

1 Introduction

This is a manual for the installation and use of the database application 'MyDatabasesGlobal'. The program is a Windows application, for creating, loading and manipulating a collection of databases. You are licensed to install this application on one device and to do this you must register the application on the device. Only one database at a time can be manipulated by this application. The application is a multilingual application, with a user interface that can be presented in a variety of languages. The options currently available are English (the default) and German. These options can be selected on either the Splash screen at start up or via the selection presented in the 'Connect' tab.

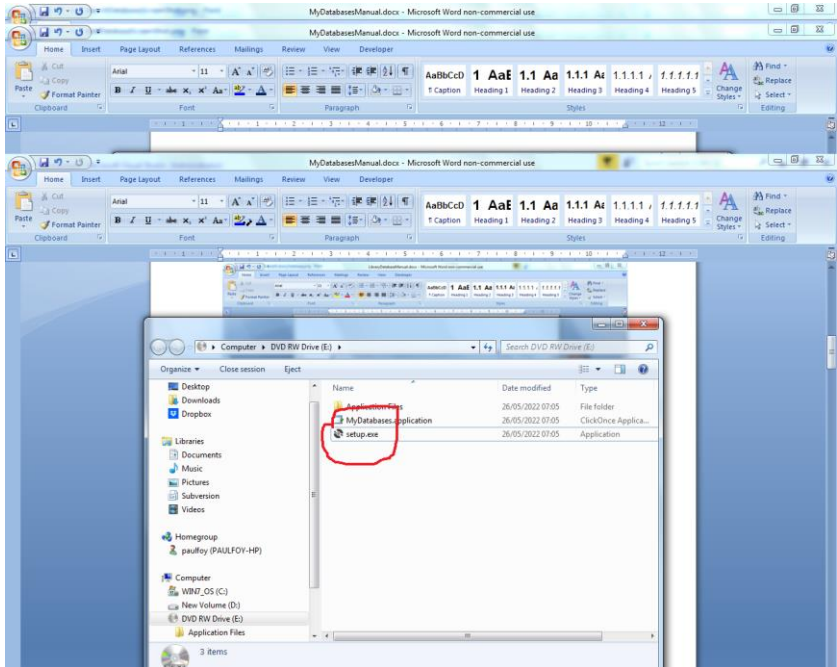
2 Pre-requisites.

1. A PC running Windows 7 or above.
2. A USB stick or optical drive containing the program setup files, together with this manual (available online).
3. An installation of an instance of Microsoft SQL Server.

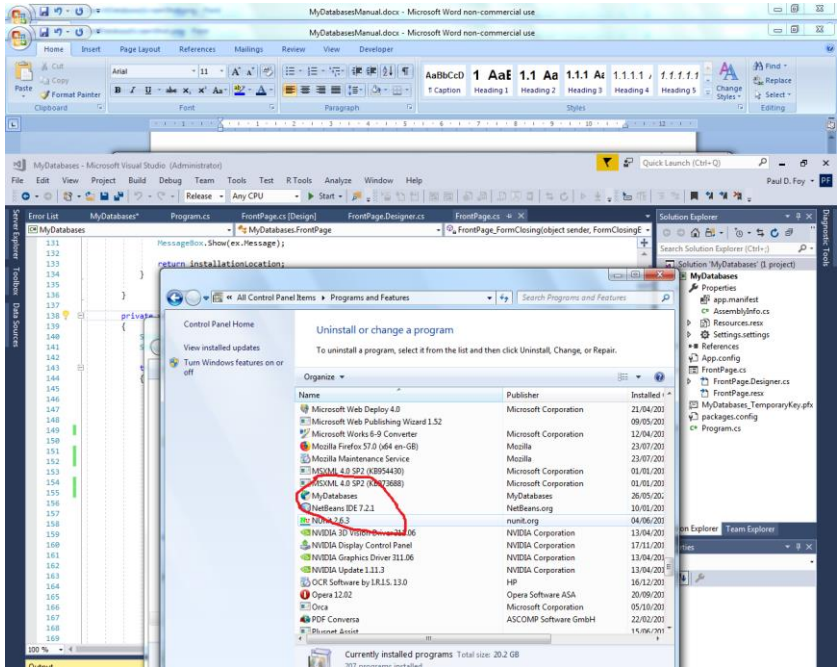
This application is normally installed at the same time that Microsoft SQL Server is installed. It is particularly important to note the name of the Server for the first connection to the Server.

