Contents

Instructions for starting up AJS

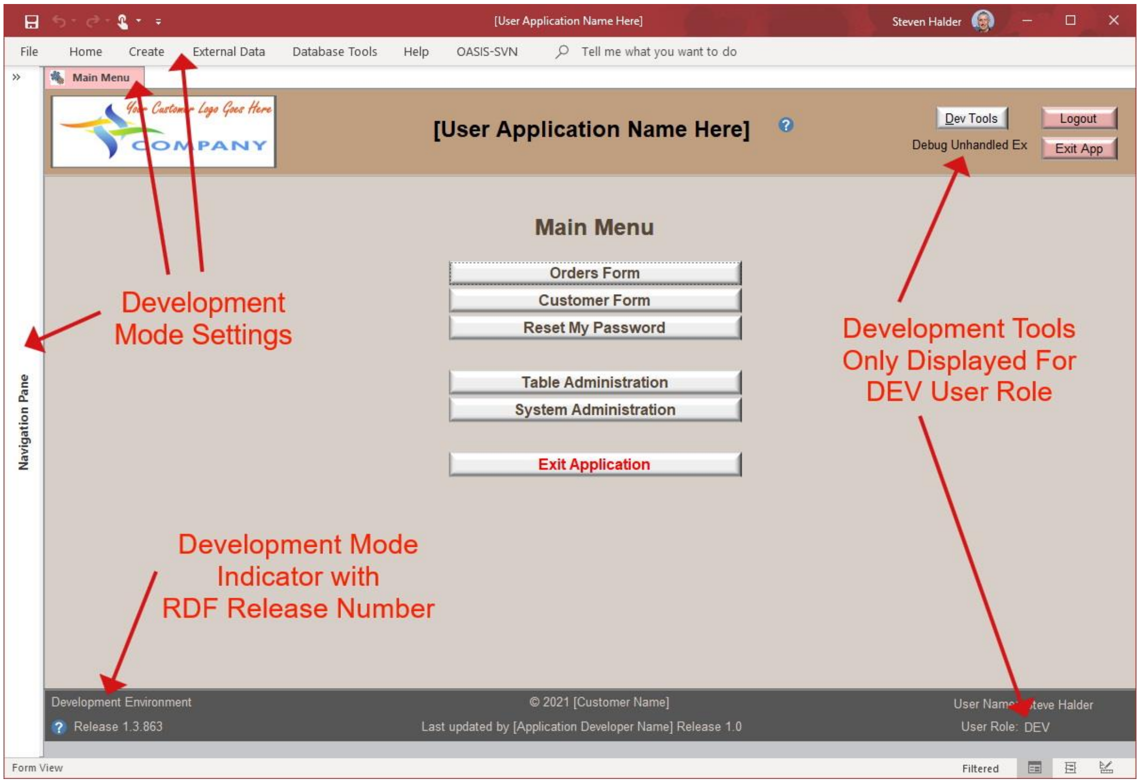
The template consists primarily of three Access files:

- AJS_Library.accdb is the AJS Library (you can convert this to an ".accde" file). This contains most of the AJS content.
- AJS_AppTemplateFE.accdb is the Front End database which is the user interface and template for your application objects. It contains the minimum amount of AJS code needed to interface to the AJS Library.
- AJS_AppDbTemplateBE.accdb is the Back End database, containing shared AJS data tables and your future shared application tables.

