**Classes**

* **clsROWSDB**
  + Handles connection to database
  + Handles queries to database
    - Never exposes any ADODB variables to the outside world
    - Uses passthrough functions to get access to the ADODB.Recordset from a query
* **clsUser**
  + Holds all of the information for a logged in user
    - Username
    - Role
    - Role Rank
    - Last Login Date/Time
    - Permissions (captured as both an array and a string)
      * Permission Array
      * Permission String
  + Handles Login/Logout functionality
    - Handles building SQL queries and executing them against a clsROWSDB local instance
    - Sets lastLogin in database
    - Calls correct show/hide sheets functions
    - Resets its member variables
    - Handles getting role Rank

**Initial & Login Flow**

* When Excel sheet is first opened it hides all sheets and brings the user to the ‘Welcome’ worksheet
  + Shows the Login Rows (from global variables on which rows to show/hide)
  + Hides the rows that show information for a logged in user (from global variables on position)
  + Shows the cmdLogin button
  + Selects the Username cell for input
  + Initializes the global clsUser variable (constructor here will set this to a logged-out state)
* User clicks **Login** button
  + Display error text in the error cell if no username is entered
  + Display error text in the error cell if no password is entered
  + If username and password are entered:
    - Calls clsUser.Login
      * Creates a local clsROWSDB instance
      * Creates the SQL query
        + Should not only check that the username and password are valid, but should also grab:

Last Login

Role

Role Rank

Permissions (both as a string and array – can convert array to string later in process)

* + - * If false response, then shows error in the error cell (e.g. “Invalid username/password”)
      * If successful
        + Saves the information to clsUser global class instance
        + Takes user to the **Dashboard** worksheet

Leaving the “Welcome” worksheet visible

**Welcome** Worksheet

Hides the login rows

Shows the login info rows about the currently logged in user

Displays a logout button

Clicking the logout button would call the clsUser logout function

This would hide all sheets but Welcome

This would reset clsUser to logged out status

This would show the login rows on the sheet

This would select the Username cell on the Welcome sheet

* + - * + Showing **Dashboard** Worksheet

Should show all buttons available

Should enable/disable buttons based on the clsUser permissions

Clicking any button should take you to that sheet and hide Dashboard

Basically user can always get to the Welcome sheet and the sheet they are taken to

E.g. User clicks “Create User” button on dashboard (assuming they have the permissions)

User will see the “Welcome” worksheet as well as the “UserCreate” worksheet

This allows the user to always go back to the Welcome worksheet to see their login status

This worksheet, any time it is activated will check the global clsUser status

Will reset as necessary, if they are not logged in, everything will reset

Otherwise it’ll show the logged in user’s information