It will be necessary to ensure that Microsoft Sql Server is configured as a Windows service and that it runs automatically when the computer is turned on. Occasionally these services stop and have to be restarted before this application will work. This can be done within this application. Installation/Removal

The application is installed by inserting the supplied stick or disc into the PC and running the 'setup.exe' program on it, or by running this same program from the download obtained. The application was developed on a Windows 11 platform using SQL Server 2019.



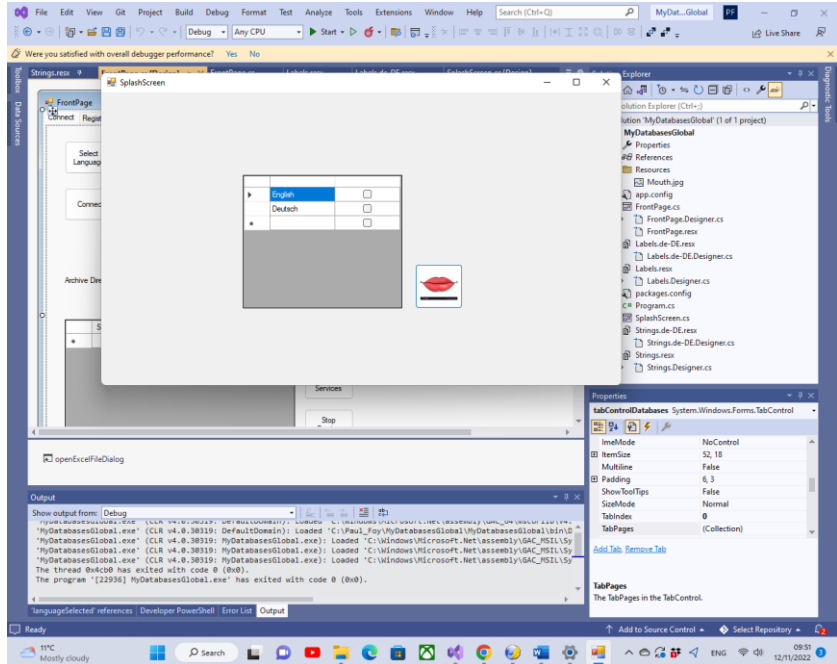
The program can be removed from the PC, by using the 'Program & Features' menu from within Control Panel.



3 Use

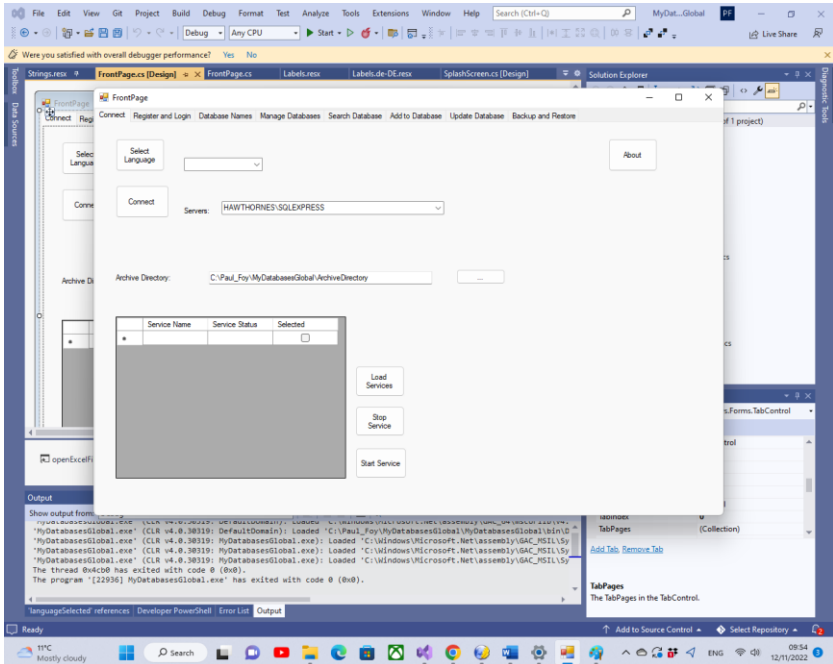
The application has 8 tabs on its main form and a separate Splash screen for selecting the language desired.