Getting started:

1. Unzip the Product package into the working folder you will use to build your application. For example: "C:\MyNewApp"
   - Note that the AJSdocs\ subfolder contains all the AJS documents in PDF format. You can read them via the AJS Developer Tools menu or directly from Windows File Explorer.
2. Start up the AJS_AppTemplateFE database file.
   - AJS will create a user record based on your Windows login and will set it to the "Dev" role. (You will want to change this behavior before deploying your new application).
   - AJS will ask you if you want to create the SessionLogs\ folder. Respond affirmatively. This is where a session log file will be created each time you start up a new Application session. You can write messages to the Session Log from VBA code by using the AJS.PutLog method.
   - Press the "Dev Tools" button in the upper right to open the "Developer Tools Menu" and then press the "AJS Documentation" button
   - Note for your review
     - the Product-Benefits Document,
     - the Release-Notes Document,
     - the Checklist Document and
     - the How-To Document as well as
     - the detailed Reference Documents.
   - Return to the "Developer Tools Menu" and use the "Edit AJS Options" button to view options settings. This is where you set your company name, the customer name, application name, etc. There are also many options to control behavior of your application and specify locations for files and other characteristics.
3. The Main Menu screen display format varies between Development and Production modes. Two screen clips on the following page show both the Development and Production mode interfaces.

Development Mode Screen:



Development Mode Settings

Development Tools Only Displayed For DEV User Role

Development Mode Indicator with RDF Release Number

Development Environment

Release 1.3.863

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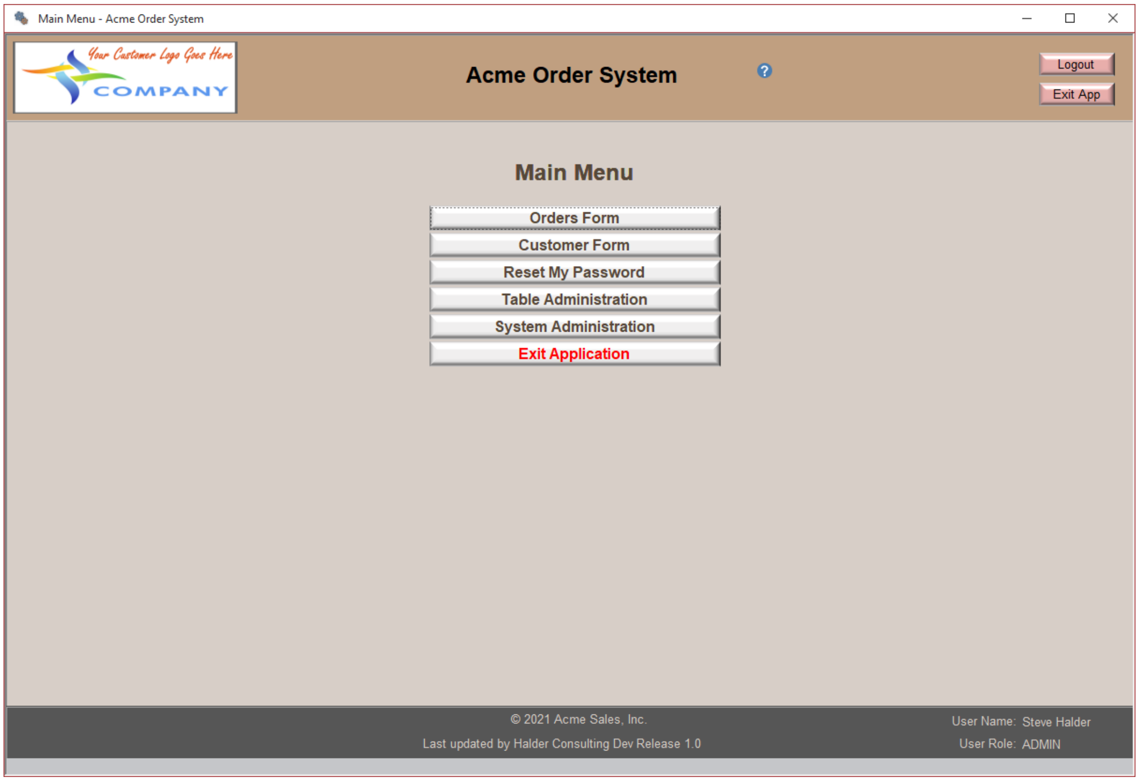
Last updated by [Application Developer Name] Release 1.0

User Name: Steve Halder

User Role: DEV

Production Mode Screen:



