Create the China Shop Database using Visdata within Visual Basic 6

One question I've been asked by those who read my Database book is why did you talk about creating the China Shop Database using Microsoft Access, and not talk about the Add-in Visdata.

The main reason for that is that working with Access is so easy, and I'm really of the opinion that any serious developer of Visual Basic should own a copy.

However, for those of you without a copy of Access, and whose version of Visual Basic comes supplied with Visdata, in this article I want to take you through the process of creating the China Shop Database using Visdata. Here's the schematic for the China Shop Database, developed in Chapter 3 of my book, Learn to Program with Visual Basic Databases.

China Shop Database Fields

Table	Field Name	Field Type	Field Size	Required?	Description
Customers	CustId*	AutoNumber		Yes	Customer ID
Customers	FirstName	Text	20	Yes	Customer's First Name
Customers	MI	Text	1	No	Customer's Middle Initial
Customers	LastName	Text	30	Yes	Customer's Last Name
Customers	Address1	Text	30	Yes	Customer's Address1
Customers	Address2	Text	30	No	Customer's Address2
Customers	City	Text	30	Yes	Customer's City
Customers	State	Text	2	Yes	Customer's State
Customers	Zip	Text	9	Yes	Customer's Zip Code
Customers	Phone	Text	10	No	Customer's Phone Number
Transactions	TransId*	AutoNumber		Yes	Transaction ID Number
Transactions	CustId	Number		Yes	Customer ID Number
Transactions	ItemId	Number		Yes	Inventory ID Number
Transactions	Quantity	Number		Yes	Quantity of item purchased
Transactions	Price	Currency		Yes	Price of item purchased
Transactions	DateOfPurchase	Date/Time		Yes	Date of Purchase
Inventory	ItemId*	AutoNumber		Yes	Inventory ID Number
Inventory	Brand	Text	20	Yes	Inventory Brand
Inventory	ItemName	Text	20	Yes	Inventory Item

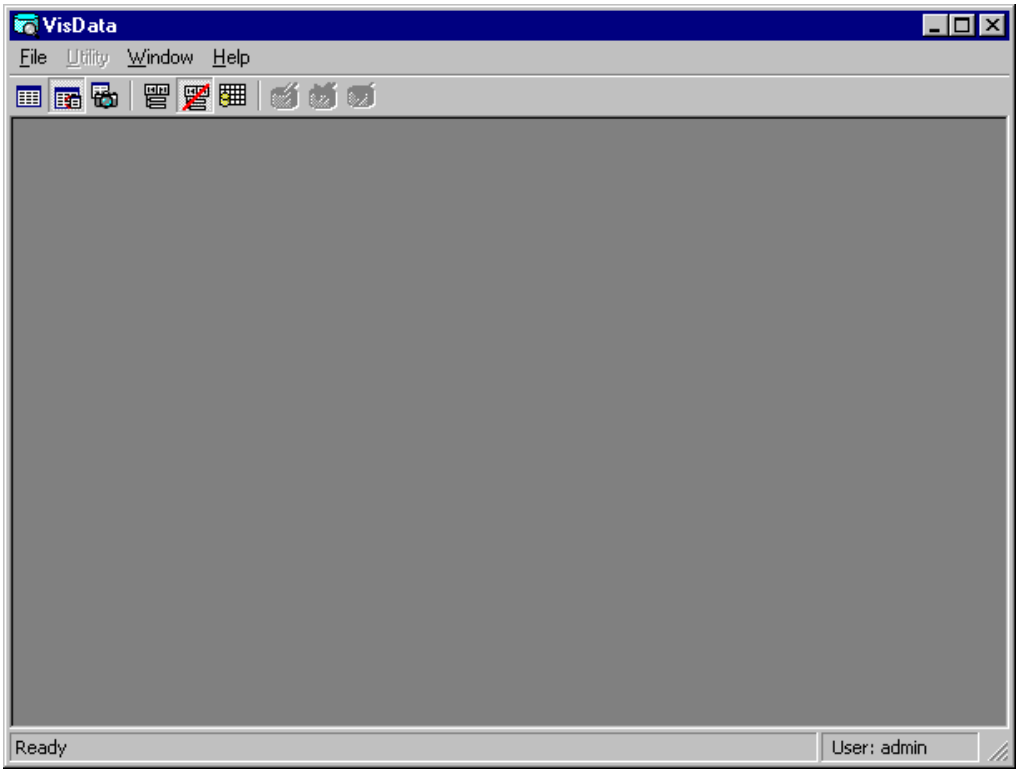
Inventory	Price	Currency		Yes	Inventory Price
Users	UserId*	Text	13	Yes	UserId
Users	Password	Text	8	Yes	Password

Not shown on the schematic, but discussed in Chapter 3 of my book, are the One-To-Many Relationships between Customers and Transactions, and between Inventory and Transactions.

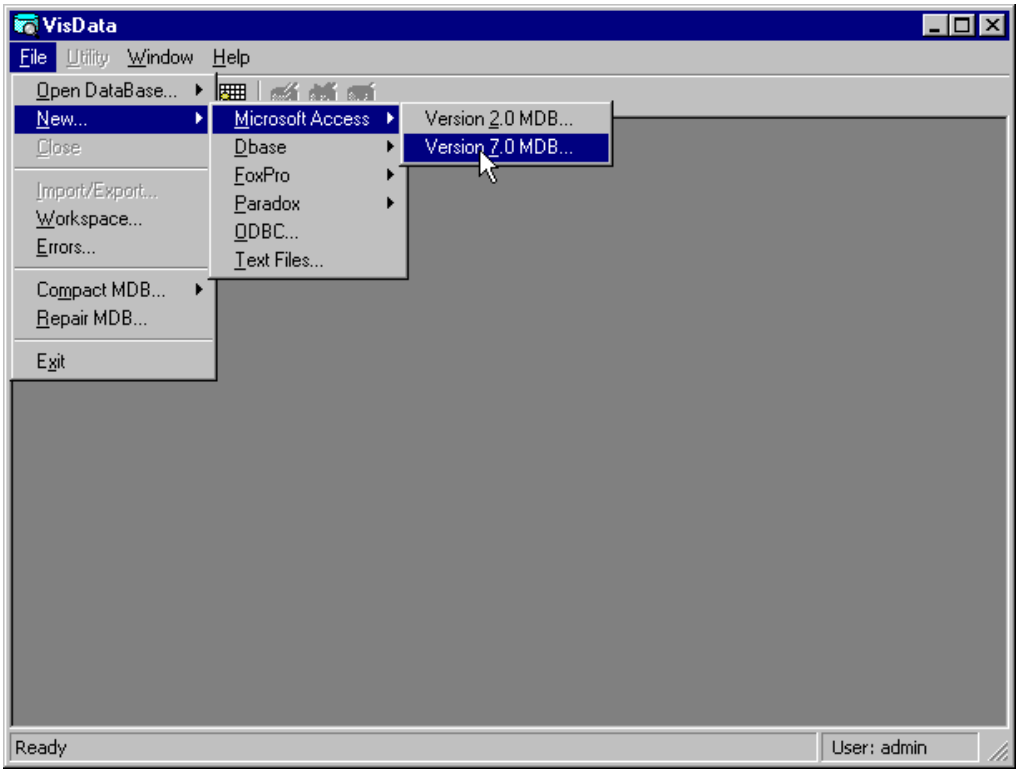
Let's see how we can implement this Database, and the table structures using Visdata.