3.1 Splash Screen



The button with the mouth icon may be used to select the working language.

3.2 Connect



The functions of the buttons on this tab are:

Select Language: This selects the working language of the application from the options in the combo box. Currently 2 are available: English and German. Once a language has been selected, the user will not be presented with a Splash screen at start-up. A splash screen may be forced at start-up by pressing this button without selecting a language.

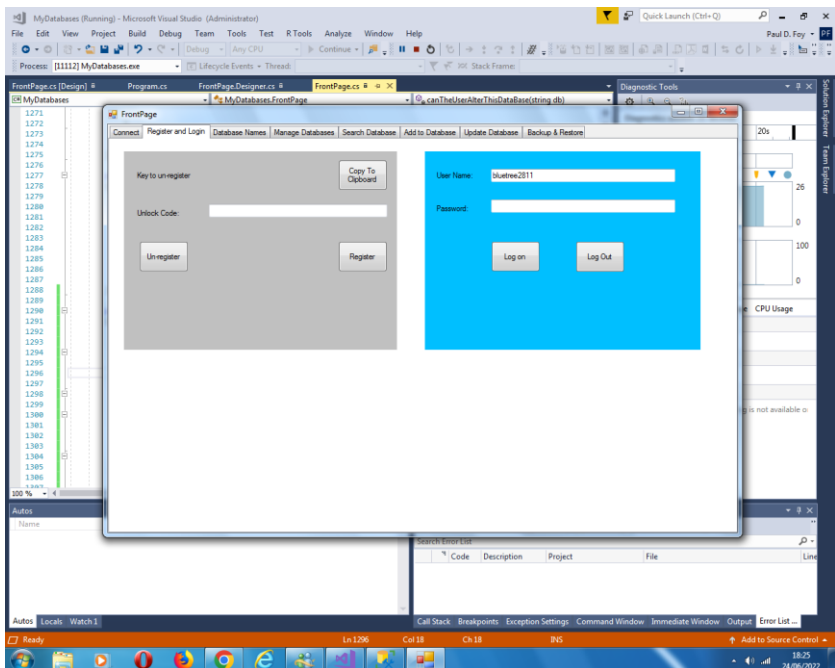
Connect: This button allows you to select the instance of SQL Server that you are using for your databases. The last choice made is automatically presented to you. If this has not been previously chosen you may supply it, either via selecting it, or typing in its name. It is also possible to see information about the software using the 'About' button. You must connect to the

SQL Server using the 'Connect' button. An archive directory, used internally by the program, for storing information about many of the flex grids can be selected. Until a valid archive directory is set by the user the program will not remember databases created. Information about the various SQL services available may be obtained, and then these services may be stopped or started, via the **Load Services**, **Stop Service** and **Start Service** button.

About button – information about the application.

An archive directory for use by the application is normally selected.

3.3 Register and Login



Before this application can be used on a device it must be registered on the device. This is the role of the controls on the left hand panel.

The presented key to register must be sent to 'paulfoy@mathematicalservices.co.uk'. It can be copied using the 'Copy To Clipboard' button. In return you will be sent an unlock code, which is unique to that device. On inserting that into the textbox the application is registered using the 'Register' button.

Sometimes it is necessary to transfer the licence of an application from one device to another (say you have a problem with the hard disc on a PC and it becomes unusable). This application permits that. The process is: Click the 'Un-register' button and send the code displayed in the text box to 'paulfoy@mathematicalservices.co.uk'. The application from that point on will not be able to be used on that device, but can be re-registered on a different device by following the procedure as before.

Only users that have logged in can use this application. This is the role of the right hand panel. To log in it is necessary to supply a valid username and password.