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Last updated by Halder Consulting Dev Release 1.0

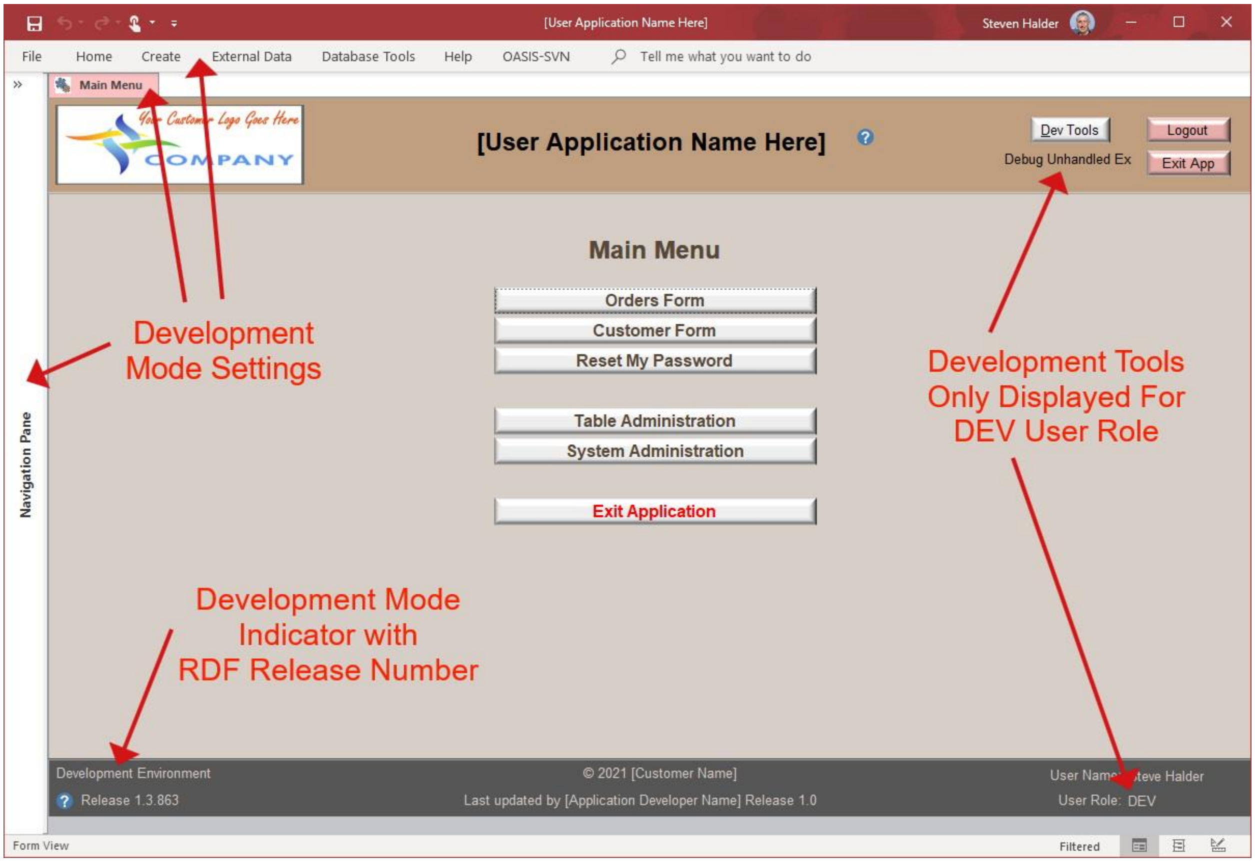
User Name: Steve Halder

User Role: ADMIN

Exploring the AJS template

The Main Menu

1. Development Mode of the Main Menu is presented to you as shown here. The “Dev Tools” button opens the **Developer Tools** menu. This button is only displayed for users who have the “Dev” role, as shown in the lower right corner.