To start Visdata, select Visual Data Manager from the Add-ins menu item of the Menu Bar.

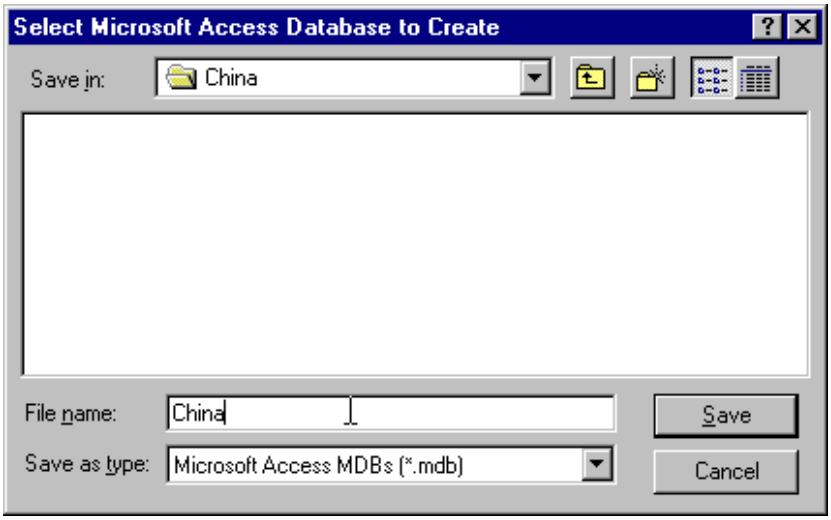
Visdata will appear.



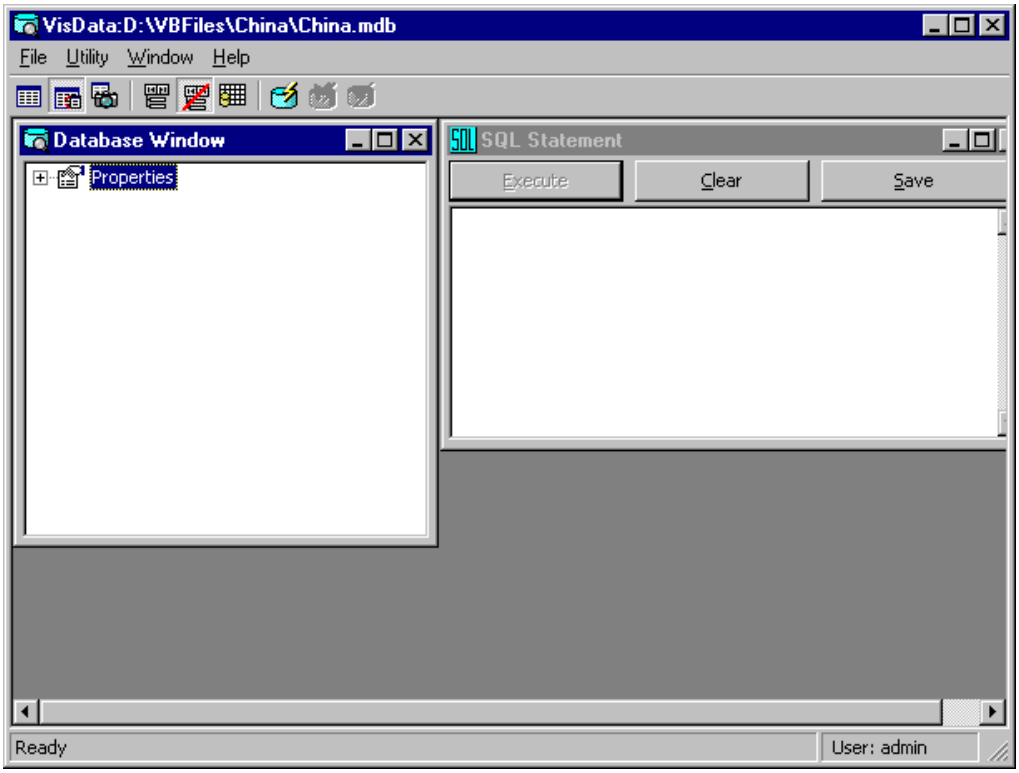
The first thing we want to do is create the China Shop Database itself. To do that, select File-New-Microsoft Access-Version 7.0 MDB….



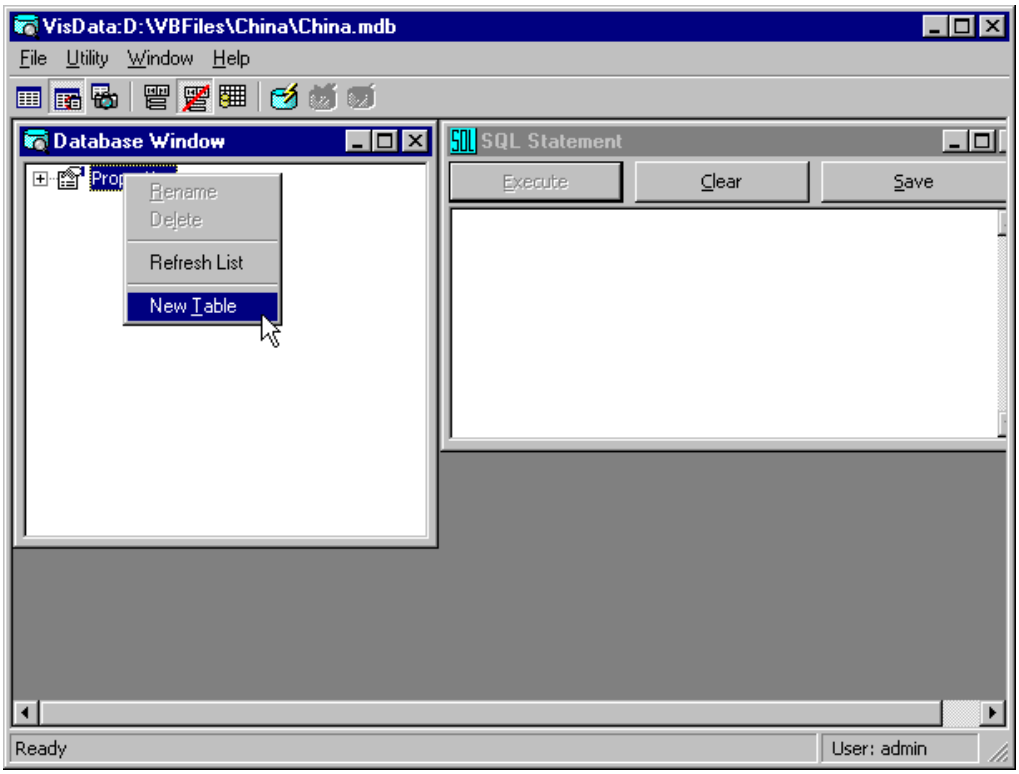
Visdata will now ask you for a name and location of the Database. Specify a name of China, a location of \VBFiles\China, and click on the Save button



