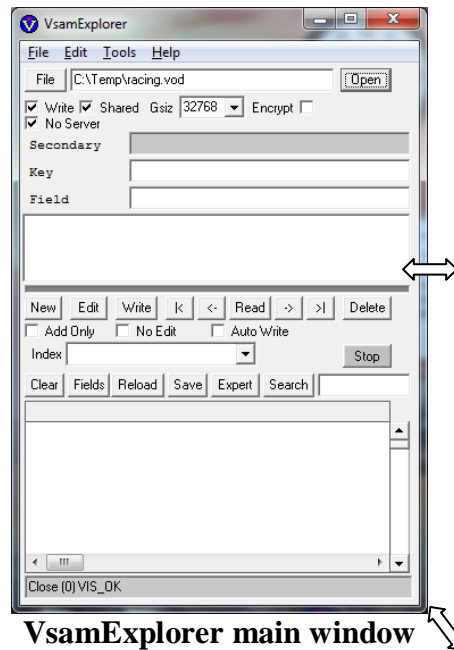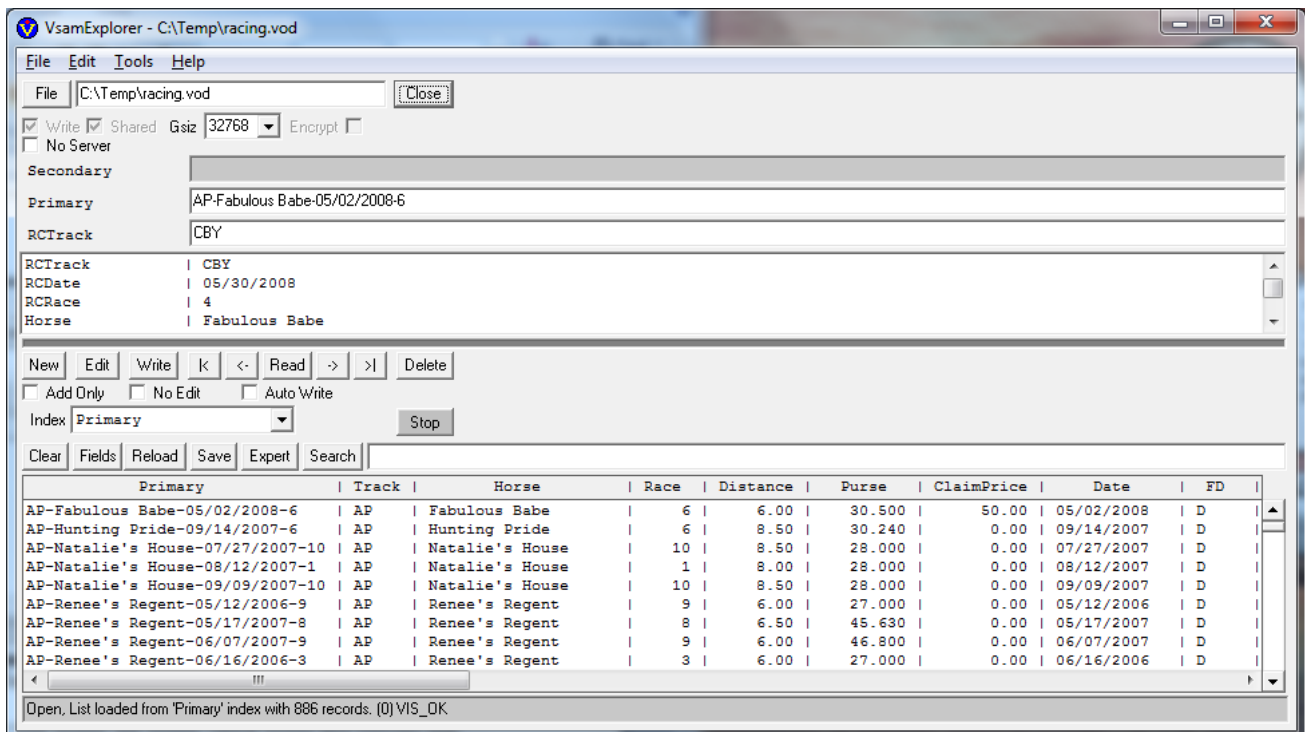# VsamExplorer Users Guide

