemID, Item.name, Item.storageType, Item.expirationDate, Food.foodCategory

FROM ItemSearchResult

LEFT JOIN Food

ON Item.itemID = Supply.itemID

WHERE Food.foodCategory = \$individualCategory;

If `\$individualCategory` is one of supply category

SELECT

Item.itemID, Item.name, Item.storageType, Item.expirationDate,

Supply.supplyCategory
FROM ItemSearchResult
LEFT JOIN Supply
ON Item.itemID = Supply.itemID
WHERE Supply.supplyCategory = \$individualCategory;

- On each item from the item search result, user can click on *Request Item* button to specify number of items they want to request.
 - Look up user's site table, if it is the same site as the Food bank, return message "cannot request from the same Food Bank as you are associated with."
 - Else, user can modify the number of that item to whatever they want to request.
 - If the number is zero, the item will be removed from Request Item table. (optional)

Retrieve Outstanding Requests

Abstract Code

- Click *View Outstanding Requests* button from <u>User Home</u> form.
 - If the user's associated Site does not have a food bank, return message "Unable to view Outstanding Request Form".
 - To get user's associated siteID

SELECT siteID FROM User WHERE username = \$username;

To get food bank of that siteID

SELECT facilityName FROM Foodbank WHERE siteID = \$siteID;

- Jump to Retrieve Outstanding Requests task to show Outstanding Request Form.
 - By default, result in Outstanding Requests Form is sorted by `\$StorageType`.

SELECT

Request.requestID,

Request.status,

Request.guantityRequired,

Request.guantityFulfilled,

Item.itemName,

Item.storageType,

Item.itemType,

Item.expirationDate

FROM Request LEFT JOIN Item

ON Request.itemID = Item.itemID

WHERE Request.facilityName = \$facilityName ORDER BY storageType;

- Click **Sorted by Storage Type** button to view the report Sorted by `\$StorageType`.
 - SQL similar to the above SQL sorted by storage type.
- Click **Sorted by Category button** to view the report Sorted by `\$Category`.
 - SQL similar to the above SQL sorted by storage type.
- Click Sorted by Subcategory button to view the report Sorted by `\$SubCategory`.
 - SQL similar to the above SQL sorted by storage type.
- Click **Sorted by Quantity of Items** button to view the report Sorted by `\$Quantity`.
 - SQL similar to the above SQL sorted by storage type.
- At each of the above subtask:
 - if more than one request for a particular item exists such that the total number of items requested is greater than the total number available, call Mark
 Outstanding Item subtask to mark those items in red.
 - Group By itemID to sum up all quantity required for an itemID. Then compare the sum with available quantity to see if it's outstanding.

SELECT

Request.itemID, SUM(Request.quantityRequired) AS itemRequestSum, Item.availableQuantity

FROM Request LEFT JOIN Item

ON Request.itemID = Item.itemID

WHERE Request.facilityName = \$facilityName

GROUP BY Request.itemID;

Add Request

Abstract Code

 On <u>Item Report</u> Form, once user sees the available items they are interested, user click on *Add Request* button to add an request

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INSERT INTO Request (requestID, itemID, status, quantityRequested, quantityFulfilled) VALUES (`\$requestID`,`\$itemID`,`\$status`,`\$quantityRequested`,`\$quantityFulfill

(\$requestID , \$itemID , \$status , \$quantityRequested , \$quantityFulfill ed`);

<u>Update Request</u>

- On **Outstanding Requests** Form, user select the way to update the request.
 - If Mark Request Fulfilled in Full button is selected, look up that request in Request Form and update attribute Fulfilled Number (`\$FulfilledNumber`) to whatever request number is made.

```
UPDATE Request SET quantityFulfilled = `$quantityRequested`
WHERE requestID = `$requestID`;
```

If Reduce Request button is selected, look up that Request in Requests Form update `\$FulfilledNumber` to the fulfillment number that user typed in.

```
UPDATE Request SET quantityFulfilled = `$quantityFulfilled` WHERE
requestID = `$requestID`;
```

Retrieve Request

Abstract Code

• From <u>User</u> Form, Click *Retrieve Requests Status* button. Jump to **Retrieve Requests**Status task to show all requests this user has made.

C

SELECT

Request.userName,

ClientService.facilityName,

Request.itemName,

Request.status,

Request.quantityRequest,

Request.quantityFulfilled

FROM Request

LEFT JOIN ClientService

ON Request.facilityID = ClientService.facilityID

WHERE Request.userName = \$userName;

- Look up Request table and return status (pending or closed) attribute.
 - o If status is closed, return actual number provided.

Cancel Request

- Click Cancel Request button from <u>View Request Status</u> form. Jump to Cancel Request task.
- Look up the request that user is going to cancel from Request table.

 If the request is in the Outstanding Request Table, remove the request from Request table and Outstanding Request Table.

0

DELETE FROM Request WHERE requestID = \$requestID;