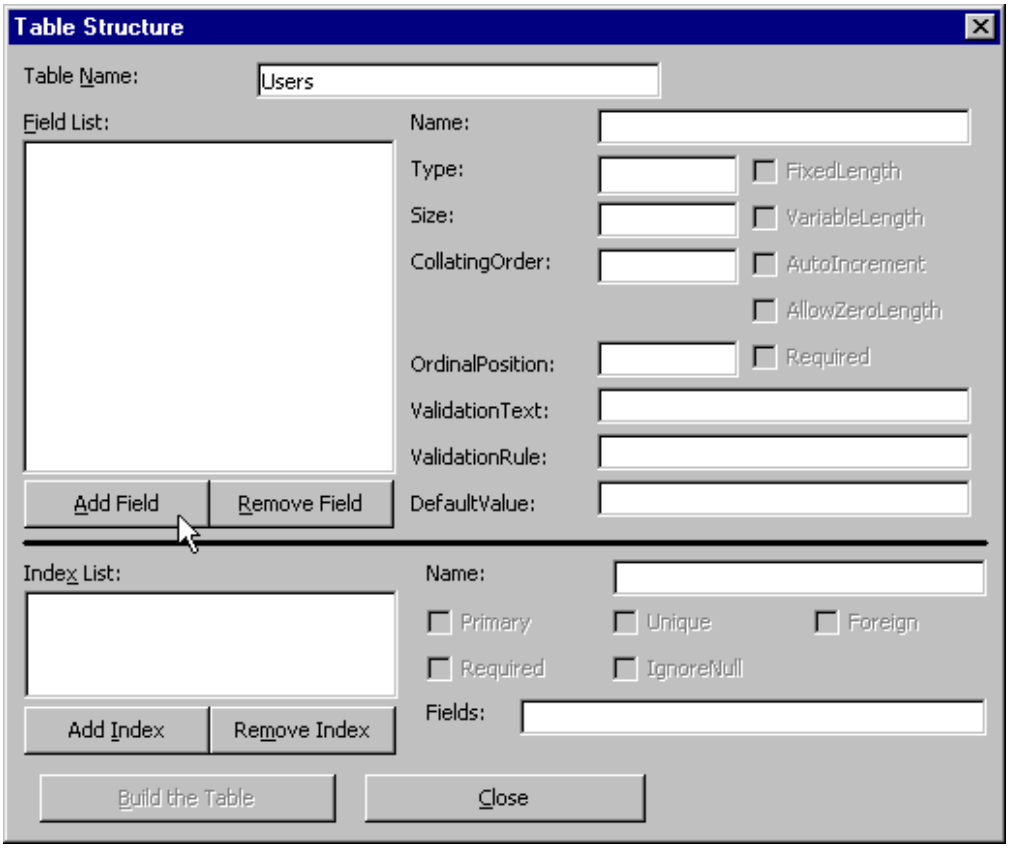
This window will now appear. Now it's time to build the tables…



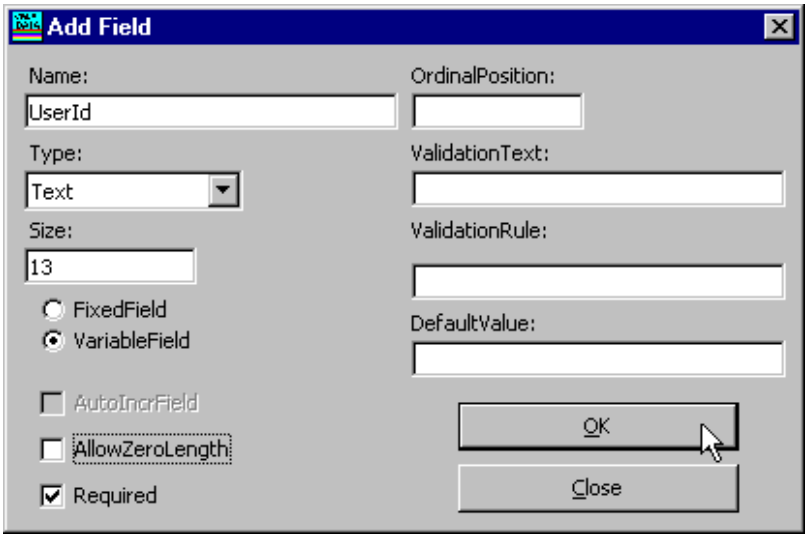
Right-click your mouse on the word Properties and a Dropdown menu will appear. Click on new Table…



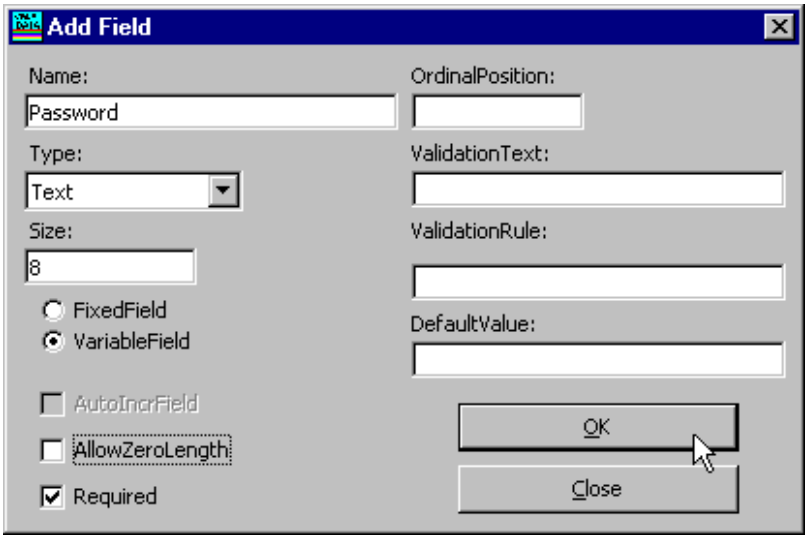
and a Table Structure window will appear. We'll build the Users table first (it only has two fields), so type the word Users into the Table Name field, and then click on the Add Field button to add the first field of the Users table.