VsamExplorer may be used for creating and maintaining VsamEx databases. It will perform simple selection and reporting using any VsamEx[treme] database.
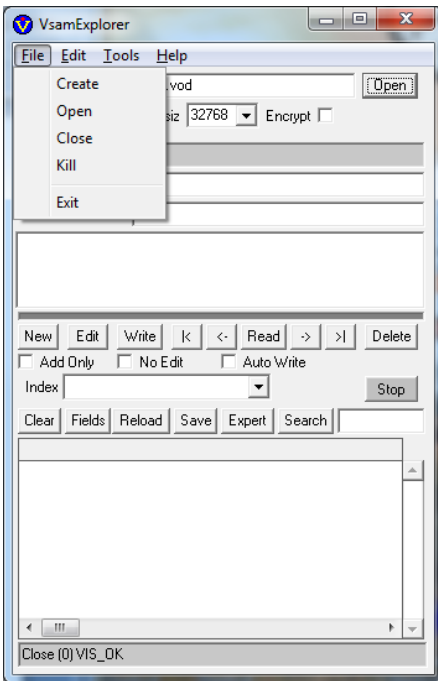


**VsamExplorer main window**

The main window has a menu, some text boxes, list boxes, check boxes and buttons that can be used to control its activities. The Main Window is sizable and can be changed to create a better view of large datasets.
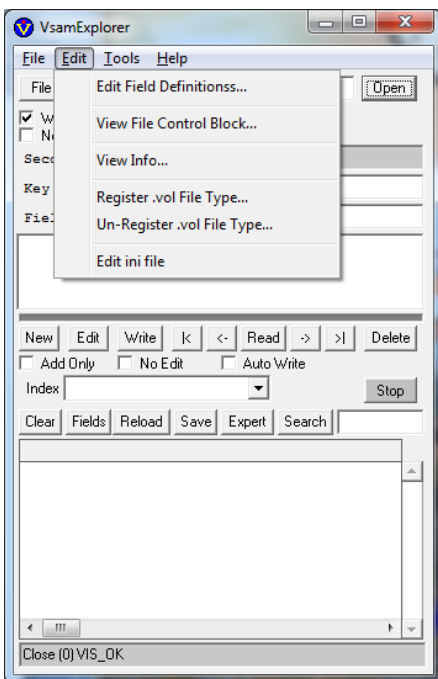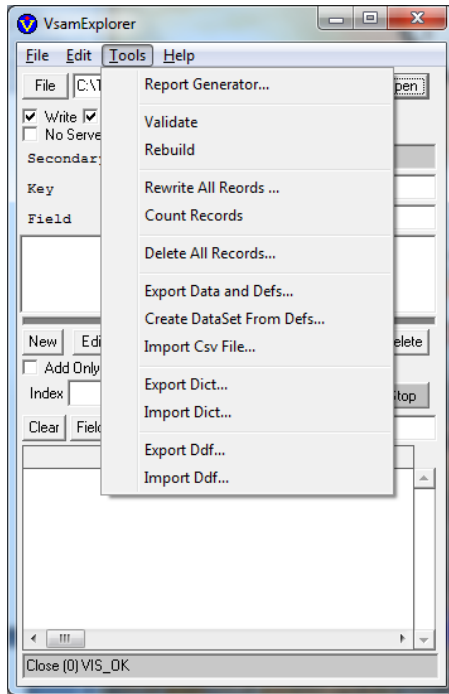
**MENUS:**



**File**

| | |
|---|---|
| Create | Create a new database |
| Open | Open an existing database |
| Close | Close an open database |
| Kill | Kill (delete) a database |
| Exit | Exit the VsamExplorer |



