ODBC with Access

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Document Number

This document has been prepared to conform to the current release version of Open Systems Accounting Software. Because of our extensive developments efforts and our desire to further improve and enhance the product, inconsistencies may exist between the software and the documentation in same instances. Contact your customer support representative if you encounter an inconsistency.

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OVERVIEW

To use ODBC, you must have Microsoft Windows 95, Windows 98, Windows NT, or Windows 2000 installed on machines where you install the ODBC drivers. If your OSAS data is stored on a UNIX or LINUX drive, you will need software to map those drives as DOS drives or use a data server to access the OSAS data. After you install the ODBC drivers under Windows, you can use it to access your OSAS data, produce reports, and import OSAS data into other applications.

This course covers using ODBC with Access. You will walk through examples of using Microsoft Access to link to tables, forms and reports.

Before you can access the OSAS data using Microsoft Access, in OSAS you must set up any custom files, fields, indexes, and create a configuration file using the Edit CONFIG.TPM function. You must also setup the BASIS ODBC Drivers in Windows.

Setup in OSAS

Files

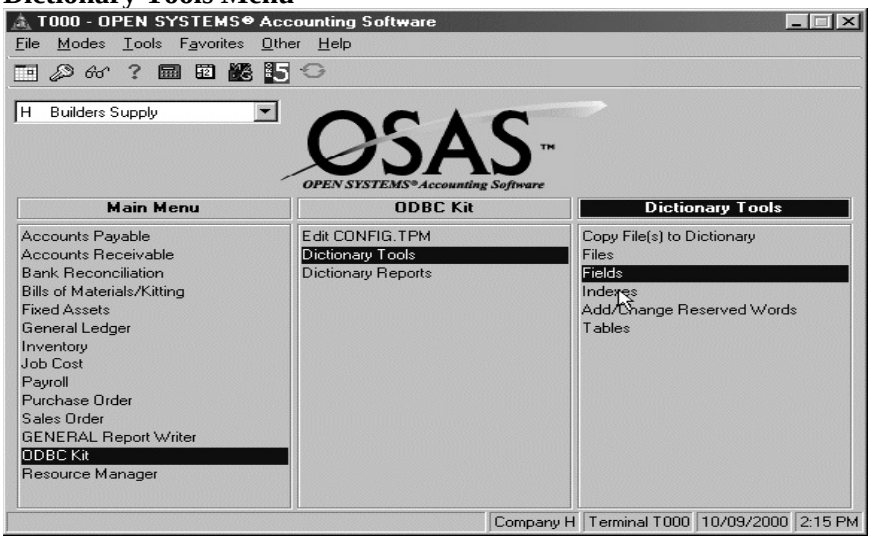
Use the Files function to set up and maintain data dictionary information about the data files used in OSAS programs, to construct views of the OSAS data files, and to delete unnecessary file definitions from the data dictionary.

Dictionary Tools Menu - Files

Fields

Use the **Fields** function to define and edit the fields in the data dictionary files.

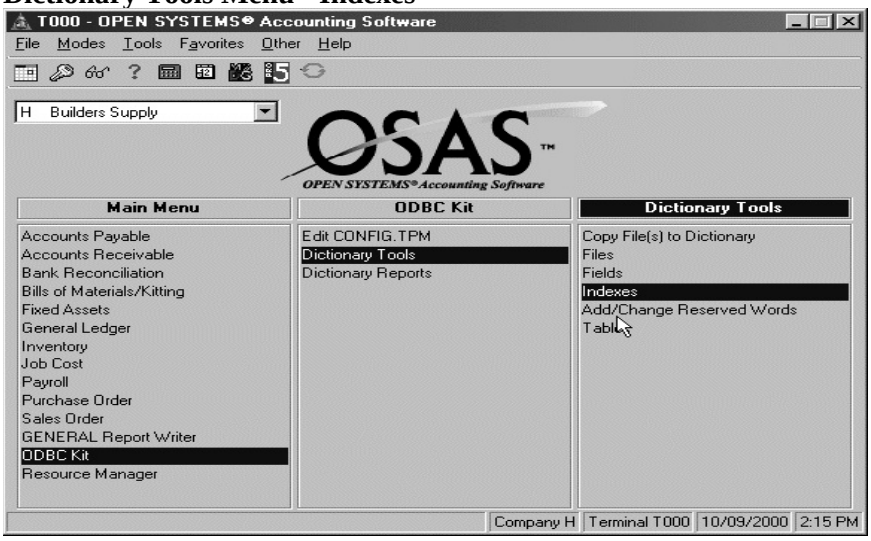
Dictionary Tools Menu



Indexes

Use the **Indexes** function to define the keys used in OSAS Mkeyed data files.

Dictionary Tools Menu - Indexes



Copy File(s) To Dictionary

Use the **Copy File(s) To Dictionary** function to copy file, field, and index definitions from one set of data dictionaries to another; to create a copy of a data dictionary file name; and to rebuild the base tables.

Dictionary Tools Menu

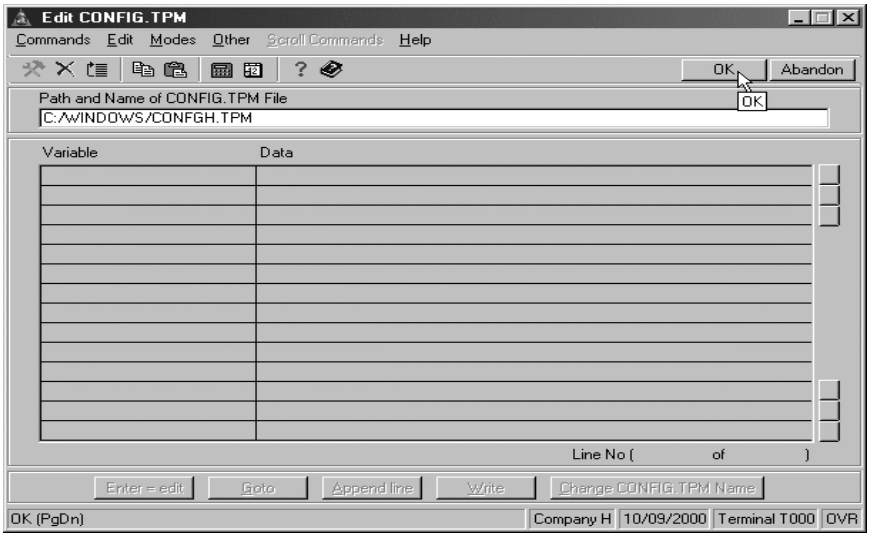
Edit CONFIG.TPM

Use the **Edit CONFIG.TPM** function to create and edit database configuration files for use with the BASIS ODBC Driver.

ODBC Kit Main Menu – Edit CONFIG.TPM

Select **Edit CONFIG.TPM** from the ODBC Kit menu.

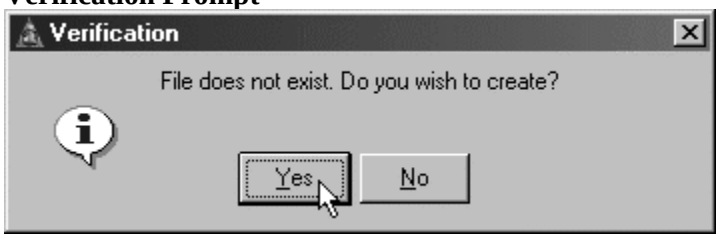
Edit CONFIG.TPM Selection Screen



To create a configuration file make the following selections:

Selection	Description
Path and Name of CONFIG.TPM File	Enter the path and TPM file name to create. The path defaults to the Windows directory and the file name defaults CONFIG.TPM[1]. You can accept this path and configuration file name[2] or you can type in your own path and configuration file name.