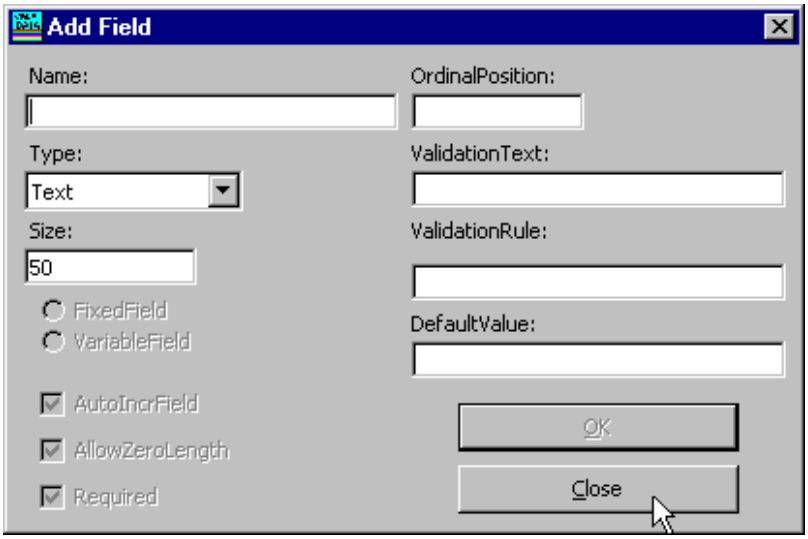
When you click on the Add Field button, the Add Field Window will appear. Type the name of the first field, UserId, into the Name textbox, make sure that Type is specified as 'Text', and enter 13 into the Size textbox. Be sure to check off AllowZeroLength and check on Required. Then click on the OK button to add this field to the definition of the Users Table.



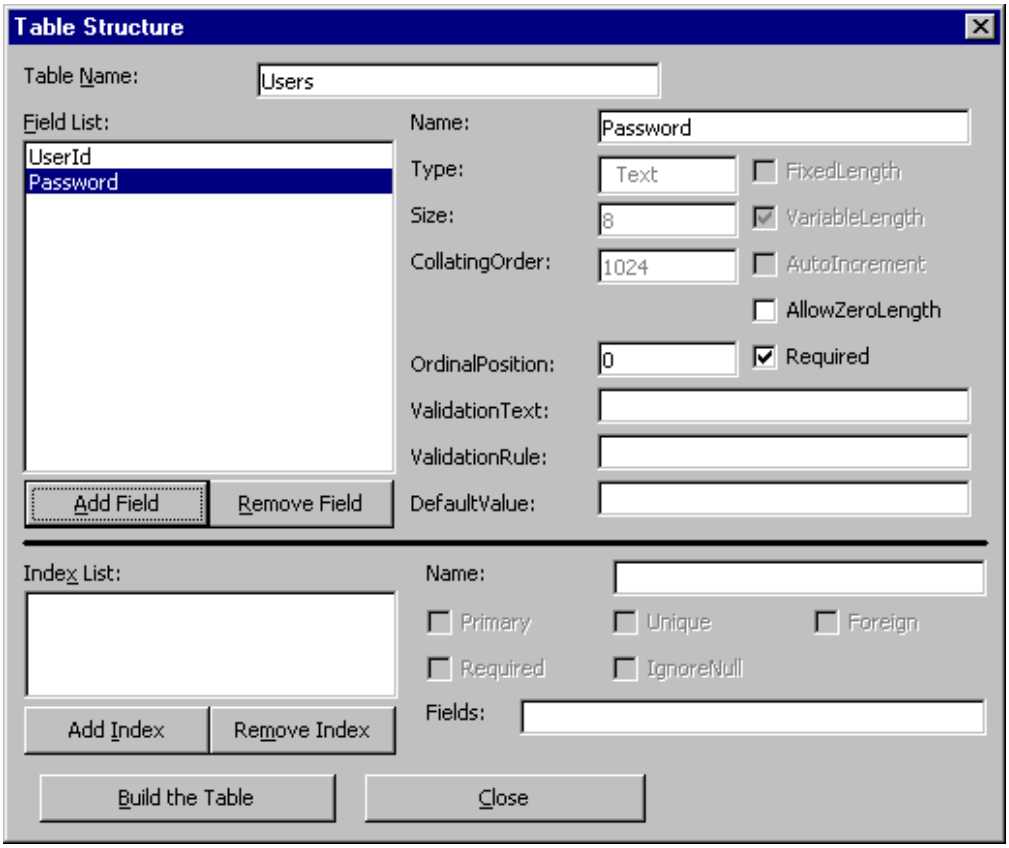
When you click on the OK button, the textboxes of the Add Field will be cleared, ready for you to add another field. We have just one more field, Password, to enter. Type the name 'Password' into the Name textbox, make sure that Type is specified as 'Text', and enter 8 into the Size textbox. Then click on the OK button to add this field to the definition of the Users Table.



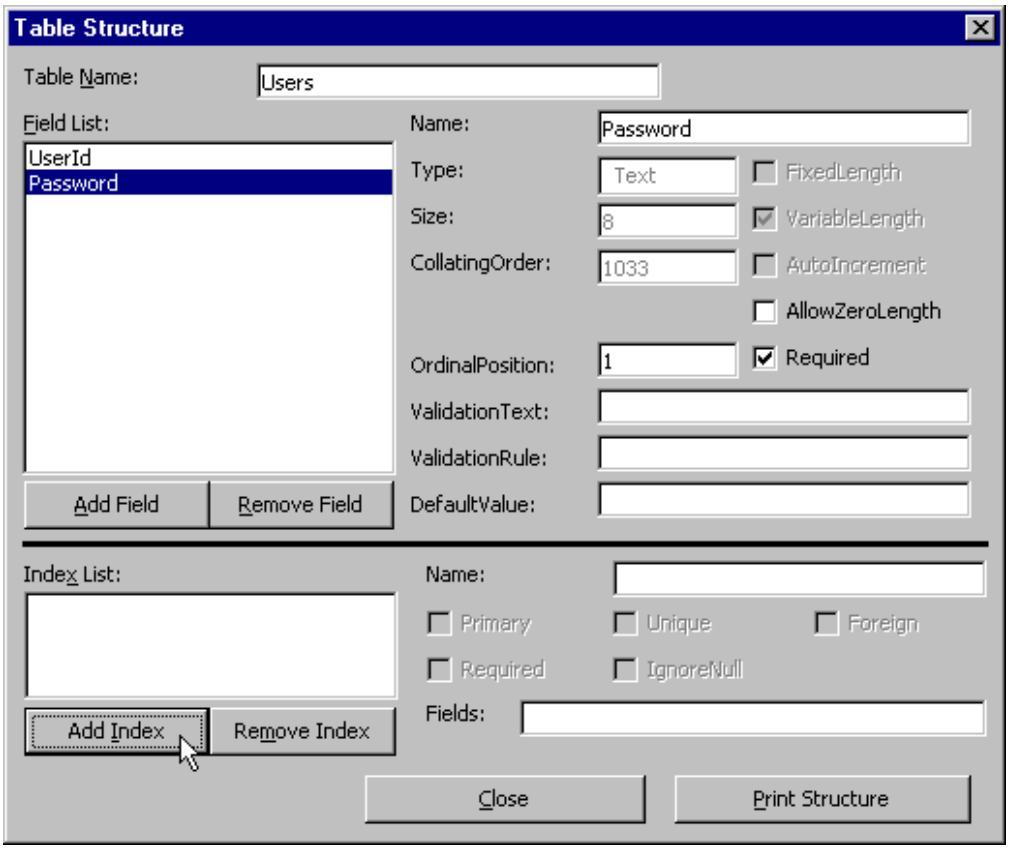
Once again, the textboxes of the Add Field window will be cleared, prepared for the entry of a new field. However, we have no more fields, so click on the Close button.



