


Security

Implementation

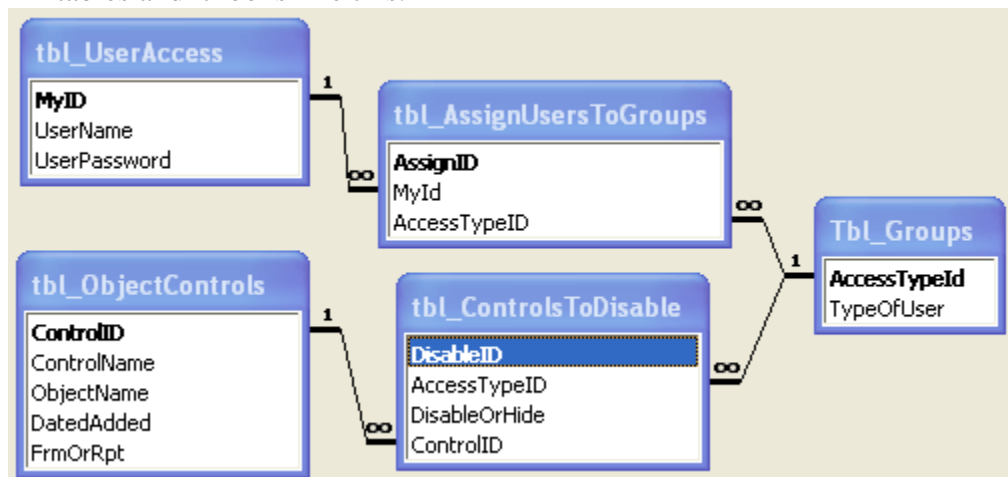
1. Import the following objects **ONLY** from the Advanced Custom Security Database into your personal database. *Note: If you application is already split into a Front End (FE) and Back End (BE) these objects need to be imported to the FE, except for the “Custom Security” module, which shall be imported into both the FE and BE.*
 - a. **Module:** “Custom Security”
 - b. **Form:** “Frm_Logon”
 - c. **Form:** “frm_MainForm” (This form does not have to be imported if you are setting up the security in our own DB. However, your main form should be named as such i.e frm_MainForm, or may search/replace VBA code in the “Current Project” for all instances of frm_MainForm, and replace with the name of your current Main Form, after importing).
 - d. **Form:** “frm_ControlsToDisable_sub”
 - e. **Form:** “frm_ControlsToDisable_Main”
 - f. **Form:** “frm_AddUsersToGroups_Sub”
 - g. **Form:** “frm_AddUsersToGroups_Main”
 - h. **Form:** “frm_Administrator”
 - i. **Form:** “frm_ChangePassword”
 - j. **Form:** “frm_Add_New_Employee”
 - k. **Form:** “frm_Manage_Groups”
 - l. **Report:** “rpt_Group_Permissions”
2. The next step is to create the tables. The necessary tables with their relationships are automatically created when the function “CreateSecurityTables” is run. The CreateSecurityTables function can be found within the “Custom Security” Module.

Note: If you application is already split into a Front End (FE) and Back End (BE) then the following steps which creates the tables need only be run from the BE (but then must import the created tables to the FE, as links).

 - a. To run the “CreateSecurityTables” Function just place your cursor inside the function and press the F5 key once. Or press CTRL + G and in the immediate window then enter a question mark (?) followed by the name of the function without any space and press enter on the keyboard. E.g ?CreateSecurityTables.
 - b. After 2.a is carried out, the following tables are created
 - i. tbl_UserAccess
 - ii. tbl_AssignUsersToGroups
 - iii. tbl_ControlsToDisable
 - iv. tbl_Groups
 - v. tbl_ObjectControls
 - c. The only thing you need to amend with these tables is to open the table **Tbl_UserAccess** in design view and add an “Input Mask” of Password to the “UserPassword” field as seen below.

General		Lookup	
Field Size	10		
Format			
Input Mask		Password	
Caption			
Default Value			
Validation Rule			
Validation Text			
Required	Yes		
Allow Zero Length	Yes		
Indexed	No		
Unicode Compression	No		
IME Mode	No Control		
IME Sentence Mode	None		
Smart Tags			

- d. The CreateSecurityTables function also creates the relationships for the tables and it looks like this.



3. Adding the Controls to Disable

- Now we need to add all the various controls from all the forms in the application to the table “ObjectControls” (if using your own main form you must first perform step 8.iii).
 - Open the form “frm_Administrator” and click on the first button which is named “Update New Controls”.
 - All form controls except labels will be added to tbl_ObjectControls. Depending on how many controls you have throughout your application this might take a little while.
- Note:* If a new form is added after you ran the “Update New Controls” button. Then you will have to run this button again in order to capture the controls for the new form.

4. Creating Users

- a. Open the “Administrators” form and click on “Add a User” button and the following form will open.



- b. All the fields on this form are required. The length of the FirstName and LastName fields is 22 characters and the Username and UserPassword fields are 12 characters.

5. Creating Groups

- a. A Group is a class of people who carry out the same functions within the database. When you disable controls for a group all users in that Group would not be able to access the same controls.
- b. From the “Administrators” form click on “Manage Groups” and create the various names of your groups.



6. Assigning Users to Groups

- a. From the administrators form click on the “Add Users to Groups” button and select the group you want from the combo box.
- b. Then add the relevant user to the group.
- c. Steps A and B are repeated until all users are assigned to a group.