Verification Prompt

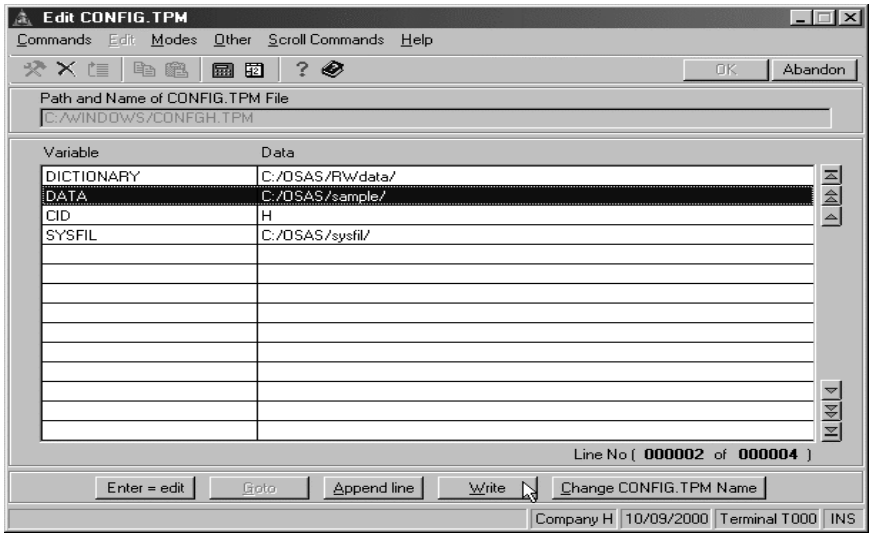


Selection	Description
File does not exist. Do you wish to create?	Select **Yes** to create the configuration file in the selected path. Select **No** if you do not want to create the configuration file entered.

[1] If you are on version 6.05 or earlier, the default path is the OSAS/RWdata directory.

[2] The configuration file does not have to have the name CONFIG.TPM. The file is an 8.3 Dos file and is only required to have the TPM extension, but can have any name you want.

Edit CONFIG.TPM Selection Screen



Variable	**Data**
DICTIONARY*	The path to the ODBC data dictionaries. The default path is the Rwdata directory setup with the Directories function in Resource Manager.
DATA*	The path to the OSAS data. The default path is the Data1 directory setup with the Directories function in Resource Manager.
CID	The company ID. The company you are in defaults as the company ID
SYSFIL*	The path to the OSAS systems files. The default path is the SYSFIL directory setup with the Dictionary function in Resource Manager.

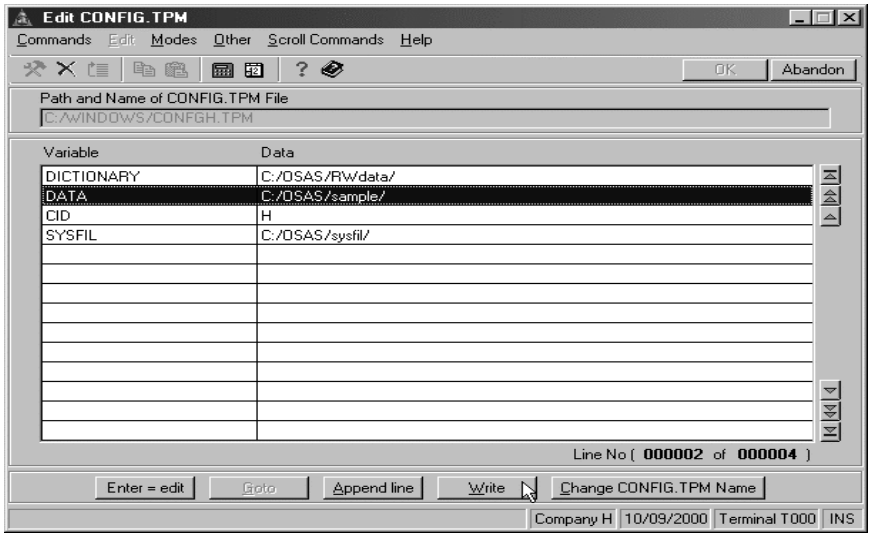
You can edit the configuration file by selecting the following:

Command	**Action**
Enter = edit	**Enter** to edit the line next to the cursor.
Append Line	Select **A** to add a line to the configuration file.

Note: You must create a separate database configuration file for each company you want to access with the ODBC driver.

*The path entered must contain a drive letter and colon for the ODBC Drivers to access the OSAS data properly, unless you are using a data server. If you are using a Unix or LINUX system and not using a data server, do not create a configuration file here (See Appendix C).

Edit CONFIG.TPM Selection Screen



Command	**Action**
Write	Select **W** to write the configuration file.
	Select **Y**, for Yes, to save the changes made to the configuration file.
	Select **N**, for No, if you do not want to save the changes made or the configuration file.
CONFIG.TPM Name	Select **C** to enter the path and file name for a new configuration file.

Note: If you are using the 1.1 BASIS ODBC Drivers you must also run the Build Shadow Dictionary function (See Appendix A).

Setup In Windows

To use ODBC, you must install and register the BASIS ODBC Drivers on a system with Microsoft Windows 95, Windows 98, Windows NT, or Windows 2000.

See ODBC Kit users guide for installation instructions.

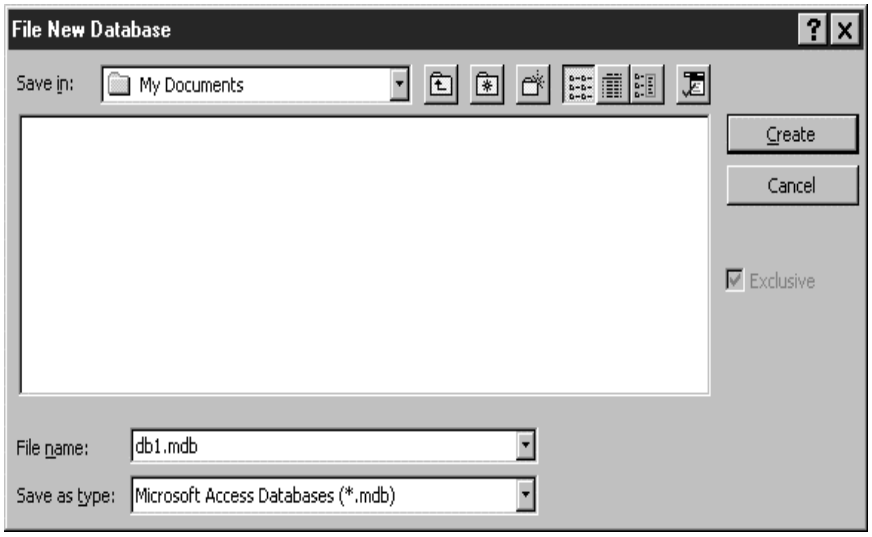
Linking to Tables

Create a New Database Screen

Start Microsoft Access. Select the database you want to use with ODBC. If the database you want to use is not listed, create a blank database.

This example uses a blank database.

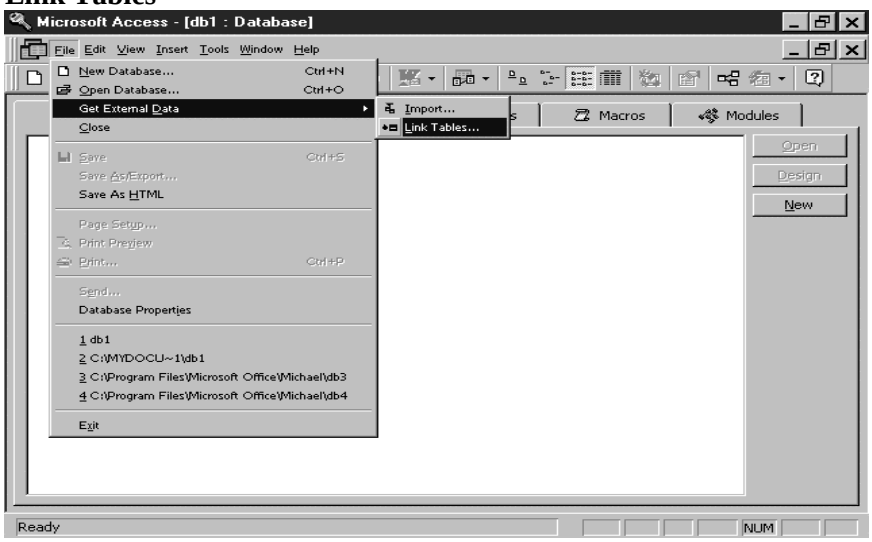
File New Database Screen



Choose the path and file name for the database.