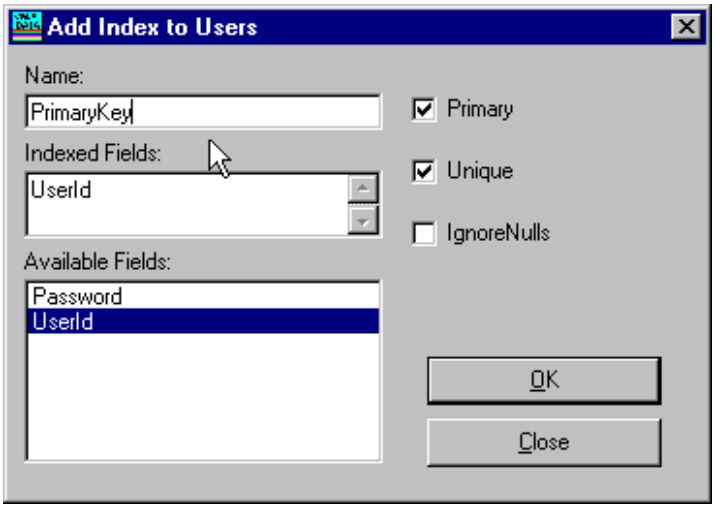
The Table Structure window will be displayed, showing you the two fields that are contained in the Users table.



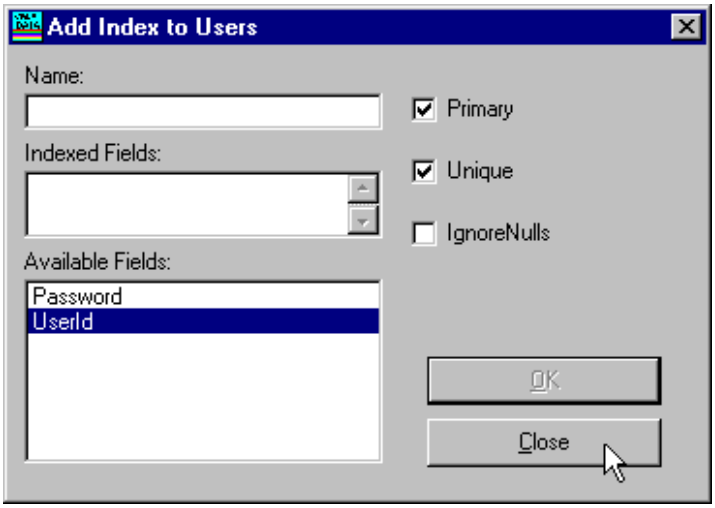
Our next step is to identify the UserId field as the primary key of the Users Table. Click on the Add Index button …



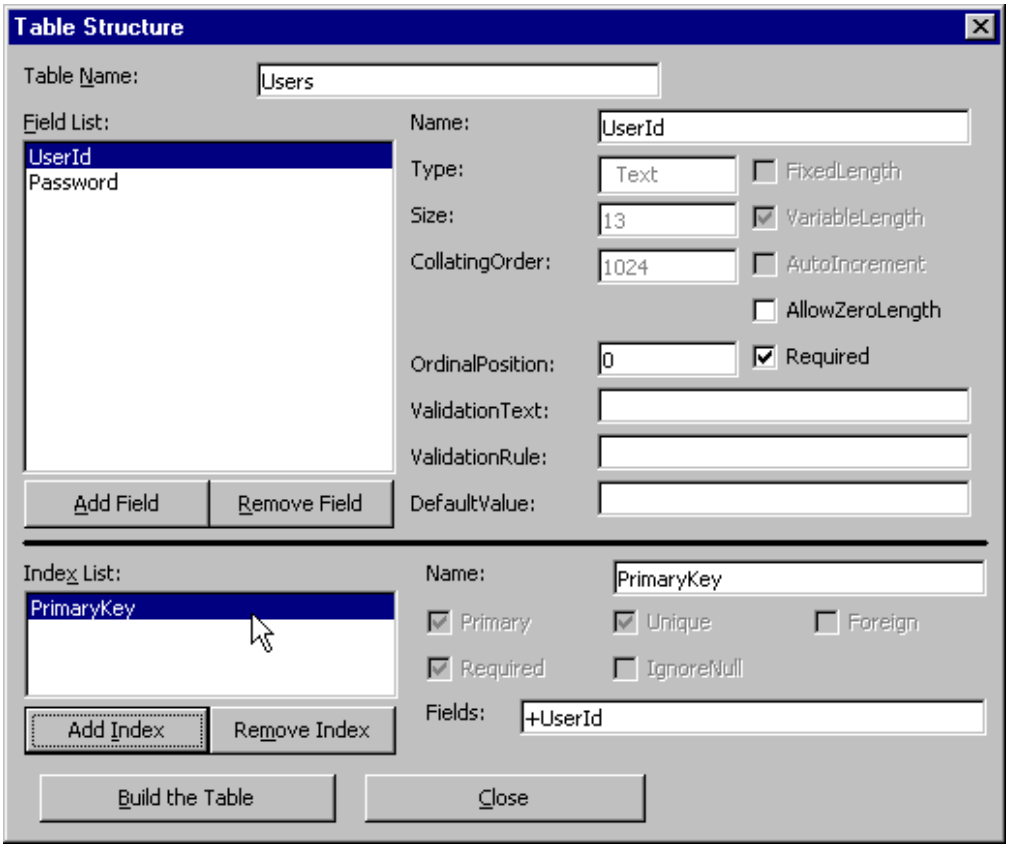
and the Add Index Window will appear. Click on the name UserId in the Available Fields textbox. This will cause the word UserId to appear in the Indexed Fields ListBox. Make sure Primary and Unique are checked on, and as a final step, type the word PrimaryKey into the Name textbox, and then click on the OK button.