Add Users to Groups

Add A User to Group

AccessTypeID: 1

Type Of Group: [Dropdown Arrow]

Group: Administrators

UserName

[Add Icon]	Dane Miller	[Dropdown Arrow]	[Delete Icon]
[Add Icon]		[Dropdown Arrow]	[Delete Icon]

Record: [Navigation Buttons] 1 [Navigation Buttons]

7. Setting Group Permissions (Disabling Controls)

- a. From the Administrators form click on the button marked “Set Permissions for Groups” and the following form will open

- b. Using the “Setup Group Permissions” form you can use the “Navigate Groups” button on the top right hand side to move the various groups.
- c. Once you have your desired group, click the “Control” combo box to get the name of the control that must be disabled.
- d. The two list boxes on the right hand side of the form shows all the users that belong to a particular group as well as the forms to which controls are disabled.

Right, we have done a lot already but just hang in there. We just have a few steps again and that's it.

8. Code to Place on Forms and Reports

For the security to work, forms need to have the following code on their On Open event except for certain forms as indicated in point 8.a.ii.

a. Forms

- i. Call the Security Enabled code on your forms “On Open” Event. You can paste the code from the example straight into the forms event.
 1. Example:
 - a. *Call SecurityEnabled(Me.NAME, "Form") ' enable security for this form*

- ii. IT MUST BE NOTED THAT THIS CODE MUST BE PLACED ON INDIVIDUAL FORMS MAINFORM ONLY AND NOT IN ANY IMBEDDED SUBFORM THAT IS ON A MAINFORM.
 - 1. THE SUBFORMS PRIMARY KEY MUST ALSO HAVE A “TAB INDEX” OF ONE (1).
- iii. The only difference to points i and ii is that the Main Form which you use to do all your navigation. i.e. (The form you want to open directly after access to the login form has been given) Must have the following code.

"close the log on form if it is open.

Dim strFrm As String

strFrm = "frm_Logon"

If Application.CurrentProject.AllForms("frm_Logon").IsLoaded
Then

DoCmd.Close acForm, strFrm

End If

Call SecurityEnabled(Me.NAME, "Form") ' enable security for this form

b. Reports

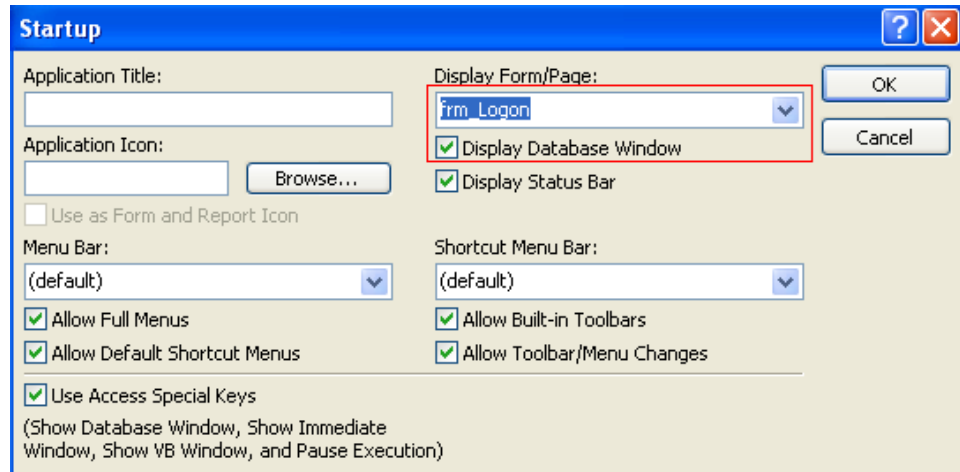
- i. Unlike forms, the security enabled code must be called on your Reports “**On Activate** Event”. The other difference is that the last argument in the SecurityEnabled function is “Report” as the example shows.

1. Example:

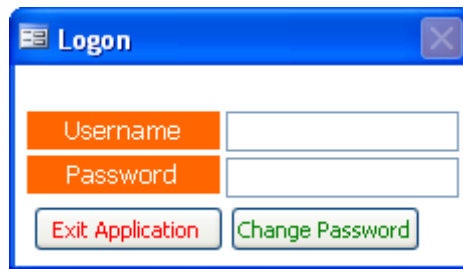
- a. *Call SecurityEnabled(Me.NAME, "Report") ' enable security for this report*

9. Login in for the First Time

- a. Before you login you need to set the application to startup with the login form “frm_Logon”. This is done by simply going to the “TOOLS” menu and selecting “STARTUP”. In Access 2007, go to the Start Button > Access Options tab > Current Database > “Display Form” field (and disable the “Display Navigation Pane” option to prevent users from accessing the objects in the Navigation Pane; may reactivate by F11 key).



- b. On the startup dialog box use the combo box “Display Form/Page” to select the frm_Logon.
- c. Also **uncheck** the “Display Database Window” check box.
- d. Now each time the application is closed and opened back up the following logon form is opened first.



- e. The user can now enter their assigned username and password and press ENTER on the keyboard to gain access to the application.

10. Changing your Password

- a. If users want to change their password they can click on the green change password button on the Logon form and the following change password form will be opened.



- b. Once the correct username and password have been entered. The new password can now be entered and confirmed and the “Close” button is clicked.

11. Related Utilities & Other Steps

This code allows a developer to say what user can gain access to which control on a form. However we still need to stop individuals from getting into your VBA code by changing your .MDB to an .MDE as well as disable the opening of the database by using the Shift Bypass key.

The following two pointers address these two issues.

- a. Converting your .MDB to a .MDE (Removing the source Code)**
 - i. On your database menu go to TOOLS → DATABASE UTILITIES → MAKE MDE FILE.
 - ii. For further information on making and MDE you can look at these web links.
 - 1. [Link](#) 1,
 - 2. [Link](#) 2
- b. Disabling the Shift ByPass Key.**
 - i. This little utility from Rick Hicks will work nicely for this. [Rick's Web Link to the Utility.](#)
 - ii. This is another option for disabling the shift.. [Link](#)