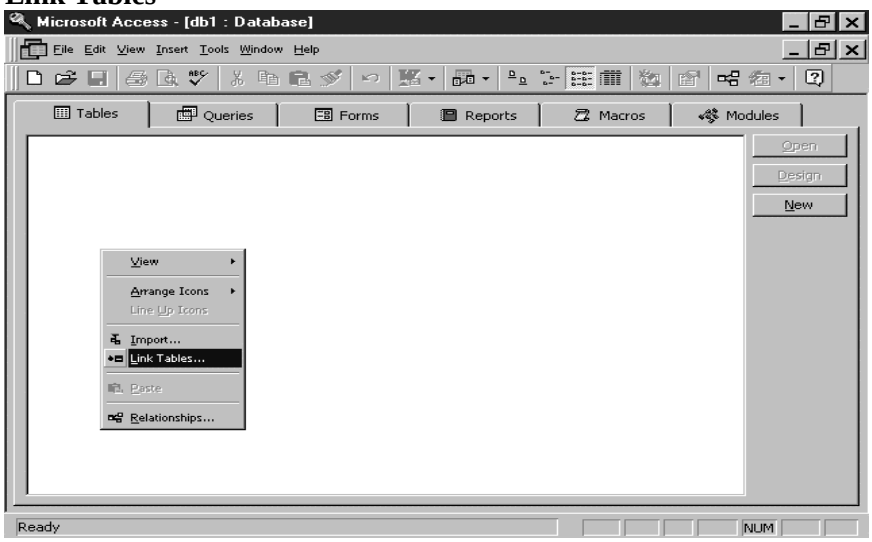
Select the Create button.

Link Tables



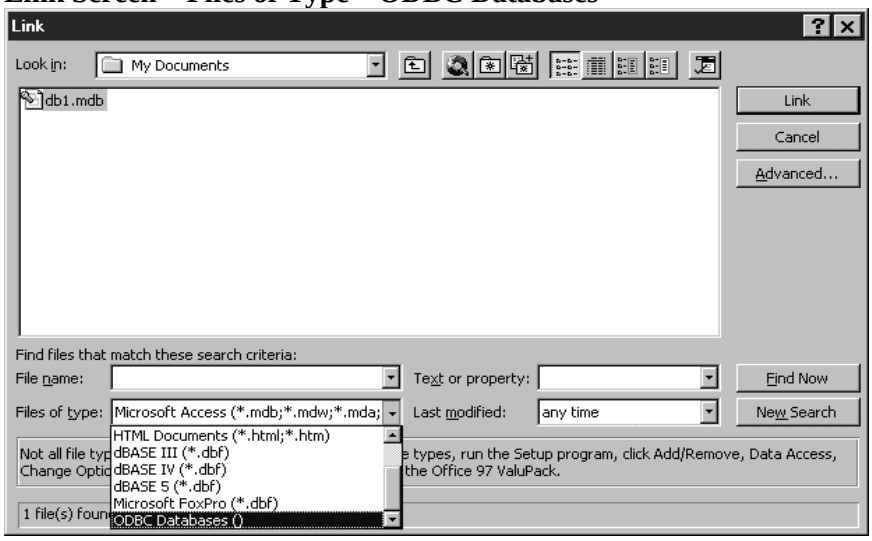
The database is displayed. Select the Tables tab. From the menu bar, select File, followed by Get External Data, and then choose Link Tables.

Link Tables



Alternatively, Right click in the Database container and select Link Tables

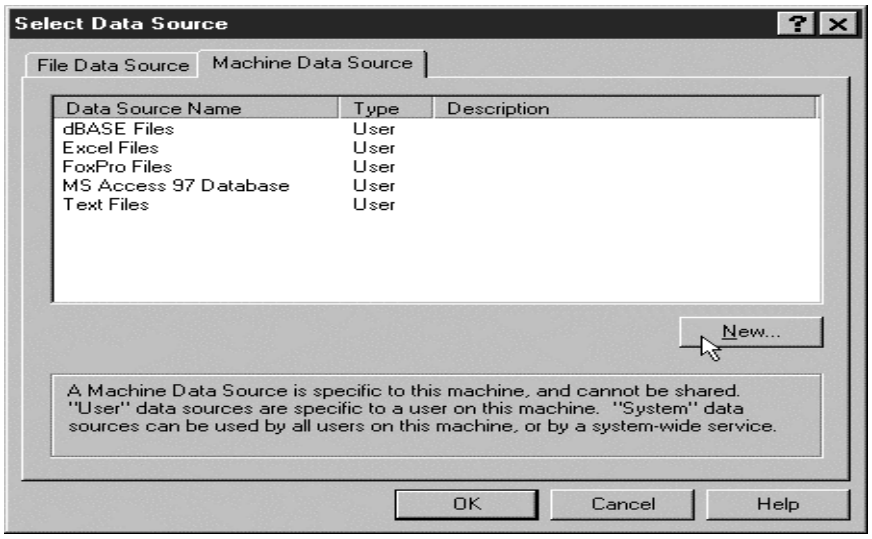
Link Screen – Files of Type – ODBC Databases



The Link screen is displayed.

Select the Files of type field. Use the combo button to select the ODBC Databases.

Select Data Source Screen



The Select Data Source screen is displayed.

Select the Machine Data Source tab[3].

Select the data source you want to use to link to the OSAS data.

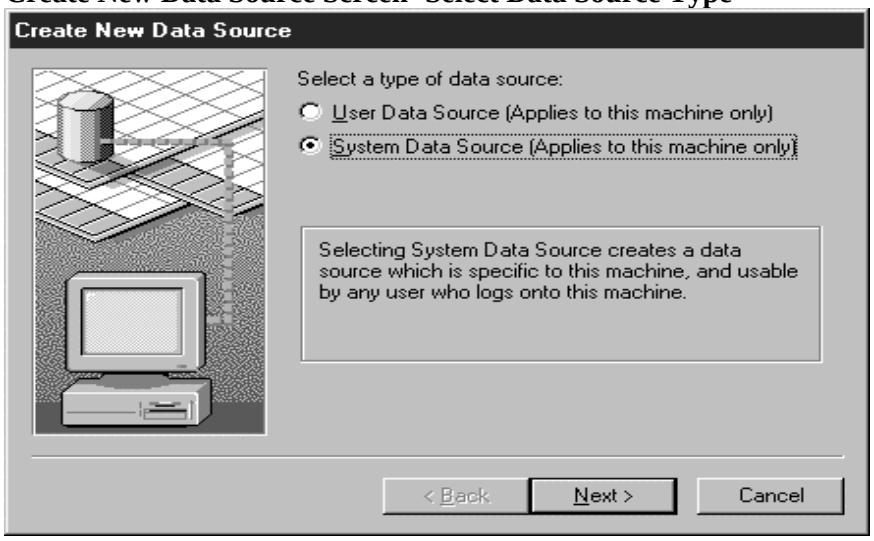
If the data source is not listed, click the New button to create a data source.

Select New.

[3] You must always use a Machine Data Source to link to that OSAS data from Access.

The Create New Data Source screen is displayed.

Create New Data Source Screen- Select Data Source Type

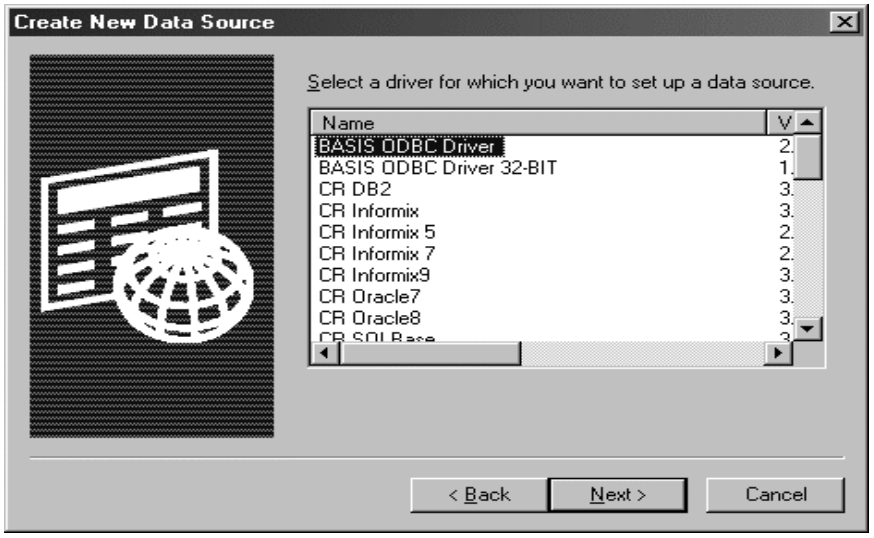


Select the type of data source you are creating.