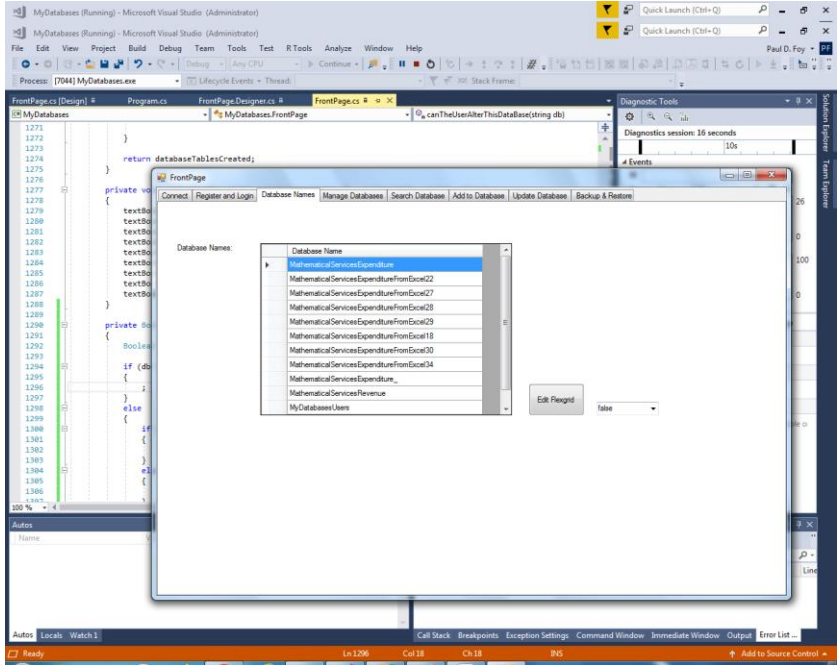
The database of valid usernames and password is called 'MyDatabasesUsers'. It has one table named 'users' with the following columns:

1. username
2. password
3. administrator
4. logintime
5. logouttime
6. createaccesses
7. loadaccesses
8. deleteaccesses
9. addaccesses

10. updateaccess
11. bacupaccesses
12. restoreaccesses
13. searchaccesses
14. guid
15. dateOfEntry

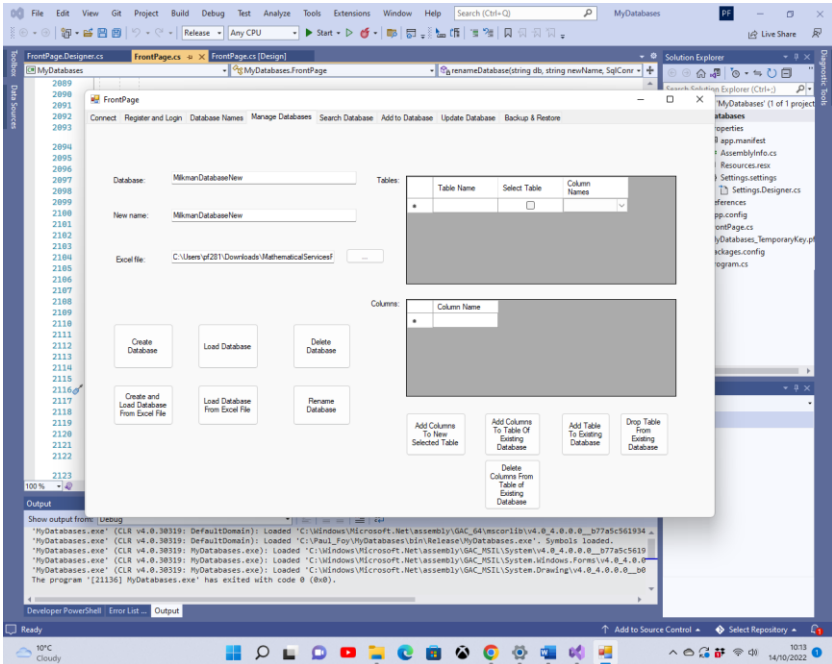
The names of these columns are self-explanatory and are used to log what operations have been performed by the current user between logging in and logging out. Column 3 determines whether the current user is an administrator or not. It is a string which can have only the values 'yes' or 'no', depending upon whether the user is an administrator or not respectively. Only an administrator can load and perform operations on the 'MyDatabaseUsers' database. Thus only an administrator can control which users have access to this application. This database itself is loaded upon the first invocation of this application, when one entry is added having username 'admin' and password 'admin' and administrator being set to 'yes'. Thus, this user and this user only can begin to use the application and to set things up, including establishing other users.