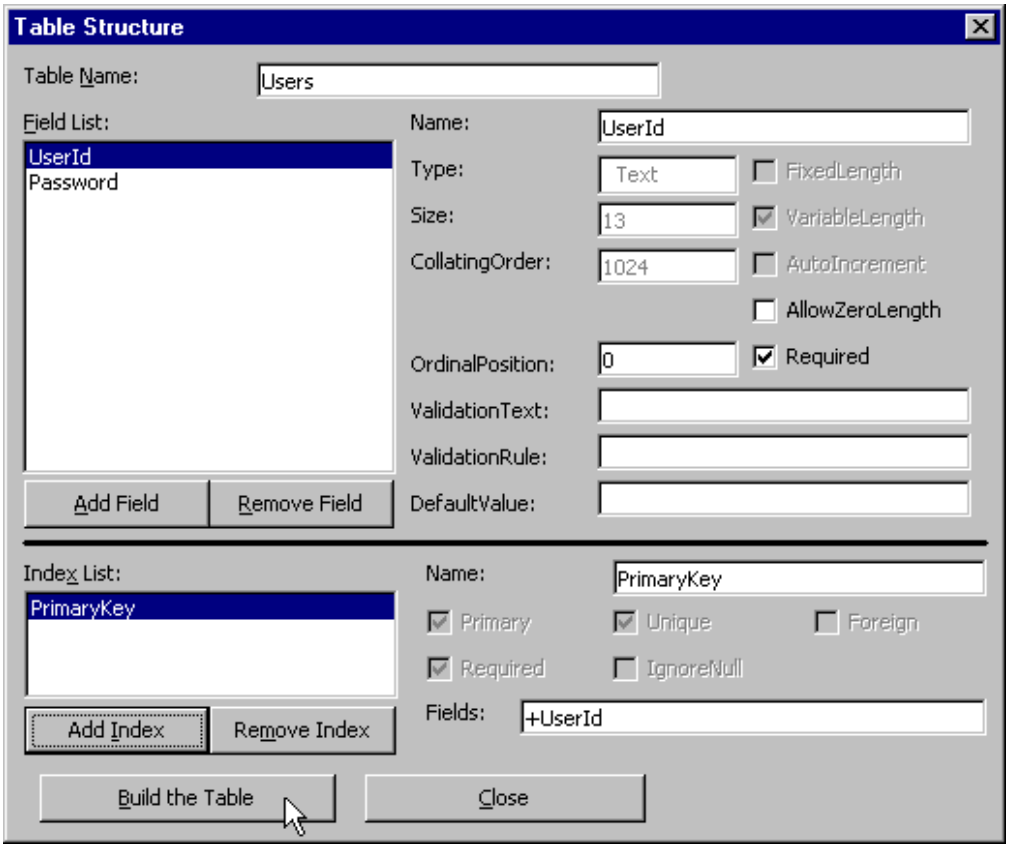
The Add Index window will appear again. We have no more Indexes to create, so click on the Close button



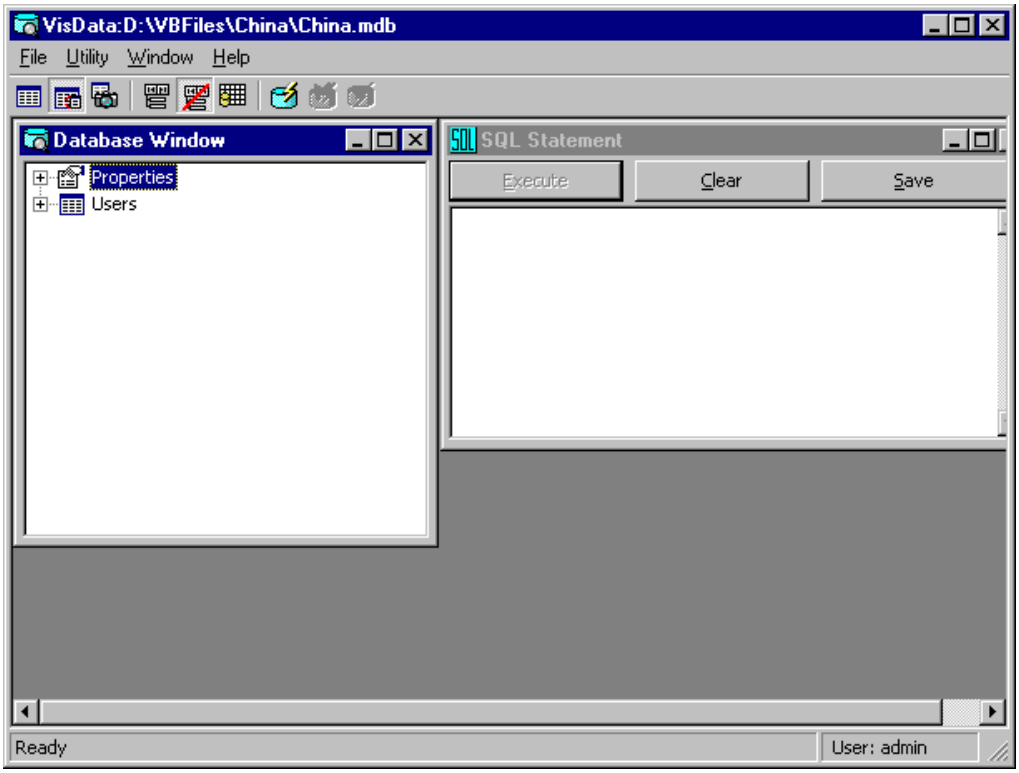
and you'll be returned to the Table Structure Window.



Your Table Structure Window should indicate that you have two fields, UserId and Password, and that you have one Index, whose name is PrimaryKey. Now click on the Build the Table button to add the Users table to the China Database.



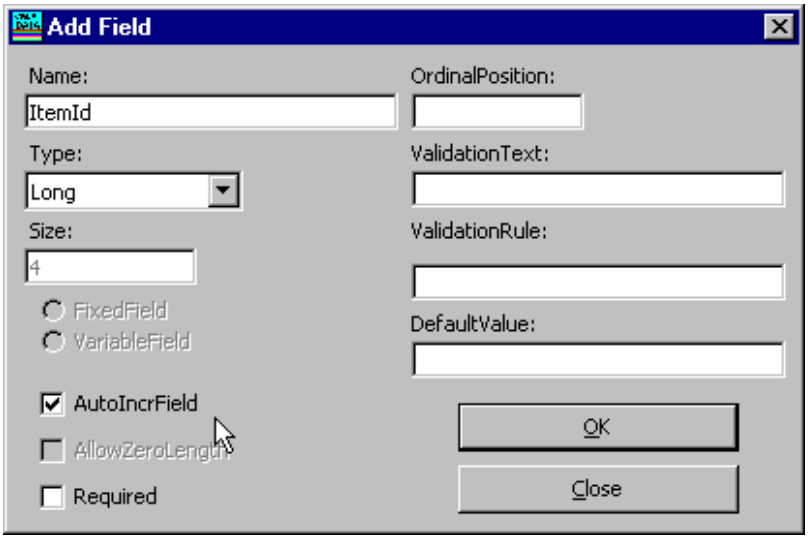
The Database Window will reappear, and you should see the Users table as an Object in the Database window.