Selection	**Description**
User Data Source	Creates a data source for this machine that only the user creating it can access.
System Data Source	Creates a data source for this machine that anyone who uses this machine can access.

Select the Next button.

Create New Data Source Screen- Select Driver

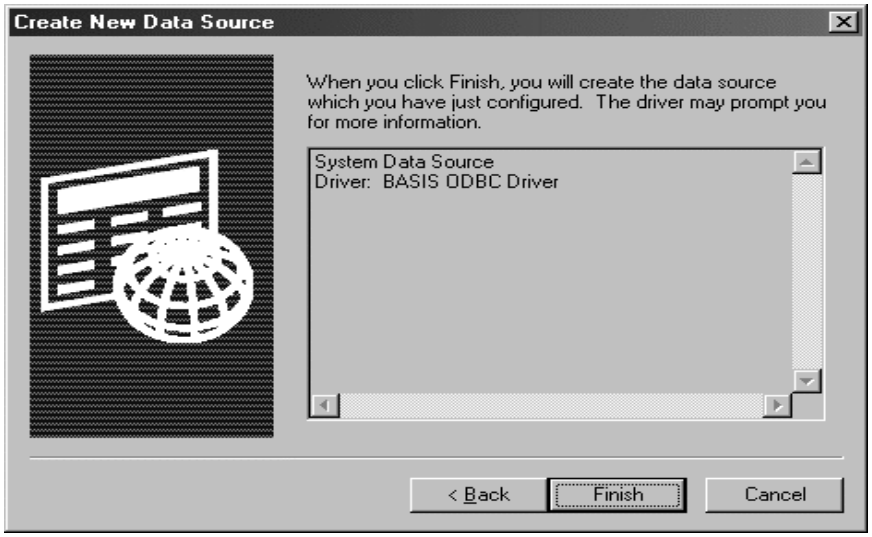


Select the driver for the data source. For OSAS data select the BASIS ODBC Driver[4].

Select the Next button.

[4] If you are using the 1.1 version of the ODBC Drivers (OSAS 6.02 and earlier) select the BASIS ODBC Driver 32-Bit.

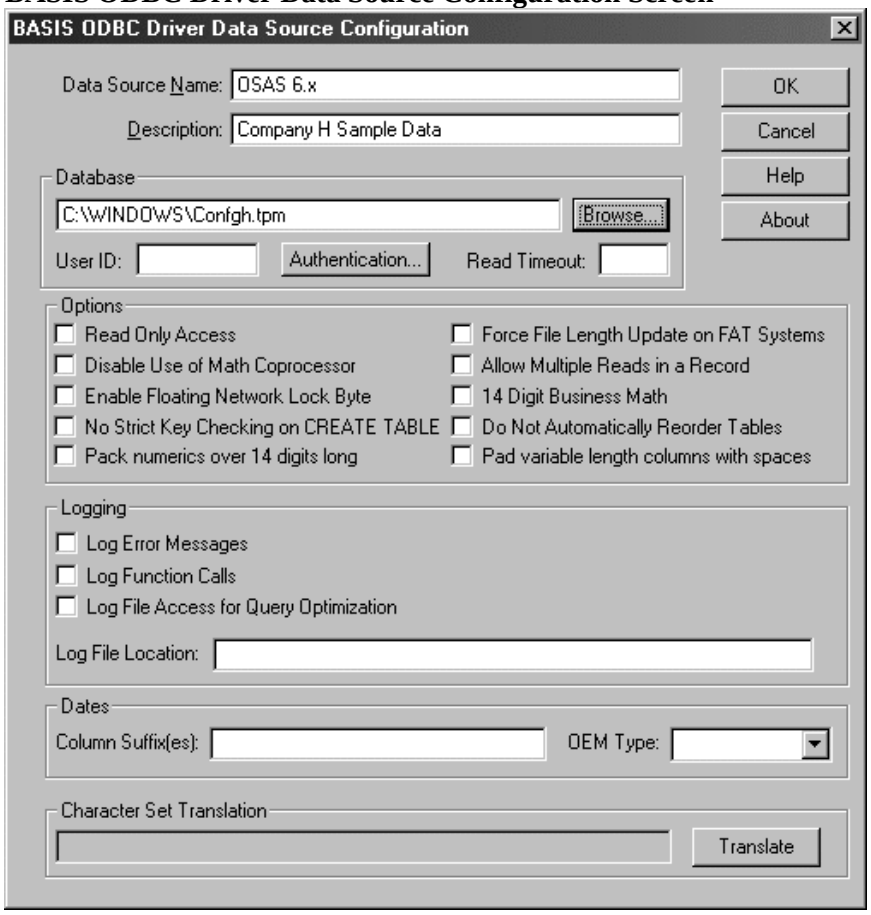
Create New Data Source Screen - Finish



The last screen summarizes the type of data source you are creating and the driver used for the data source. Verify everything to make sure it is correct.

Select Finish

BASIS ODBC Driver Data Source Configuration Screen

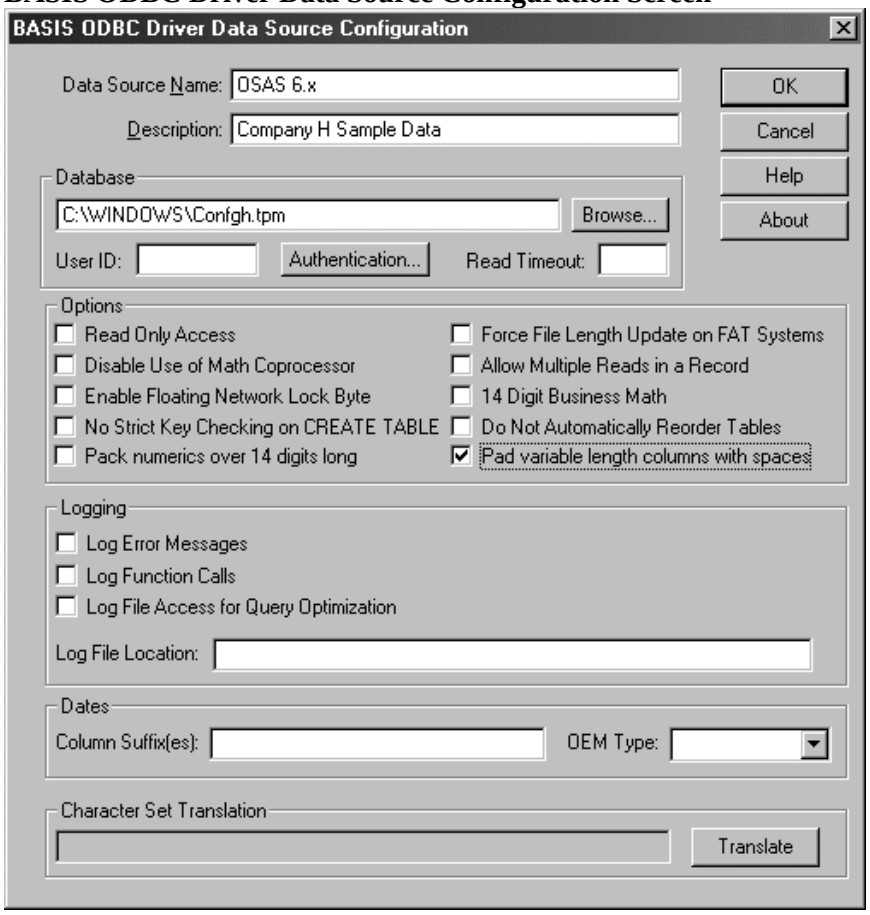


The BASIS ODBC Driver Data Source Configuration screen is displayed.

1. Enter a name and description for the data source.
2. Enter the path to the configuration file you created in OSAS with the EDIT CONFIG.TPM function.