3.4 Database Names



This tab lists the databases created by and available to this application. Only databases listed here can be loaded and manipulated by this application. The 'MyDatabaseUsers' database is not listed here. It is possible for an administrator to edit this flexgrid, for reasons beyond the control of this application.

3.5 Manage Databases



This tab allows you to manipulate a database, its tables and their columns: There various buttons behave as follows:

Create Database: Allows the creation of a new database. The tables of the database are listed in the 'Tables' flex grid. To add the columns to a table, prior to creating a database, list the columns in the 'Columns' flex grid and press the '**Add Columns To New Selected Table**' button. Once this is done for each table of the database, the database can be created.

One of the distinguishing features of this application is that each record of a table is unique and distinguished by its GUID. This GUID is supplied by the application, upon creation of the database, and cannot be selected by the user. Its sole purpose is to maintain the unique identity of each record of the table.

This permits, for example, the inclusion of two or more copies of the same book, which are identical in all respects (i.e., other fields) apart from the GUID. Each record is also labelled with the date on which it was created. This date is supplied by the application and cannot be selected by the user.

Load Database: A database previously created by this application may be loaded. The table and columns of the database appear in the 'Tables' flexgrid. Only databases created by this application can be loaded.

Delete Database: An existing database may be deleted provided it is not being used. Only databases created by this application may be deleted. You should be careful using this button as all records will be permanently deleted, including backup records.

Rename Database: A loaded database, with a name of the upper text box is renamed with a name of the middle text box. All data and names within the database remain unaltered.

Add Columns To Table Of Existing Database: The columns specified in the 'Columns' flexgrid may be added to an existing table of an existing database in the 'Tables' flexgrid. Only different column names may be added.

Add Table To Existing Database: A new table may be added to an existing database using this button. The table is constructed as when creating a database from scratch.

Drop Table From Existing Database: An existing table and its columns may be deleted from an existing database using this button.

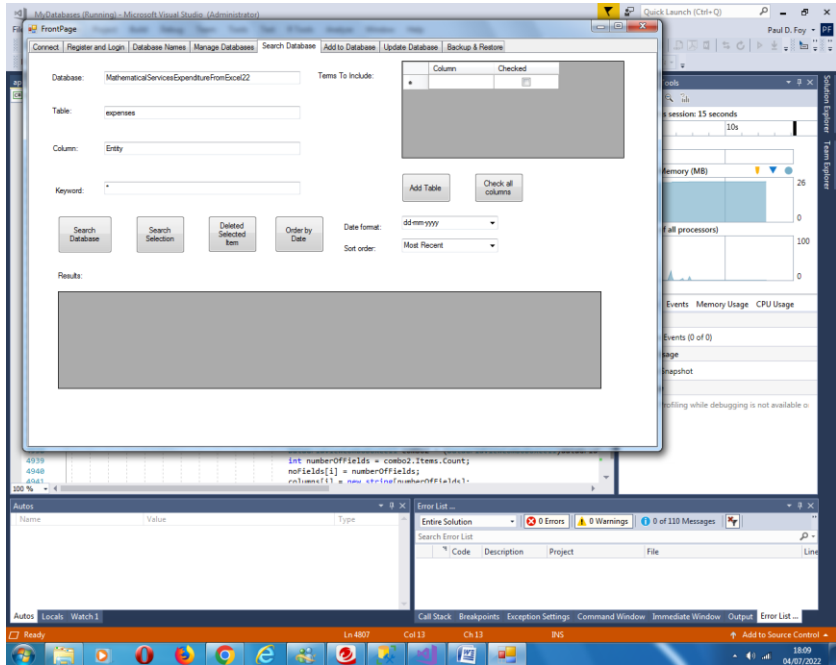
Delete Columns From Table Of Existing Database: The columns specified in the 'Columns' flex grid may be deleted from an existing table of a database.

Create and Load Database From Excel File: A database with the name specified in the top textbox is created by loading the Excel file specified. Only the name of a database which has not been created before can be newly created in this way. If there is a name of a database which has been created before by this application, then it must be loaded via the button '**Load Database**'. The sheets of the Excel file must not contain a column labelled 'guid' or 'dateOfEntry'. The tables of the database are the worksheets of the workbook, with their names. Each record of the database is a line of a worksheet. The first line of the worksheet has to be specified as being the name of each column in a table.