**Edit**

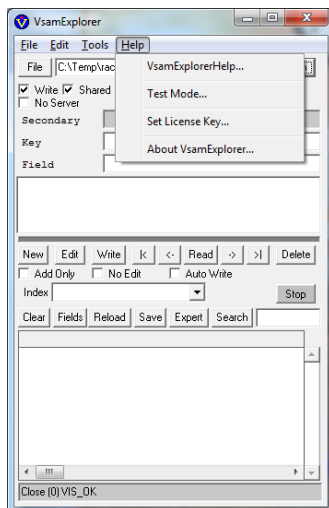| | |
|---|---|
| Edit Field Definitions… | To add, modify or delete field definitions |
| View File Control Block | Details file stats and field definitions |
| View Info… | View a shorter Info screen |
| Register .vol file type | So when you click on a .vol file it will launch The VsamExplorer |
| Unregister .vol file type | Reverse of Register |
| Edit ini File | Edit VsamExplorer parameter file |

<table>
<tr><td colspan="2" align="center"><strong><u>Tools</u></strong></td></tr>
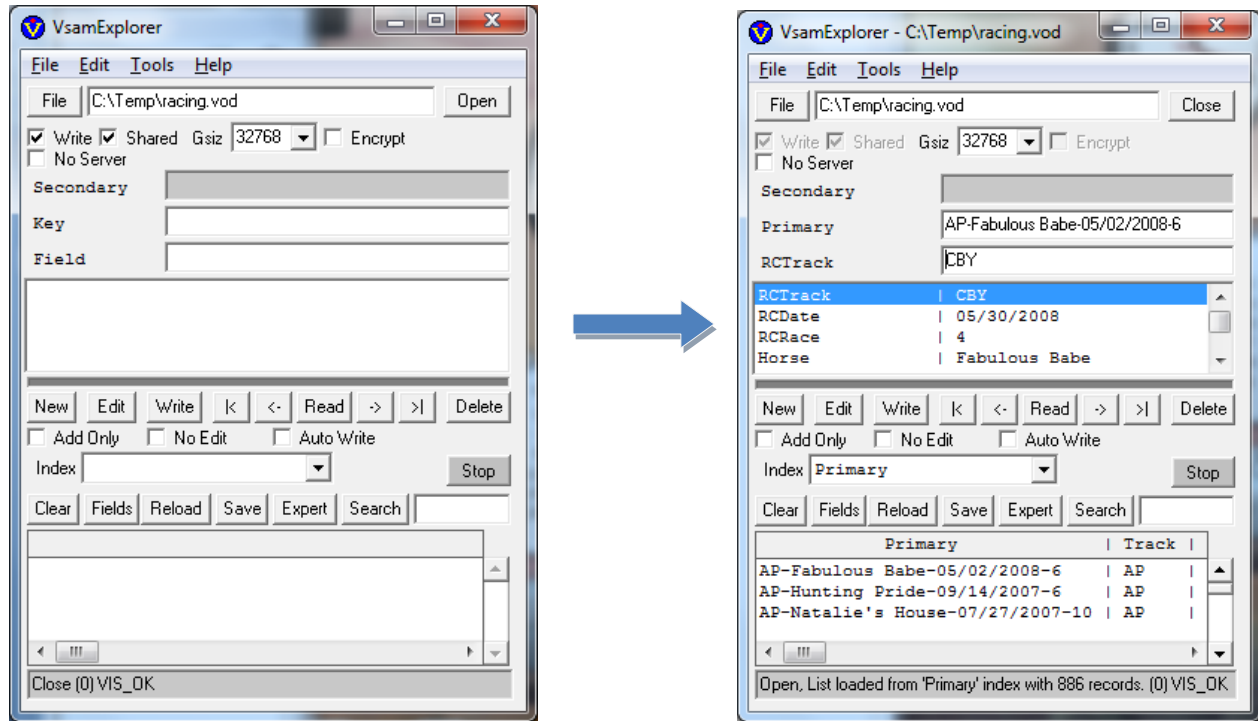<tr><td>Report Generator</td><td>Launch the VsamEx Report Generator</td></tr>
<tr><td>Validate</td><td>Verify integrity of a database</td></tr>
<tr><td>Rebuild</td><td>Rebuild a database including the dataset map</td></tr>
<tr><td>Rewrite All</td><td>Read ad write all records</td></tr>
<tr><td>Count Records</td><td>Count records in database</td></tr>
<tr><td>Delete All Records</td><td>Delete all records in database</td></tr>
<tr><td>Export Data and Defs</td><td>Export records from database and field definitions</td></tr>
<tr><td>Create Dataset from Defs</td><td>Create a Dataset from the Data Definitions</td></tr>
<tr><td>Import a CSV File</td><td>Import a Comma Separated Value type file</td></tr>
<tr><td>Export Dict</td><td>Export Data Definitions</td></tr>
<tr><td>Import Dict</td><td>Import Data Definitions</td></tr>
<tr><td>Export DDF</td><td>Export a DDF File</td></tr>
<tr><td>Import DDF</td><td>Import DDF File</td></tr>
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<table>
<tr><td colspan="2" align="center"><strong><u>Help</u></strong></td></tr>
<tr><td>VsamExplorer Help</td><td>Help on using the VsamExplorer</td></tr>
<tr><td>Test Mode</td><td>Allows creation, loading and testing a test dataset</td></tr>
<tr><td>Set License Key</td><td>I set a valid License Key into the VsamExplorer</td></tr>
<tr><td>About VsamExplorer</td><td>Normal application About box</td></tr>
</table>