The Browse buttons is available to find the configuration file.

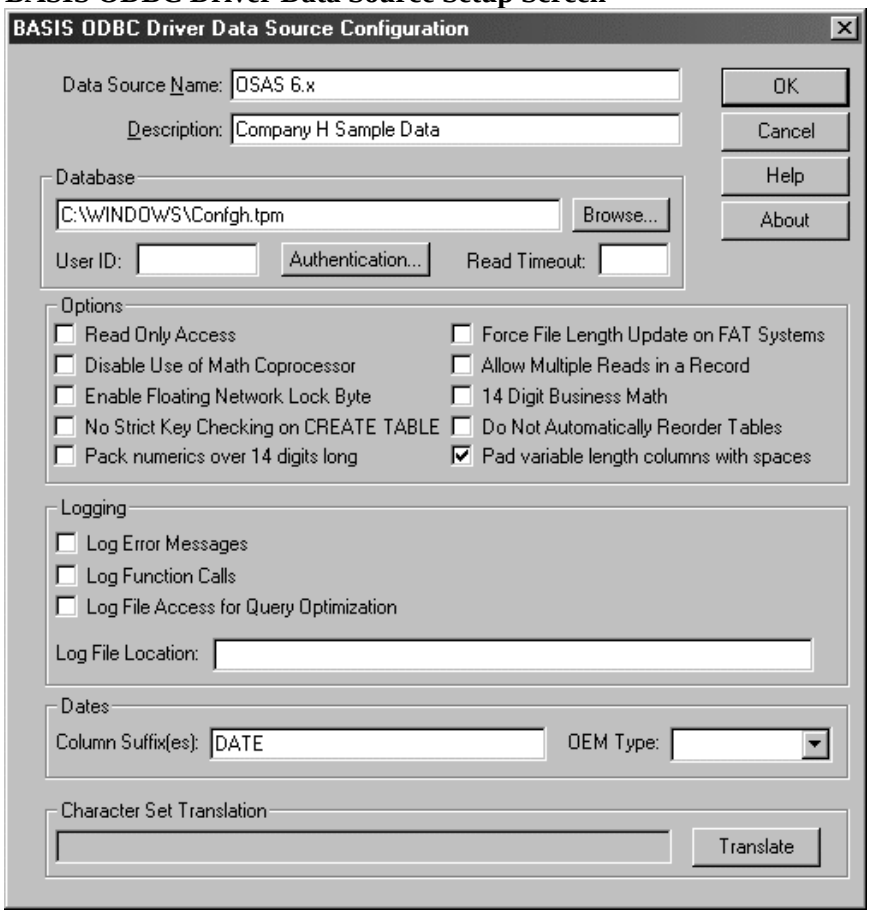
BASIS ODBC Driver Data Source Configuration Screen



3. Under Options, make sure to place a check next to Pad variable length columns with spaces[5].

[5] This option is used more if you have the Read/Writer version of the ODBC drivers, but it is a good habit to make sure a check is placed here on all data sources.

BASIS ODBC Driver Data Source Setup Screen



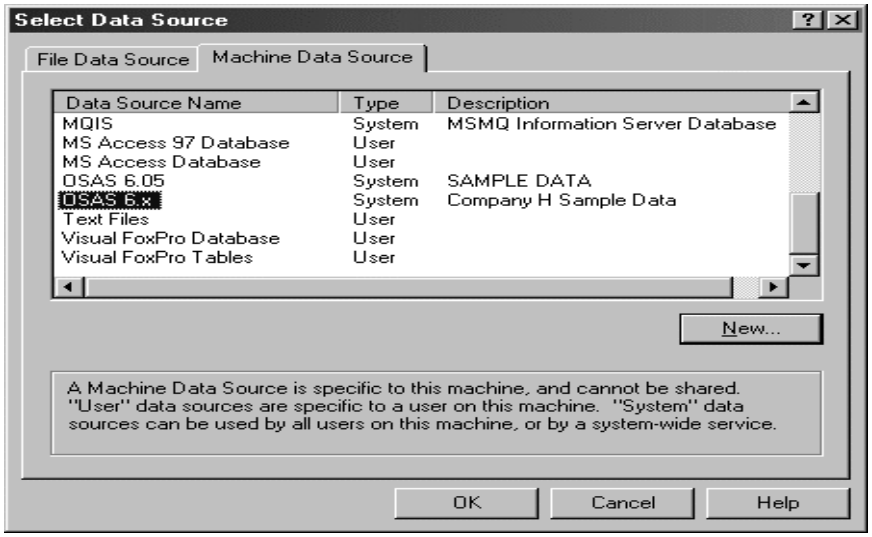
4. Under Dates in the Column Suffix(es) field, type the word DATE so the OSAS Julian dates will convert and display as regular dates.

Note: If you are using Data Server you must also enter a valid user in the Network User ID field. Root, Administrator, Admin, Supervisor are not acceptable to use with ODBC.

Select the OK button after the options have been checked, and if necessary, the Network User ID has been entered.

See Appendix B for detail information on the BASIS ODBC Driver Data Source Setup.

Select Data Source Screen



The Select Data Source screen is re-displayed.

Highlight the data source you created and click OK.

Link Tables Screen

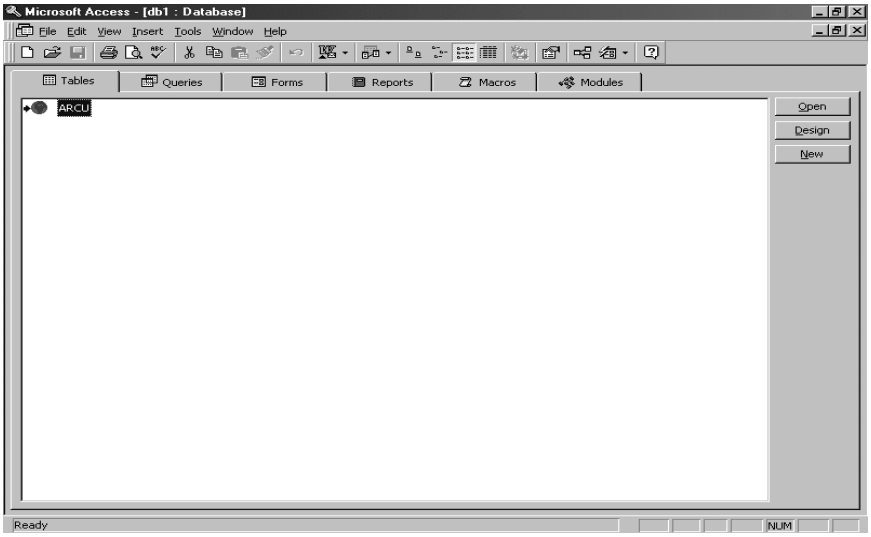
The Link Tables screen is displayed.

Select the files (tables) you want to use with this database

Select the ARCU table.

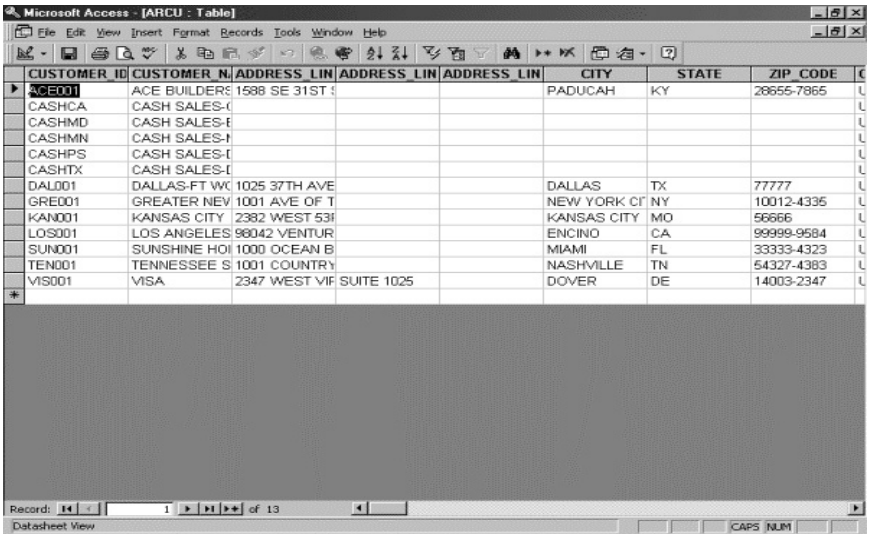
Select OK

Access – Database Container



The tables are added to the database container.