Load Database From Excel File: A database with the name specified in the top textbox is created and loaded from the Excel file specified. The tables of the loaded database are the worksheets of the workbook, with their names. Each record of the database is a line of a worksheet. This Excel file is one that has been used to export a previous database, created by this application. The name specified for this database must not be that of one previously created by this application. Hence each record will contain the reserved column names 'guid' and 'dateOfEntry'.

Note, that for all these operations names must begin with a letter.

3.6 Search



This tab allows you to search via a key word from a column within a table within a database. The results of the search are displayed. The buttons features are:

Search Database: Search the column of the table of the database specified by the keyword specified. If the wildcard character '*' is specified all records are displayed.

Search Selection: In the same way it is possible to search from within the 'Results' flexgrid.

Delete Selected Items: Deletes the records selected.

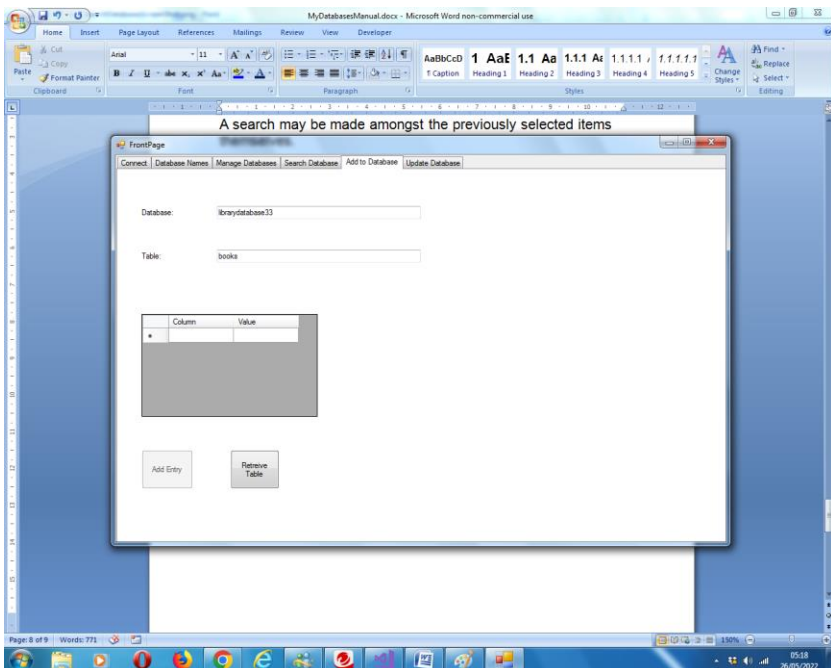
Order By Date: Orders the records of the 'Results' flex grid, according to date. The order may be least or most recent. Various date formats may be used for the date.

Add Table: Adds the specified table to the 'Terms to Include' flex grid. Terms to include in the 'Results' flex grid may then be selected, either individually or all at once using the '**Check all Columns**' button.

Each record is distinguished by (i) a unique Global Identification Number (Guid) and (ii) The date and time of creation, both provided on creation of the record. It is not possible to alter these two fields. They are automatically displayed in the 'Results' flex grid. A selected record may be updated on a subsequent tab.