The **File** button will open a file selection dialog box to browse for and select a VsamEx dataset to open. The **Open** button will toggle between "**Open**" and "**Close**" to alternatively open and close the selected dataset.

Below the file name there are check boxes for **Write** and **Shared**.  These set the operational mode for the open dataset. If the **Shared** checkbox is not checked, **the Report List/ Select** will not display any data.
The check box "**No Server**" should be checked unless you are using Vservice for accessing a dataset.

On the same line there is a text box for **Gsiz** and a check box for **Encrypt**.  The **Gsiz** box is to set the internal group size of a new database. This value should be a multiple of 1024 and the maximum size is 32768.  The maximum sized group allows VsamEx to achieve the largest possible dataset (2.1 GB). The **Encrypt** checkbox will make a text box visible to enter an encryption Key.  This Key will be used when creating or opening an encrypted database. Data entered into the encryption box will be masked with the "*" character. The Key will be used to enable SHA encryption of all data in the dataset. The only way to view or open the dataset with encryption is to use the identical Key that was used to encrypt the dataset. The maximum length key is 250 characters.

There are three text boxes labeled **Secondary**, **Key**, and **Field.** These track the **Secondary** Key of an indexed field and the records Primary record **Key** of the current record being displayed. The labels next to the text boxes will change to reflect the name of the field the text boxes are currently holding.

Next, below the **Field** text box, is the record list box that will contain all of the fields of the open database, with the Field Name on the left, a "|" character, and the field contents on the right. *Notice that the Highlighted field also shows above the record list box, with the field name displayed instead of "Field".*

Below the record list box is a row of buttons used to manipulate the data set one record at a time.
- New          prompt for data for a new record
- Edit          Press it to prompt for data for each fields in the current record
- Write          write record that is in record listbox
- |<          read first record
- <-          read previous record
- Read          read record whose key is in the key text box
- ->          read the next record
- >|          read the last record
- Delete          delete the record whose key is in the key text box

Below the manipulation buttons are three check boxes; **Add Only** prevents the system from overwriting an existing record**. No Edit** will not allow the contents record to be over-written. **Auto Write** automatically updates records when they change for any reason.

On the next line is the **Index** combo box.  It is used to select the indexed field to be used by the navigation buttons on the line above. This is one of the fields specified as a secondary index.

On the right is the **Stop** button.  It is used to stop a long operation like **Search**, **Add**, **Read** or **Load** below.

The next line starts with the **Clear** button on the left.  It is used to clear the selection list box that is below it.

Next to the **Clear** button is the **Fields** button.  It is used to change which fields are in the display.