[User Application Name Here]

Debug Unhandled Ex

Development Environment

Release 1.3.863

© 2021 [Customer Name]

Last updated by [Application Developer Name] Release 1.0

User Name: Steve Halder

User Role: DEV

Development Mode Settings

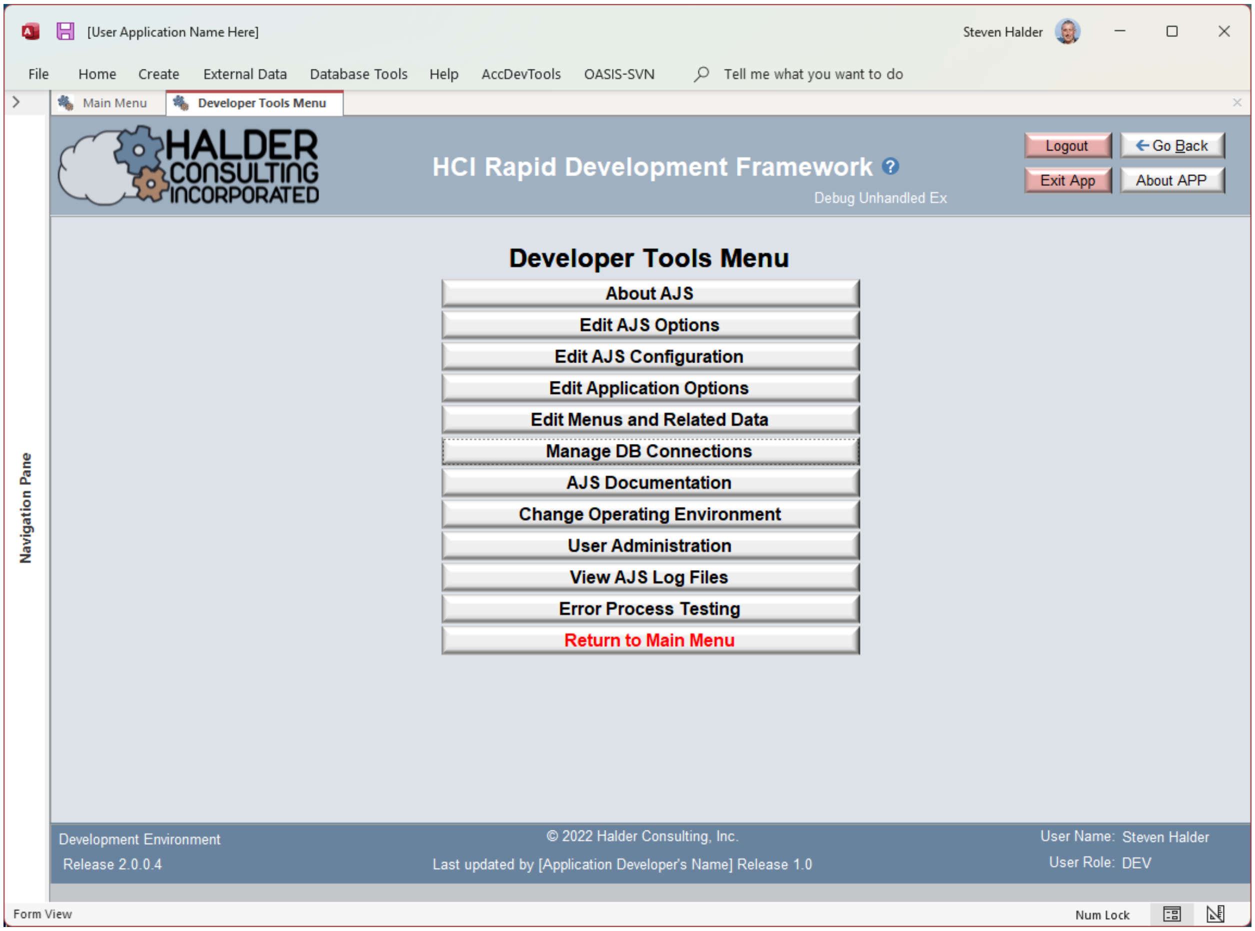
Development Tools Only Displayed For DEV User Role