ARCU Table



You can view the data in the table by highlighting the table and selecting open or by double clicking the table.

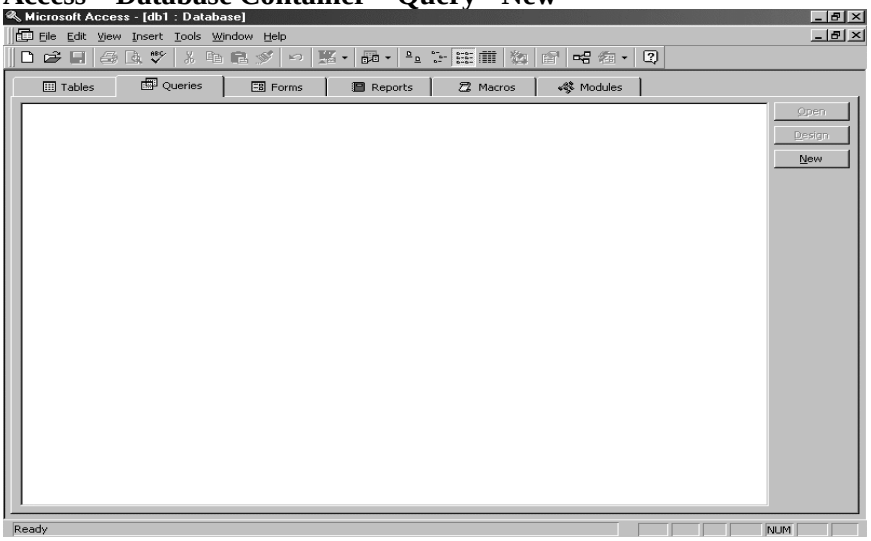
Note: If you are using the Read/Write version of the ODBC Drivers, any changes made in the table will make changes to the OSAS data file. The changes are made without prompts or warnings.

Creating a Query

Query in Access can be used in a variety of ways. With ODBC and the OSAS data files, you can use it to create fields that are not part of a Table (files) to use in Forms and Reports. With the Read/Writer drivers and Access 97 you can create queries to delete, change or add records to the OSAS data files.

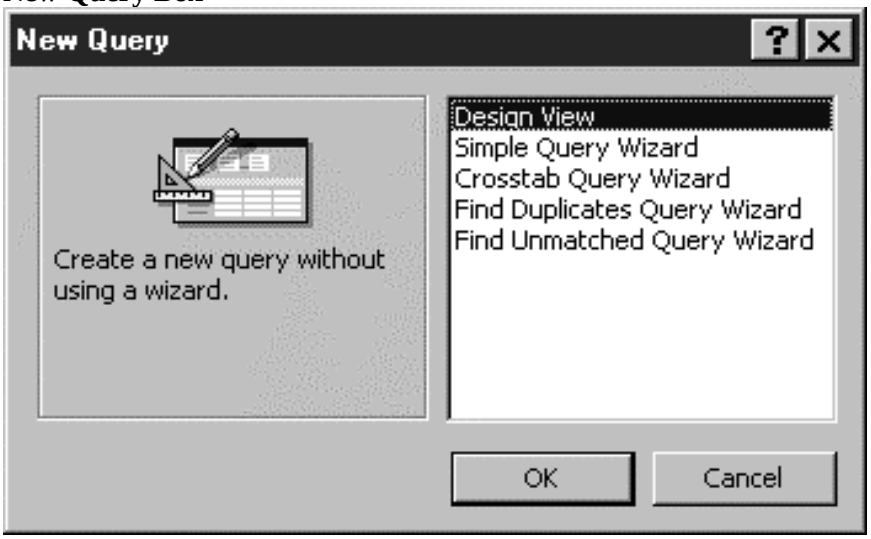
This example will walk you through the steps needed to create a query from the ARCU file. This query will contain the Attention field, Customer ID, Customer Name, Address, City, State and Zip code for the customer, all the balance amounts and we will create a total due field. This query will be used in Reports later to create a dunning letter.

Access – Database Container – Query - New



Select the Queries tab on the database container. Select the New button to create a new query.

New Query Box

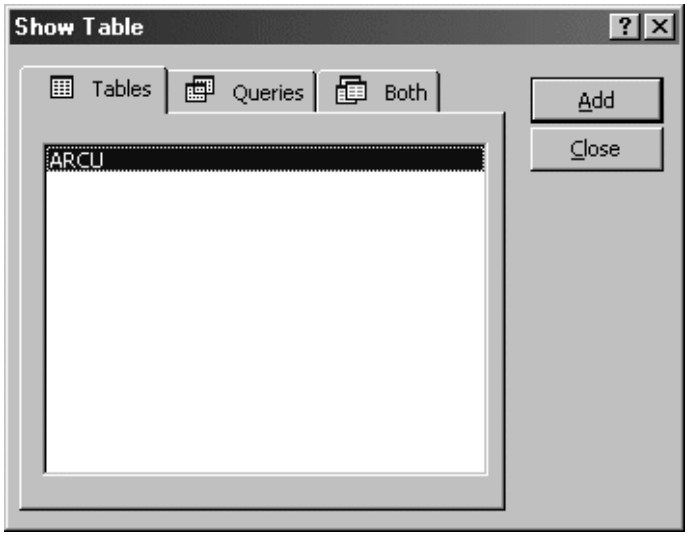


The New Query Box is displayed.

Select how you want to create the query.

Select Design View.

Show Tables Box

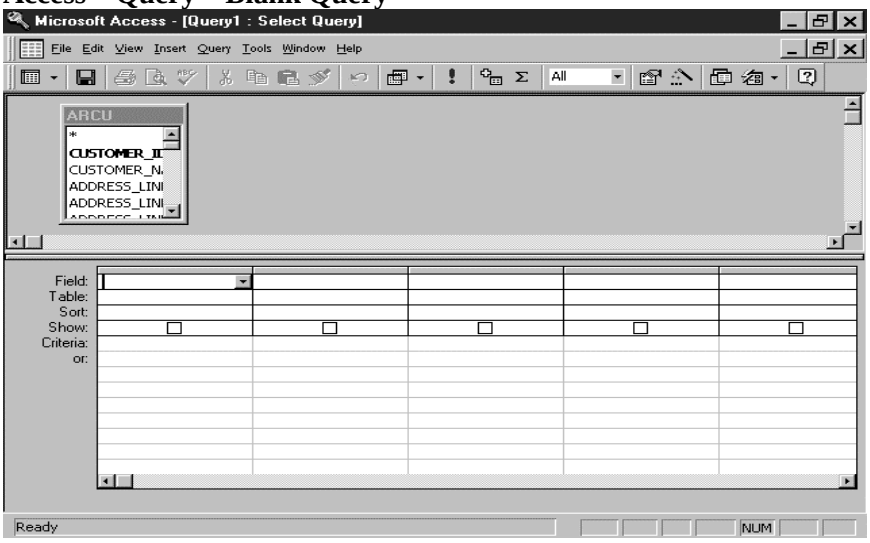


The Show Tables box is displayed.

Select the tables or queries you want to use to create this query.

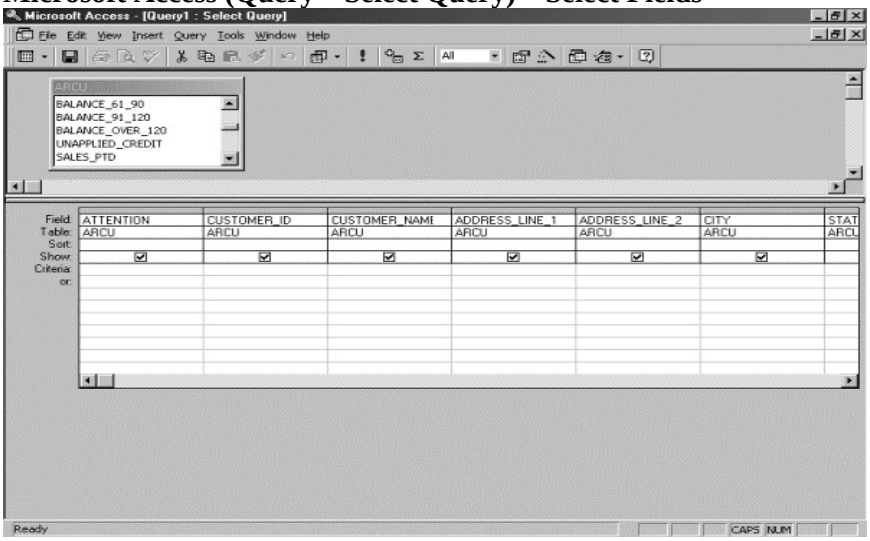
Select Add once all the selections have been made.