To the right of the **Field** button is the **Reload** button used to reload the selection list box below..
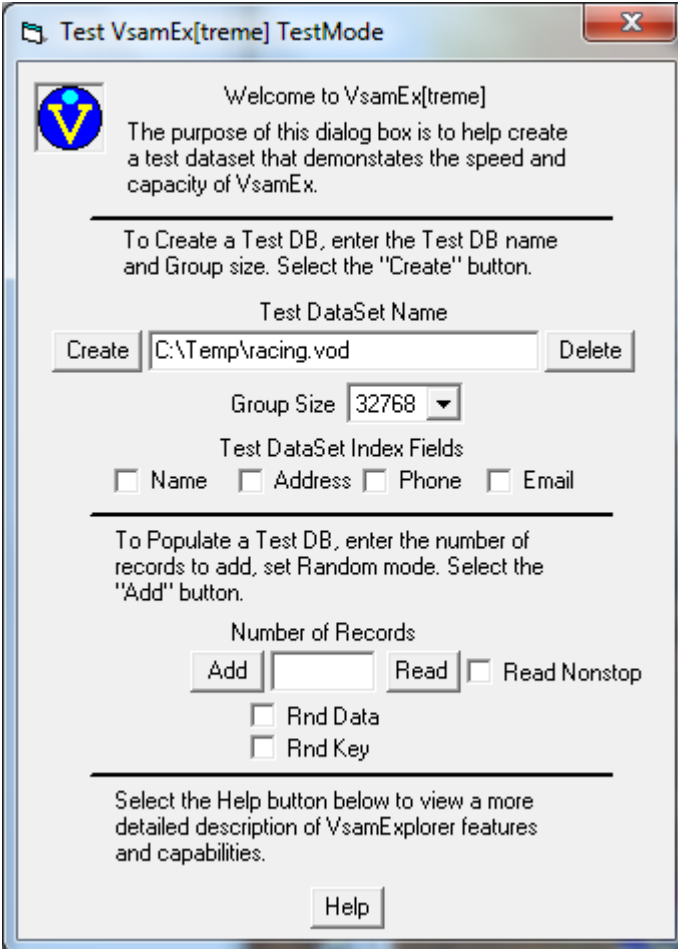
**Save** the latest Search Results as a Dynaset (a separate VsamEx dataset).

**Expert** shows an expert helper dialog box for entering complex search criteria.

**Search** button.  Press it to perform the search requested in the search text box to the right.

The next section down is the selection list box followed by a Status window that displays the results of most operations, success, failure, etc.

When the Test Mode under the Help menu item is selected, an additional dialog box is opened that provides useful tools for testing VsamEx.



Testing relies on the structure of the database to be built with the **Create** button on this dialog box. You can select Name, Address Phone and Email fields to be created and populated with data, either sequential or random using the **Rnd Data** & **Rnd Key** check boxes.

The **Add** and **Read** buttons will add or read records in the test database. The text box between the **Add** and **Read** buttons can hold a count to tell **Add** or **Read** how many records to operate on. If no number is given they will run until the dataset is full or the "**Stop**" button on the main menu is selected.

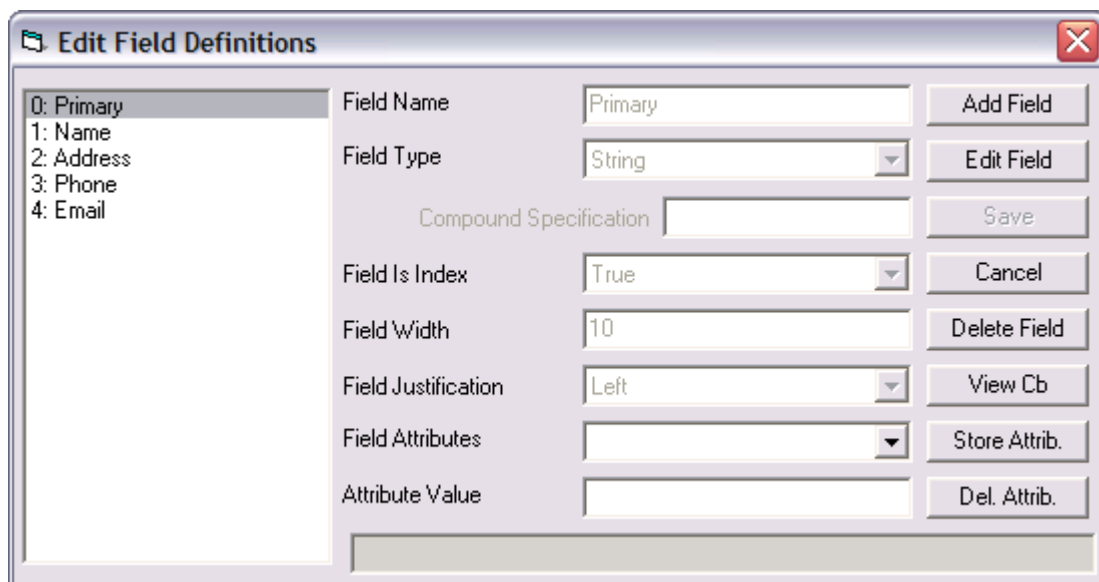The following is a guide to using some of the above features:

**Create VsamEx database:**

To create a new VsamEx database, enter the path and base name of the new database in the text box to the right of **File** on the main window. Another setting you can alter is **Gsiz**, which you might want to increase if you anticipate having more than 100 MB of data in the database. Another is **Encrypt** if you feel that the data in the database is sensitive enough that it would benefit by encrypting it. If you check the **Encrypt** checkbox a field to enter the database password will appear.

Then go to the **File** menu and select **Create**. This will create an empty VsamEx database. There will be only one field defined, the Primary key with the name **Primary**.

Records in a database consist of the Primary key and other fields you add to the Database Definition Fields must be given unique names. The Primary key, which you may rename, is always string data. Other fields can be any of String, Integer (16 bit), Long (32 bit), Single (32 bit floating point), Double (64 bit floating point), and Currency (64 bit scaled integer). String fields may be defined as Indexes to allow faster access to data. You should refer to the VsamEx[treme] Reference Manual for details.

To add fields to the database you must first open it. Go to the **File** menu and select **Open**. Then go to the **Edit** menu and select **Edit Field Definitions…** This will bring up the **Edit Fields Definitions** dialog.



**Edit Field Definitions Dialog**

With the Edit Field Definitions dialog you can:
- Add Fields
- Edit Field Definitions
- Delete Fields
- View Database Definition Control Block

**ADD A FIELD:**

To **Add** a field press the **Add Field** button. You then enter a unique **Field Name** for the new field. You can set the **Field Type** to one of the supported data types. If the field is to be a **String** you may specify that it is to be used as an **Index**. Two other attributes are useful for display purposes, the **Field Width** and **Field Justification**.

Once the selections have been make press the **Save** button to add the field. If there are no errors the field will be added to the database and the field name will be added to the field list on the left of the dialog box.
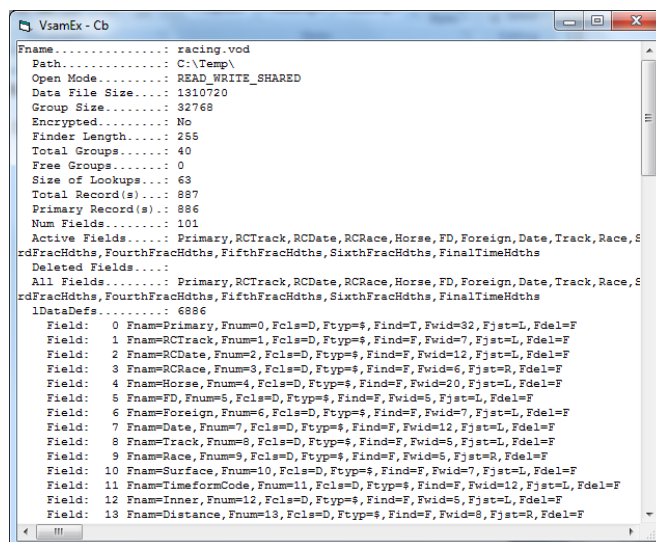
**EDIT A FIELD DEFINITION:**

To **Edit** a field definition select the name of the field to be edited from the list on the left and press the **Edit Field** button. You can then make changes to the field attributes that are enabled. You cannot change the **Field Type** but you can change the **Field Name**, **Field Width**, and **Field Justification**. If the **Field Type** is **String** you can change the **Field Is Index** attribute.