Creating the rest of the tables is just as straightforward, but there is something that is a little tricky, and that is how to implement the AutoNumber fields of the Customers, Inventory and Transactions Table.

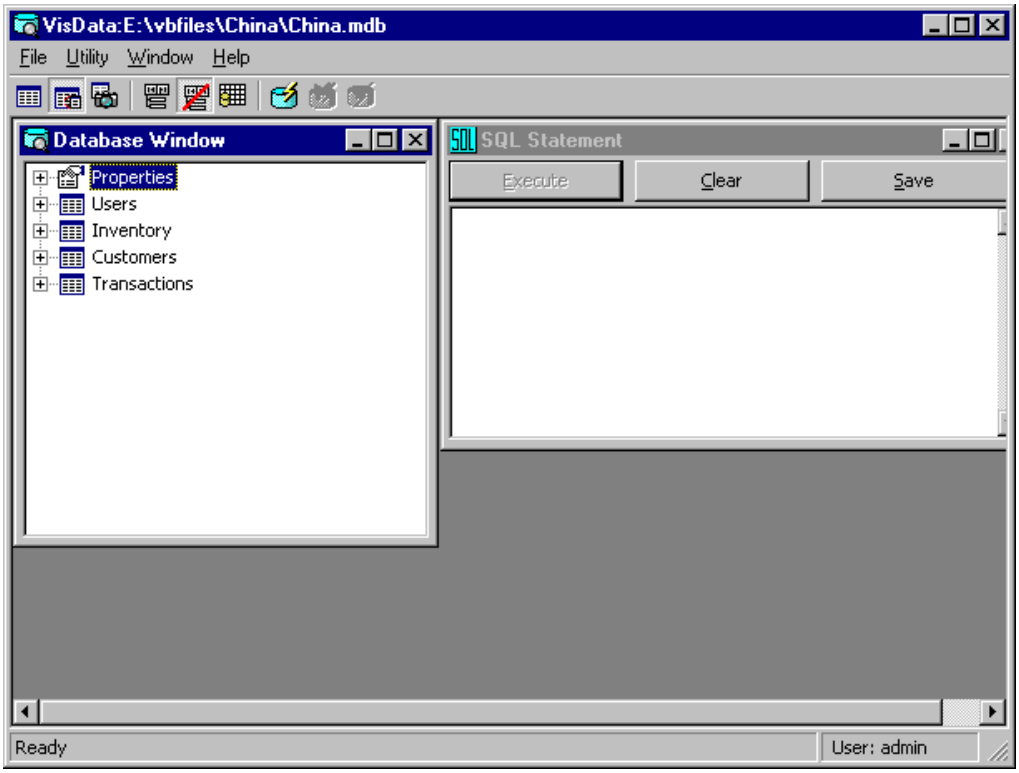
I'll show you how to create the AutoNumber ItemId field of the Inventory table---but for the rest of the fields, and the rest of the tables in the China Shop database, you'll be on your own.

Once again, right click on the Properties Window and select New Table. When the Table Structure Window appears, enter the name Inventory into the Table Name textbox, and then click on the Add Field button. When the Add Field Window appears,



enter ItemId in the Name Textbox, select Long from the Dropdown ListBox as the Data type for this field, check on the Required Field, and then check on the AutoIncrField. That's all there is to it.

Take the time now to complete the rest of the fields in the Inventory table, and then create the Customers and Transaction table. Don't forget to create a Primary Key for each one of the tables. Specify a Long Data type for the CustId and ItemId of the Transaction table, and I'd suggest an Integer Data type for the Quantity of the Transaction Table. If a field is not required, don't check the Required Checkbox on the Add Field Window. When you are done, your Database Window should look like this.

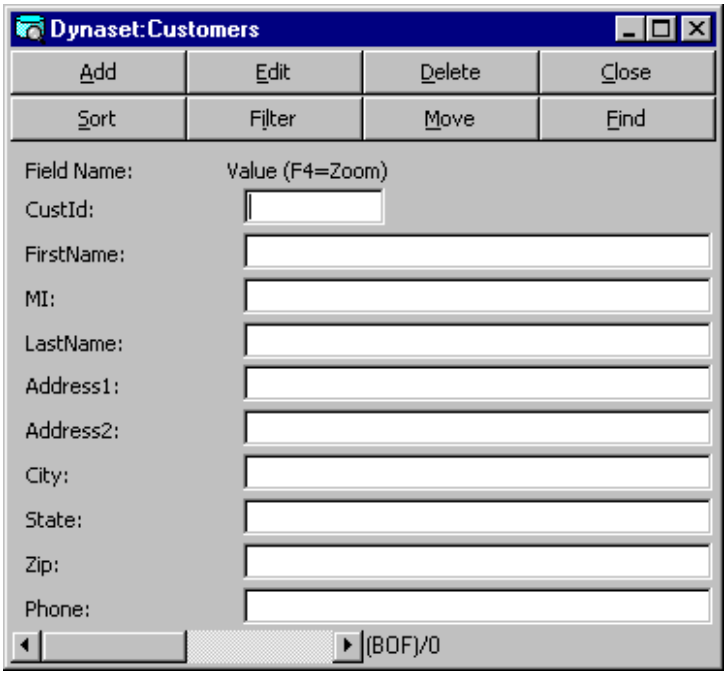


Create Relationships in the China Shop Database

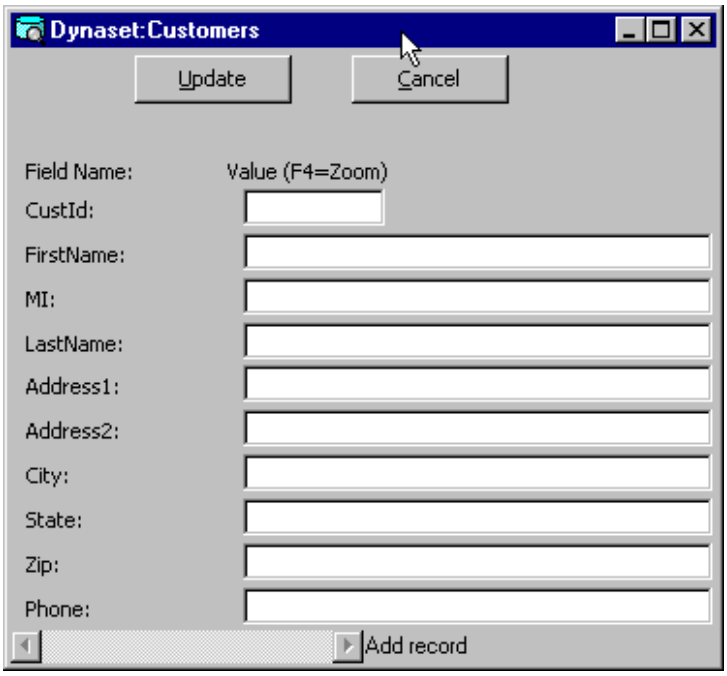
If we were using Access, our next step would be to specify the two one-to-many relationships in the Database. One relationship between the ItemId field of the Inventory Table, and between the Item Id of the Transactions table. The second relationship between the CustId field of the Customers Table, and the CustId of the Transactions Table. Unfortunately, there's no way to do this using Visdata, although it is possible to create a Relation Object using DAO or ADO Objects---unfortunately, there's just no way to enforce Referential Integrity using Visdata.