Development Mode Indicator with RDF Release Number

2. The **System Administration** menu allows you to manage users and process log files. You will probably want to make this visible to the end-user Admin role. You may want to add additional administrative functions for your application here. You can…
   1. Display and modify all authorized User Logins and see who is currently logged in
   2. Edit which user roles can see each application menu item
   3. Import a collection of log files for consolidated review
   4. Display the imported log files for your analysis. Session Start, Session End and Error messages are color coded. This is a split form and you can do multiple filters and sorts.

Developer Tools

1. Open the **Developer Tools** menu to Edit AJS Options, Edit AJS Configuration, Edit Application Options (custom options that you create), Edit Menus (user Role List, Menu Pages, Manage Color Palettes), Manage DB Connections (to named tables in the Back End database), Read/Search AJS Documentation, Change the Operating Environment (Production or Development, Select Debug level), View AJS Log Files (Ingest a collection of files, View a consolidated list with multiple sort and selection options), Error Process Testing (To verify your Debug option setting and vbWatchdog installation are performing as specified).

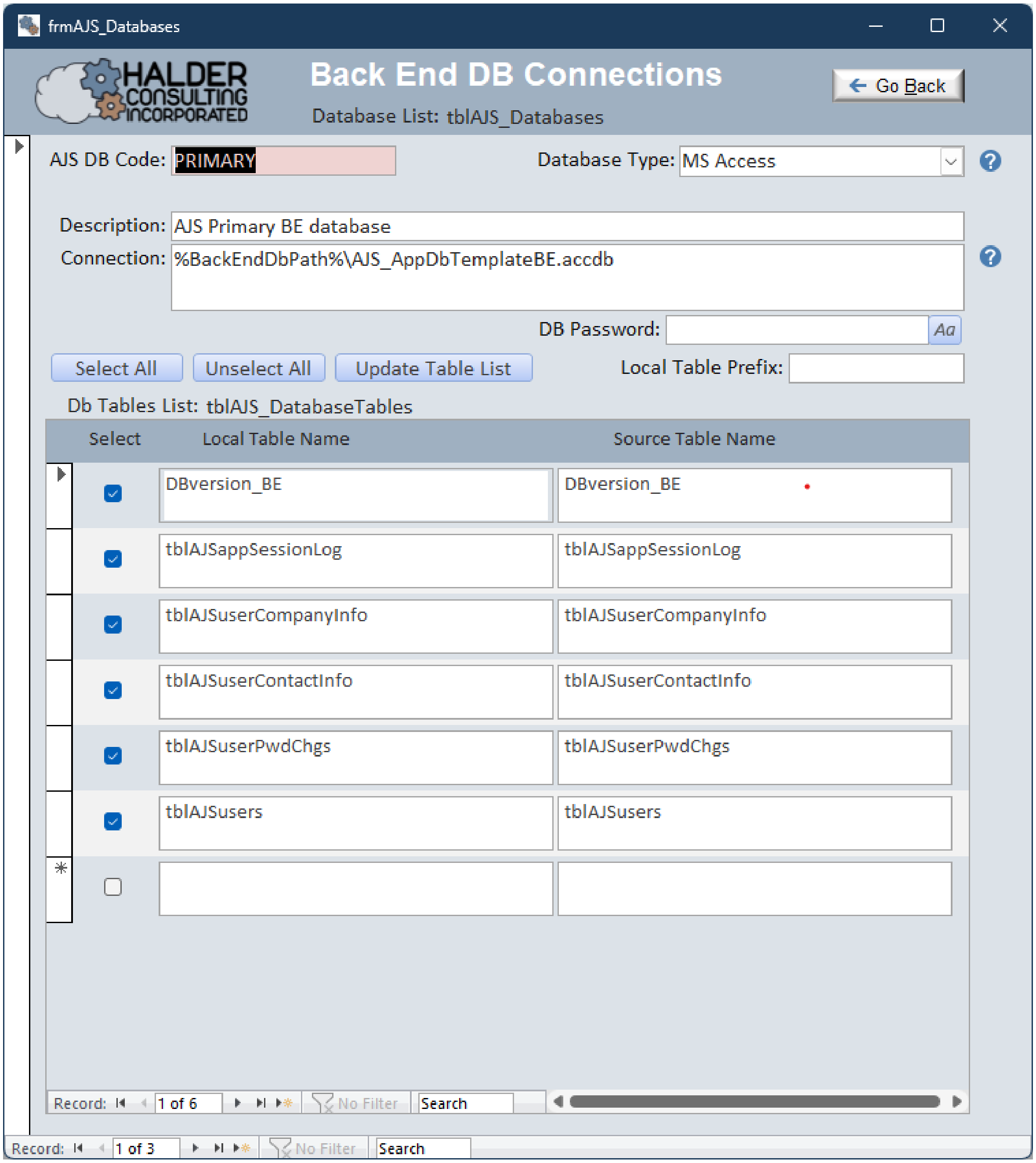


Development Environment
Release 2.0.0.4
© 2022 Halder Consulting, Inc.
Last updated by [Application Developer's Name] Release 1.0
User Name: Steven Halder
User Role: DEV

2. The **AJS Documentation** submenu allows you to read this and other AJS documents, including the **Release-Notes** and **How-To** documents.
3. Select **Edit AJS Options** to view and edit the available AJS options and the current settings. If you have created your own Application Options table, the **Edit Application Options** selection will allow you to create and edit your own option variables and settings. See Appendix C for instructions.
4. You can view which components are enabled by selecting **Edit AJS Configuration**.
   The following settings are the default values:
   - AJS_vbWinst = 0 (The vbWatchdog product is not installed)
5. By selecting **Edit Menus and Related Data** you can view and modify the application menu structure. You can also edit the Valid Roles list and manage Menu Color Palettes.
   1. It includes up to 14 lines per menu and
   2. implements role-based authentication.