Access – Query – Blank Query



The tables or queries selected are displayed at the top of the query. The fields selected for the query are displayed at the bottom.

Microsoft Access (Query – Select Query) – Select Fields



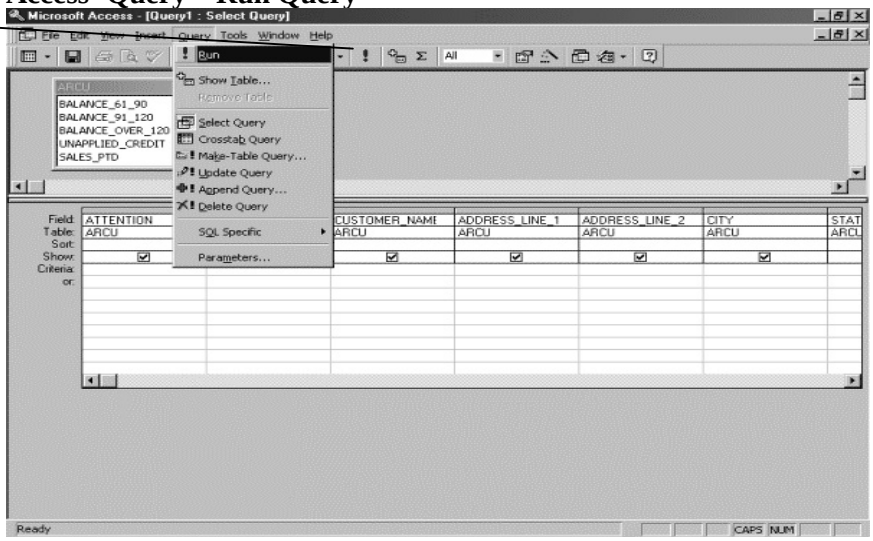
To select fields, drag and drop a field from the table to the field area, or double click on the field in the table to add it to the field area.

Select the following fields:

ATTENTION, **CUSTOMER_ID**, **CUSTOMER_NAME**, **ADDRESS_LINE_1**, **ADDRESS_LINE_2**, **CITY, STATE**, **ZIP_CODE**, **CURRENT_AMT_DUE**, **BALANCE_31_60**, **BALANCE_61_90**, **BALANCE_91_120**, **BALANCE_OVER_120**, **UNAPPLIED_CREDITS, NEW_FIN_CHARGE**, and **UNPAID_FIN_CHARGE**.

Access- Query – Run Query

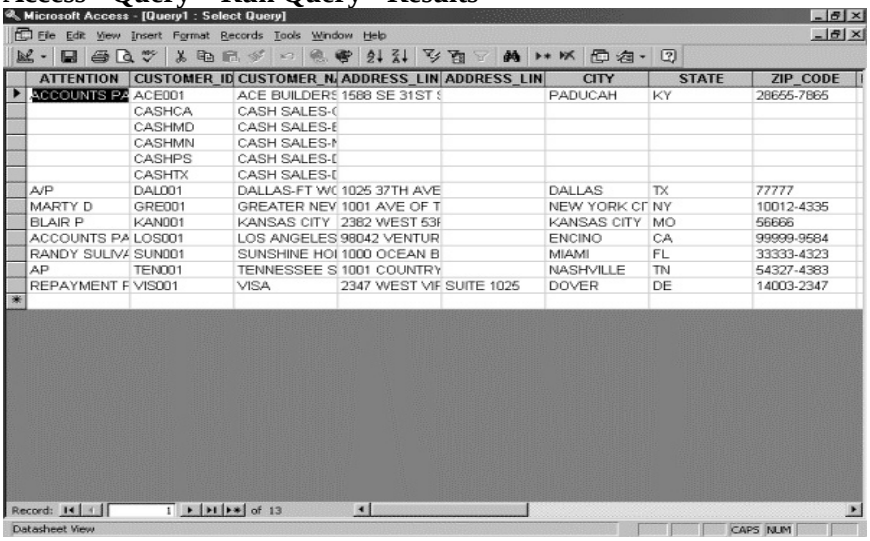
The Run icon



Next, run the query to display the data for the selected fields.

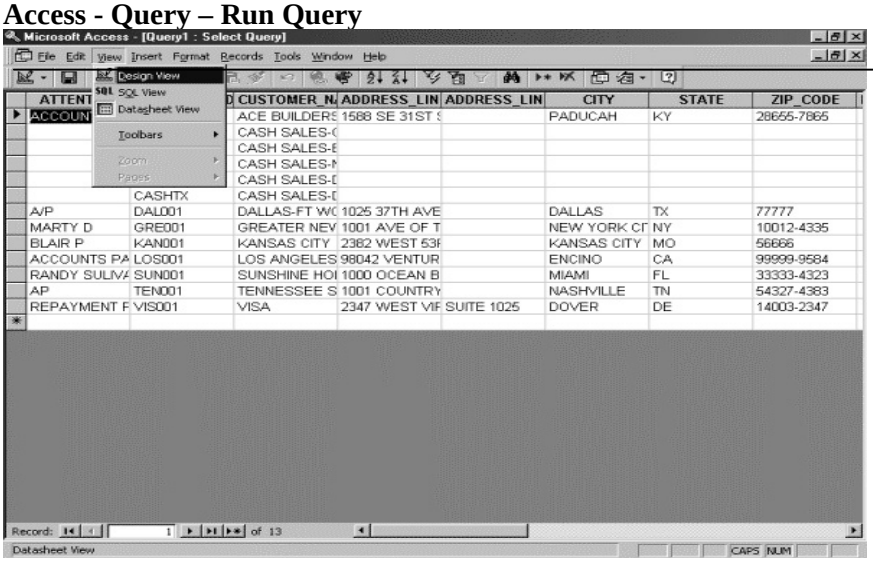
To run the query, select Query from the menu bar, then choose Run OR you can select the Run icon from the toolbar.

Access - Query – Run Query - Results



The Select Query results are displayed.

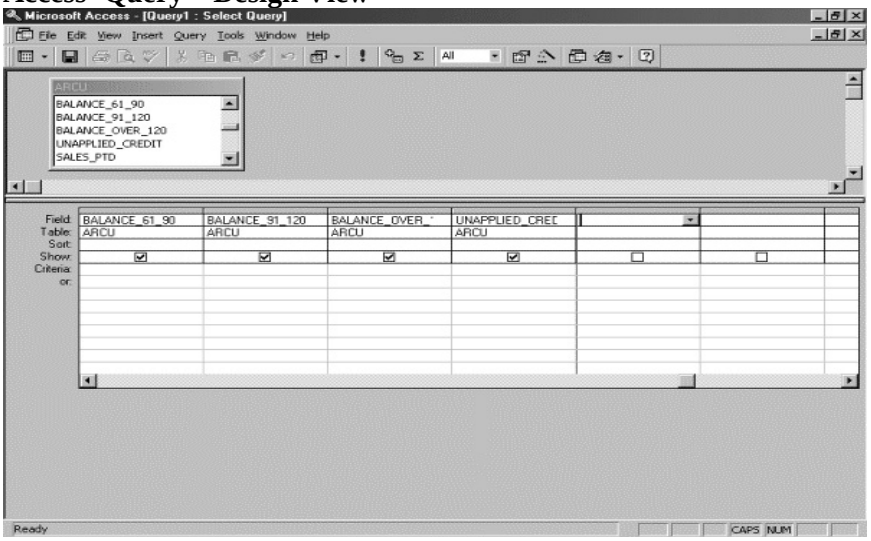
Access - Query – Run Query



Next, add a field to total all the balance fields.