**DELETE A FIELD:**

To **Delete** a field definition select the name of the field to be deleted from the list on the left and press **Delete Field**. You will be prompted to confirm that you want to delete the field. Press **Yes** to delete it or **No** to not delete it. If you replay Yes the field name in the list on the left will have '(del)' appended to it to show that the field has been deleted. You can Un-Delete any field that has been deleted. When a records written to the database it will not have data for any deleted fields. The deleted fields will continue to appear in the field list, with the '(del)', until the database is rebuilt.

**VIEW DATA DEFINITIONS CONTROL BLOCK:**

Press the **View Cb** button to view the Data Definitions Control Block.



**Data Definitions Control Block**

**ADD RECORDS TO DATABASE:**

Records can be added to an open database easily.

If the primary keys of the database are numeric, just press the **New** button and the next higher key will be generated and put in the **Primary Key** text box.

If the primary keys are not to be numeric you can type the key into the **Primary Key** text box. To make sure you don't inadvertently overwrite an existing record you can check the **Add Only** check box. With this checked the **Write** button will not replace an existing record.

After the key is in place, the name of the first field will be in the **Field Name** label to the left of the **Field Data** text box. Type the contents of the named field into the text box and press **Enter**. The text you entered will be stored in the **Record** list box and the name of the next field will be put in the **Field Name** label and the focus will be put in the **Field Data** text box. Continue until all data for the record has been entered.

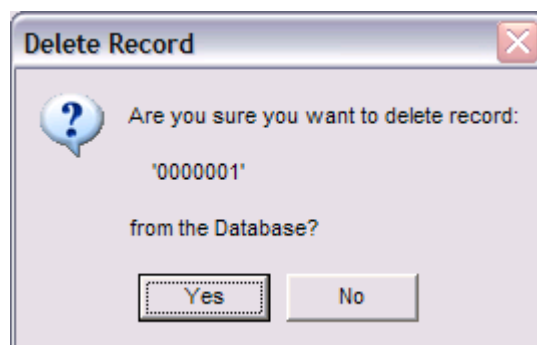To write the record into the database, press the **Write** button.

**EDIT EXISTING RECORDS:**

To edit an existing record that is displayed in the **Record** list box press the **Edit** button. The first field in the record will be put in the **Field Name** and **Field Data** controls. You can just press enter to leave the data in each field unchanged. You can type changed data into fields as they appear in the **Field** controls. To get to a particular field more quickly you can click on it in the **Record** list box.

To write the changed record to the database, press the **Write** button.

**DELETE A RECORD:**

The Delete button will delete the record who's key appears in the **Primary Key** text box. You will be prompted to as if you really want to delete the record.

Delete Record

? Are you sure you want to delete record:

'0000001'