   3. Each user will only be able to see the menus and items that are usable by their current assigned Role.

6. The **Change Operating Environment** selection allows you to select the set of Options to be used at startup. You may define multiple Development and Production environment modes. These modes determine the visibility and command options of Access and enable development debugging messages and usage of the *optional* vbWatchdog 3rd-party software error handling dialog when it is installed and enabled.

7. Also, on the tools menu, you can click **Manage DB Connections** to set up and maintain the List(s) of Tables used to link to the Primary Back End database file, and optional Secondary files.



Back End DB Connections

Database List: tblAJS_Databases

AJS DB Code: PRIMARY

Database Type: MS Access

Description: AJS Primary BE database

Connection: %BackEndDbPath%\AJS_AppDbTemplateBE.accdb

DB Password:

Local Table Prefix:

Db Tables List: tblAJS_DatabaseTables

Select	Local Table Name	Source Table Name
☑	DBversion_BE	DBversion_BE
☑	tblAJSappSessionLog	tblAJSappSessionLog
☑	tblAJSuserCompanyInfo	tblAJSuserCompanyInfo
☑	tblAJSuserContactInfo	tblAJSuserContactInfo
☑	tblAJSuserPwdChgs	tblAJSuserPwdChgs
☑	tblAJSusers	tblAJSusers
☐		

Record: 1 of 6 No Filter Search

Record: 1 of 3 No Filter Search

8. The [Database List] and [Db Tables List] tables are specified in the AJS Options table. You can specify multiple pairs of lists. This is useful to set multiple configurations such as Development, Production, etc. You can double-click on one of those Options entries to bring up this editing dialog.
9. Page through the main form to define additional secondary back end database definitions, if desired. Two sample entries are supplied for SQL Server and MySQL options. (Presently the supported database types are Access file, SQL Server, Azure SQL, MySQL, and “Other DB.” The “Other” category may require some changes to the AJS supporting VBA code).
10. The “Update Table List” button will connect to the database and add any additional table names to the Db Tables List. You can Select or Unselect the tables to be connected via the individual checkboxes or the Select buttons.
11. For SQL Server and Azure SQL databases you can specify the default DB Schema name to be used.
12. User ID and Password fields are optional and, if specified, the values are stored in encrypted form and are not visible to end users. The %UID% and %PWD% variables are used to place the actual values in the Connection string to be filled in at runtime.