Add Data to the China Shop Tables

Adding records to a table using Visdata is easy---just double click on the table name in the Database Window and a form with each one of the fields in the Table will appear. Let's double click on the Customers table now…



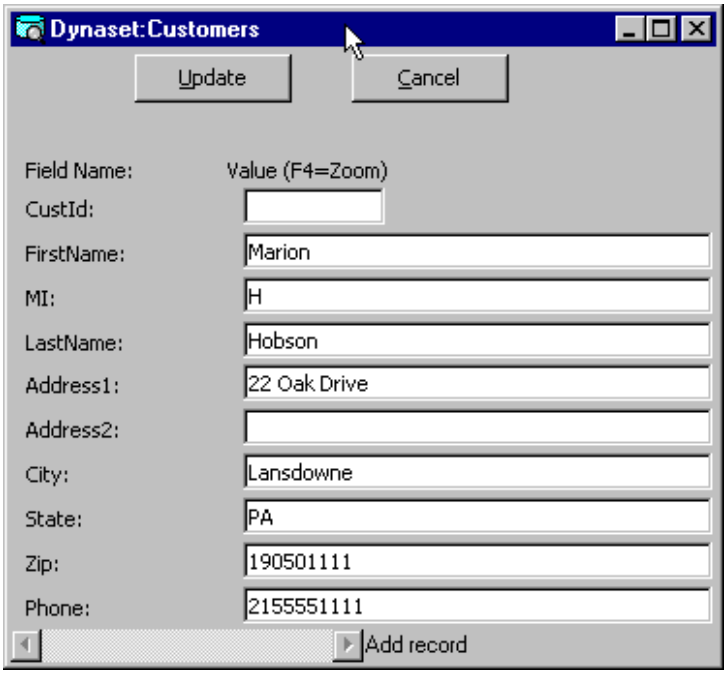
To add a record, just click on the Add Button…



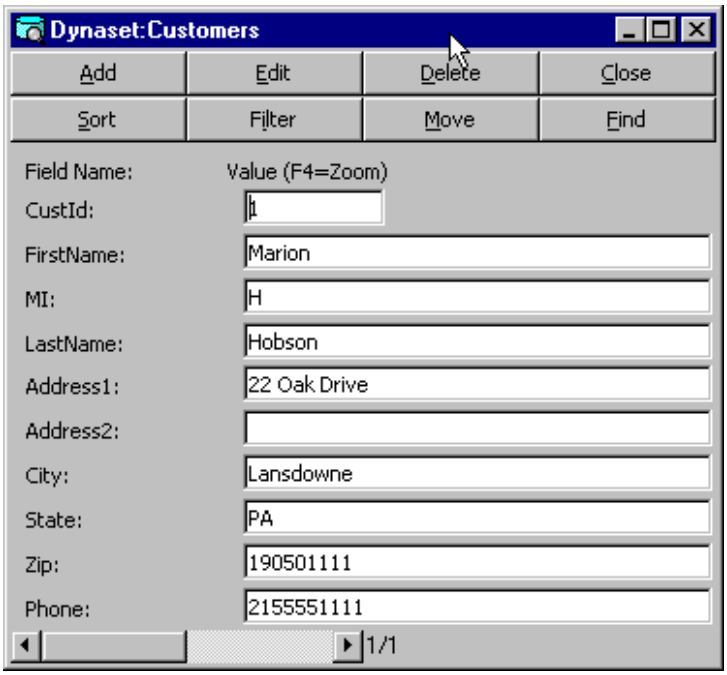
and this window will appear. Enter the values for the new record…

Field Name	Entry
FirstName	Marion
MI	H
LastName	Hobson
Address1	22 Oak Drive
Address2	
City	Lansdowne
State	PA
Zip	1905011111
Phone	2155551111

Be careful---Visdata will permit you to enter values into the CustId field---and override the automatic increment of the field. Be sure to leave it blank. As far as the other fields, you'll find that there is some basic validation---for instance, you won't be able to add any more than two characters to the State field. If you desire, you can add even more validation back at the Table Design window--but this is good enough for our purposes. Once you have all the fields entered…



click on the Update button, and you';; see this window.



Notice that the AutoIncrField field CustId has had the number 1 automatically updated for it. The record pointer at the bottom of the window also displays the current record, plus the total number of records in the table. This window is amazingly full featured, allowing you to add new records, edit existing records, and to delete records. You may want to experiment with it on your own.

What you should do now is to complete the work of adding records to the remaining tables. For the Inventory table, you should add the following 17 records. Don't forgot not to insert a value into the ItemId of the Inventory table---Visdata will do it for you.

ItemId	Brand	Item Name	Price
1	Corelle	Plate	4
2	Corelle	ButterPlate	1

3	Corelle	Bowl	2
4	Corelle	Cup	1
5	Corelle	Saucer	1
6	Corelle	Platter	5
7	Corelle	Complete	8
8	Farberware	Plate	10
9	Farberware	ButterPlate	3
10	Farberware	Bowl	5
11	Farberware	Cup	3
12	Farberware	Saucer	3
13	Farberware	Platter	13
14	Farberware	Complete	21
15	Mikasa	Plate	25
16	Mikasa	ButterPlate	10
17	Mikasa	Bowl	10
18	Mikasa	Cup	5
19	Mikasa	Saucer	5
20	Mikasa	Platter	50
21	Mikasa	Complete	50

Follow that up by adding the following two records to the Users table.

UserId	Password
Administrator	61883
Customer	30655

Finally, add the following record to the Transaction table.

TransId	CustId	ItemId	Quantity	Price	DateOfPurchase
1	1	1	1	4	04/23/98

Summary

Visdata can provide an acceptable workaround to not having a copy of Microsoft Access. Still, despite all it can do for you, it leaves us down in that it does not give us the ability to establish relationships, and the validation of its default form permits us to enter values into an AutoIncrField field.