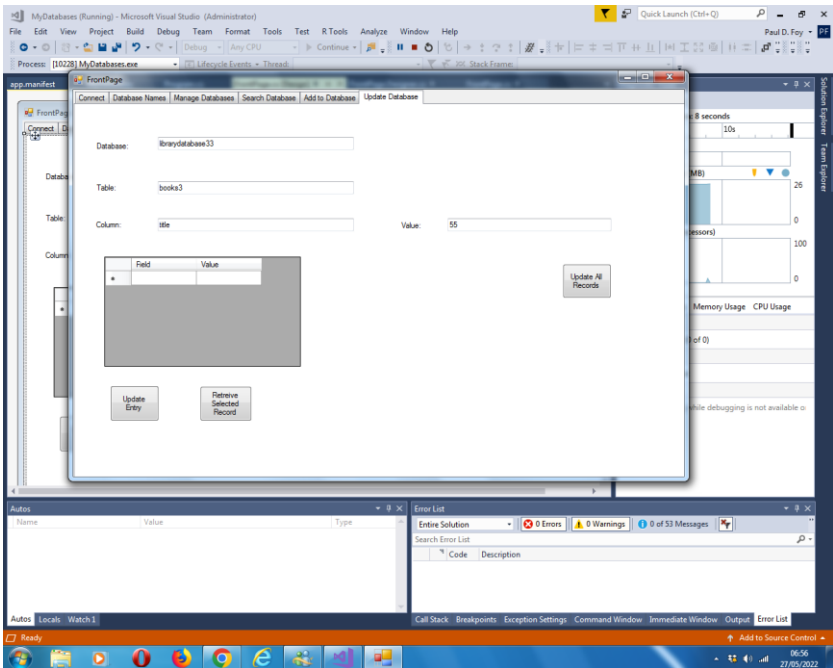
A search may be made amongst the previously selected items themselves.

3.7 Add



This tab allows an entry to be added to a table of the selected database. A Guid will be assigned automatically. Once a Guid has been assigned it exists for the lifetime of that record irrespective to any other alterations to the other fields. The date and time of creation will also be assigned automatically. It is not possible to subsequently change this either.

3.8 Update

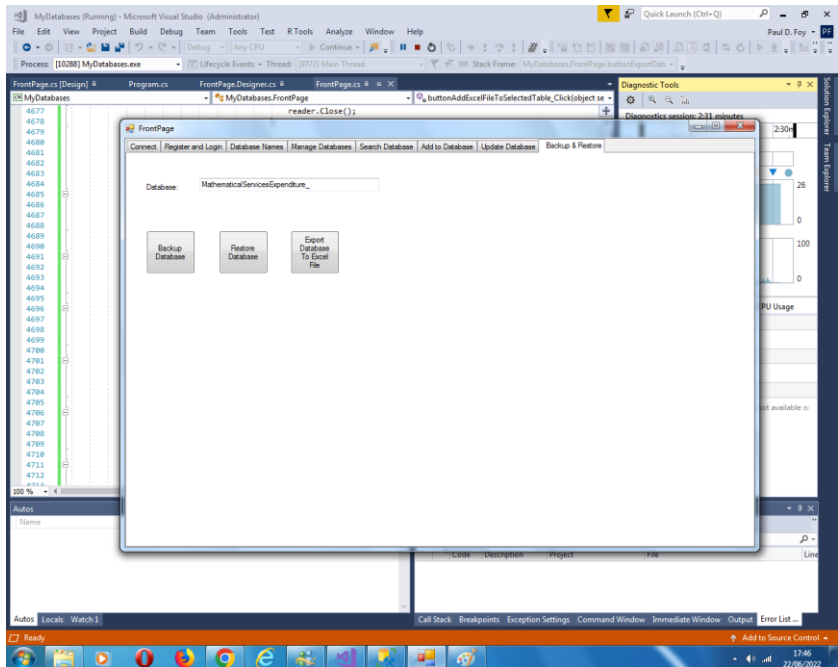


This tab allows 2 operations to be performed:

(1) an entry selected on the 'Search' tab can be retrieved and updated corresponding to the table searched for (or provided on this tab - they must be the same). It is not possible to alter the 'guid' and 'dateOfEntry' column values.

(2) A value can be assigned to the column of all records in the table, except the two reserved ones - this is the function of the right hand button on the tab.

3.9 Backup and Restore



Backup Database:

It is possible to back up the entire contents of a previously loaded database. The backup is stored in the supplied archive directory with a filename which is the database name supplied in the text box and an extension of ‘.bak’.

Restore Database:

It is possible to restore a previously backed up database, with a name that of in the textbox. The database name is added to the database names flex grid on another tab.

Export Database To Excel File:

It is also possible to export a database to an Excel file. The name of the Excel file is the database file with the extension '.xlsx'. Any existing Excel file with this filename and extension is overwritten. The file is stored in the archive directory specified on the Setup tab. If a file does not exist it is created, and if it exists it is overwritten.

Paul D. Foy
Mathematical Services Limited

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