Note: Presently AJS startup table-relinking logic processes only the PRIMARY DB Code entry and does not automatically process any secondary Back End DB files. You will need to add code as appropriate to drive the linking/relinking process for these secondary databases. AJS routines support this with appropriate parameters. See How to Connect Secondary Back End DB files in the How To Document.

AJS Module Overview

The AJS product includes AJS_Library to implement Framework features and the embedded HCI Access Library (HAL), an independent library of software tools that enhances your Access project development. (By request you may obtain an independent instance of the HAL Library for use without the other AJS components). Your VBA code can interface with all the AJS and HAL functionality (over 95 Methods and Properties) by referencing any of the following Library Class modules (Note that most are "single instance" so you don't need to instantiate an object, except as noted)

Library Modules

AJS_Library container

1. AJS – your primary VBA interface and the core functionality, for example:
    - To write a message to the log file: *AJS.putLog "My message to the log"*
    - To get the current user's Role: *Debug.Print AJS.UserRole*
2. AJSopt – read any option from the AJS options table [tblAJSoptions].
3. AJSmenuHelp – (standard module) menu helper functions used in AJS menus, but you may wish to use them in your menus as well.
4. AJSsysinfo – (standard module) provides system information for splash screens, before AJS initialization. You may also wish to use some of these functions.

HAL_Library container for separate use, also Merged into AJS_Library

1. HAL_Excel – Excel interface (Export to Excel)
2. HAL_FormResizeCls – Process dynamic Form Resizing at run-time
3. HAL_MD5 – Create an MD5 hash of an arbitrary length string.
4. HAL_Outlook – Send email via Outlook
5. HAL_RC4Cls – Provide RC4 string encryption and decryption
6. HAL_TickCounter – Instantiate one or more custom timers with 10ms resolution.
7. HALapp – Wrap Application.Echo method so that status is exposed as properties
8. HALcontrol -
9. HALcontrolOnOffCls -
10. HALdb – Miscellaneous Database interface methods
11. HALfile – utilities to work with external files
12. HALform – utilities to enhance code behind forms
13. HALsys – utilities that interface to the Windows Operating System
14. HALtemp -
15. HALutil – general utilities

Modules in the Front-End file

1. APPopt – you may build your own Application options using this sample code with the sample Application options table [tblAPPoptions]
2. Backend_Upgrades_Sample – This is meant to be manually executed during Application deployment to upgrade the Back-End DB in a Production environment.
3. AJSappSessionUtil – Containing functions specifically designed for you to modify if desired
   - AJSuserOptOverride() – you can modify to initiate specific set(s) of Options Overrides depending upon the execution environment or any other characteristics you desire
   - AJSuserStartup() – for your Application startup code
   - AJS_EnvironmentMode() – you can modify the method used to detect the execution environment as either “Dev” or “Live” production.
   - AJS_PasswordIsValid() – you can change the Valid Password rules as you see fit.
4. AJS_APPversioning – How AJS captures version information from SVN using the OASIS plug-in. You may need to customize the code appropriately if you use source code versioning.
5. Other “AJS” prefixed or “AJS” prefixed modules implement the Rapid Development Framework and so it is best that you do not modify them. If you do make changes to these other modules you will need to rework and retest your changes in future product releases.

For a complete list of the class module properties and methods and regular AJS and HAL modules see the AJS Reference and HAL Reference documents. Also, the class modules display autocomplete lists when selected and the source code contains documentation as well.