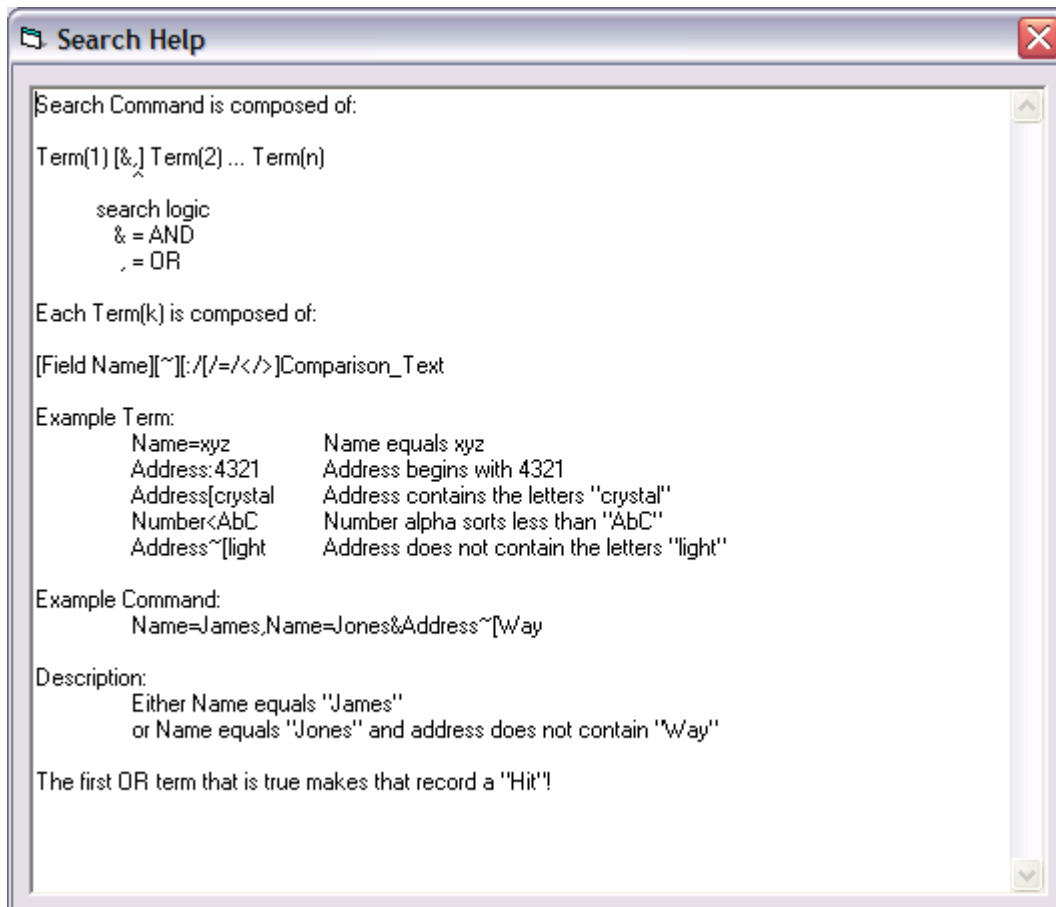from the Database?

Yes    No

**Delete Record Dialog Box**

**NAVIGATING THROUGH THE DATABASE:**

There are several ways to navigate through the records in a database.

You can use the VCR like controls to move through the database.

You can enter the key of the record you want to view into the **Primary Key** text box and press the **Read** button. If the key is not found, the Dataset pointer is positioned such that if you press the **Next** button ( ->), The next record will be read as if there were a record starting with the Key you entered.

You can also enter a Search command in the **Search** text box and press the **Search** button. The list of selected primary keys will be loaded into the **Select** list box. If you double click on a key in the **Select** list box the record will be loaded in the **Record** list box.

```
Search Help                                                    X

Search Command is composed of:

Term(1) [&,] Term(2) ... Term(n)
            ^
        search logic
          & = AND
          , = OR

Each Term(k) is composed of:

[Field Name][~][:/[/=/</>]Comparison_Text

Example Term:
        Name=xyz          Name equals xyz
        Address:4321      Address begins with 4321
        Address[crystal   Address contains the letters "crystal"
        Number<AbC        Number alpha sorts less than "AbC"
        Address~[light    Address does not contain the letters "light"

Example Command:
        Name=James,Name=Jones&Address~[Way

Description:
        Either Name equals "James"
        or Name equals "Jones" and address does not contain "Way"

The first OR term that is true makes that record a "Hit"!
```

**Search Help Screen**

**CREATE A SIMPLE REPORT:**

You can create simple reports by going to the **Report Generator** menu selection under the **Tools** top level menu.

**Report Generator Screen**

In the above example all fields have been selected and a heading has been specified. The resulting report is shown below:



**Text Report**

You can also create a report as a web page:

**Select: Address[7090**

| Address | Phone | Email | Primary | Name |
|---|---|---|---|---|
| Address-7090378 | Phone-0453527 | Email-4140326 | 0000003 | Name-8144900 |
| Address-7090579 | Phone-4564254 | Email-9474160 | 0002327 | Name-8799130 |
| Address-7090553 | Phone-9264040 | Email-3775682 | 0003572 | Name-2999171 |
| Address-4770907 | Phone-6764970 | Email-4646916 | 0004434 | Name-5378832 |
| Address-7090636 | Phone-4310176 | Email-0998113 | 0007855 | Name-3271767 |
| Address-7090219 | Phone-9079495 | Email-4885959 | 0008168 | Name-1908788 |
| Address-2709003 | Phone-6053708 | Email-4971621 | 0008657 | Name-5443574 |

**HTML Report**