Select View from the menu bar, and choose Design View OR select the Design View icon from the toolbar.

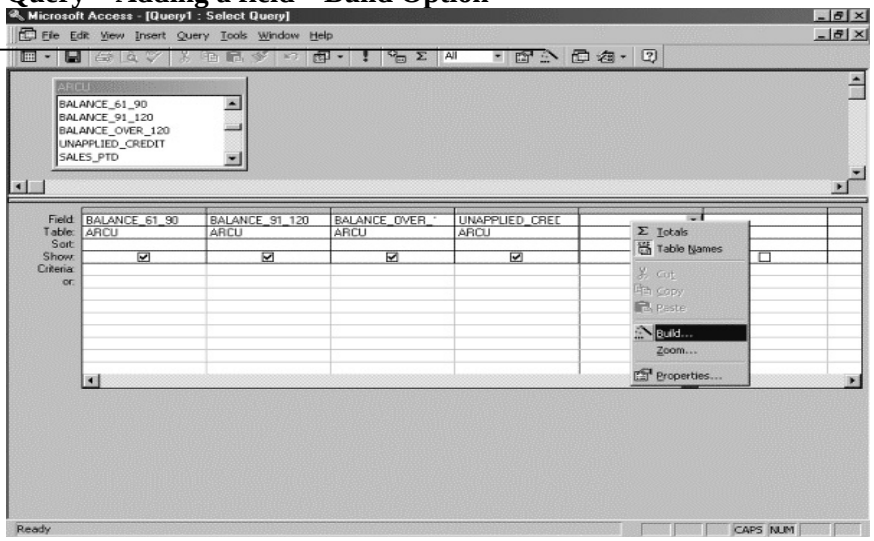
Access- Query – Design View



Select the first blank field.

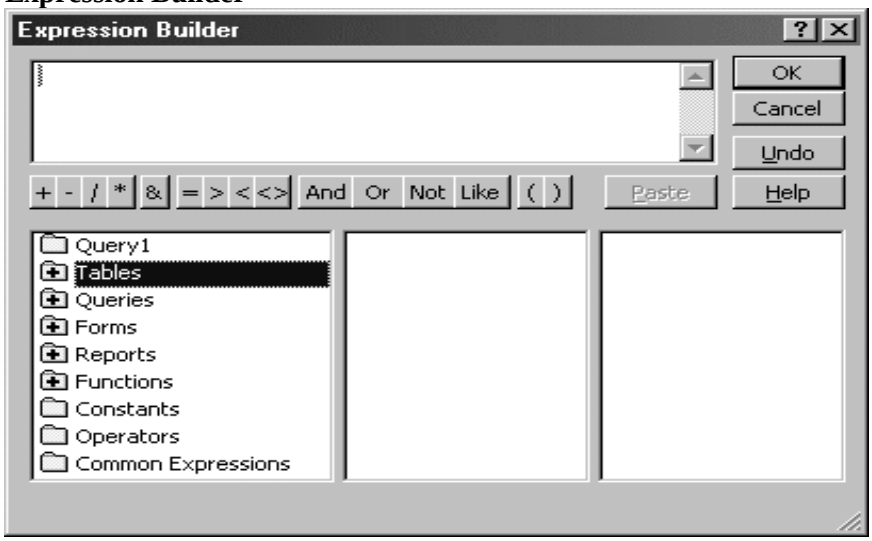
Query – Adding a field – Build Option

The Build icon



Right click in the field section and select Build OR select the Build icon from the toolbar.

Expression Builder



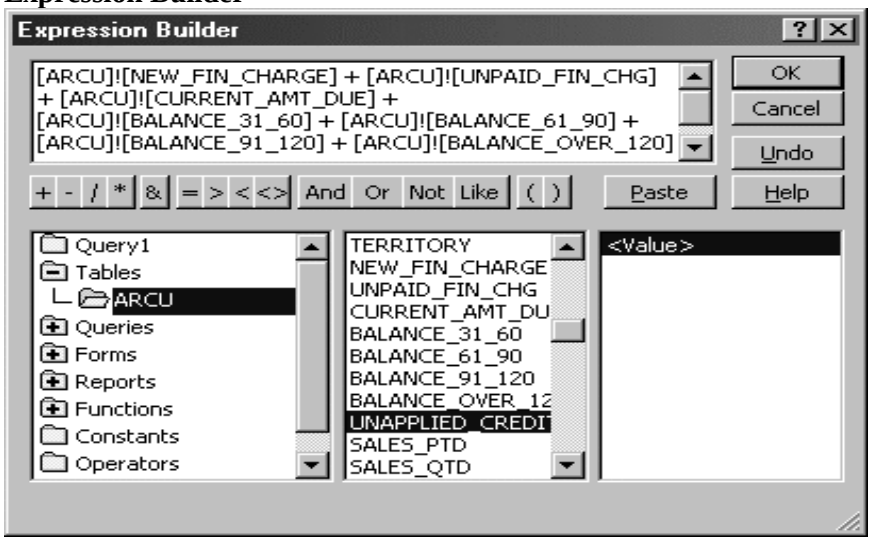
The Expression Builder is displayed.

Select the fields, functions and values you want to add to the Expression.

Field	**Description**
Function	Select the functions you want to use to create the expression.
Left Box	Select where the fields for the expression will come from. You can select any Tables, Queries, Forms or Reports added to the database container. You can also select built in Functions, Constants, Operators and Common Expressions. ***Select Tables and choose the ARCU table..***
Middle Box	Displays the valid fields or functions for the selected table, query, form, report, function, constant, operator or common expression from the first box. ***Paste the NEW_FIN_CHARGE, UNPAID_FIN_CHARGE, CURRENT_AMT_DUE, BALANCE_31_60, BALANCE_61_90, BALANCE_91_120, BALANCE_OVER_120, and the UNAPPLIED_CREDIT fields with a + function between each field.***
Right Box	Displays the values for the selected field or function from the middle box.
OK/Cancel/Undo/Help Buttons	Select OK to save the expression. Select Cancel if you do not wish to save the expression. Select Undo to go back one step in creating your expression,. Select Help to display help information about the expression builder or the function you are using.

The expression should look like the following.

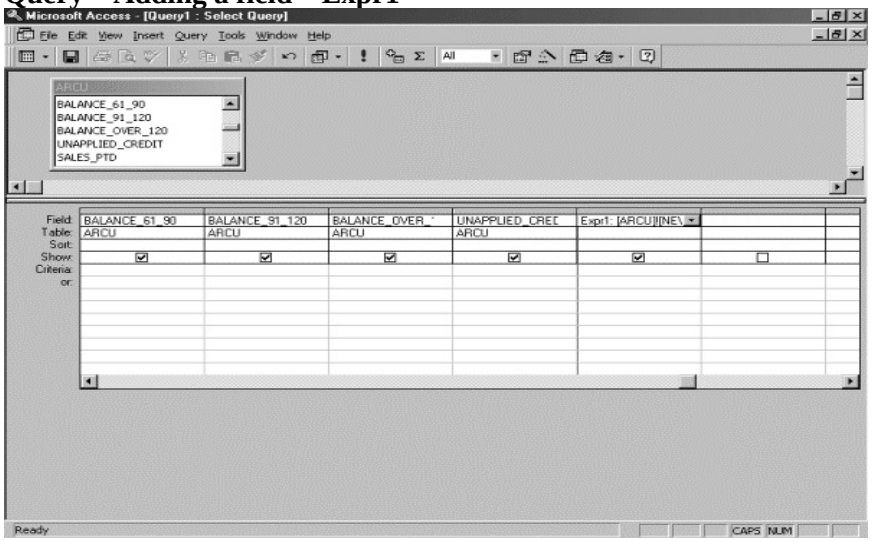
Expression Builder



[ARCU]![NEW_FIN_CHARGE]+[ARCU]![UNPAID_FIN_CHG]+
[ARCU]![CURRENT_AMT_DUE]+[ARCU]![BALANCE_31_60]+
[ARCU]!+[BALANCE_61_90]+[ARCU]![BALANCE_91_120]+
[ARCU]![BALANCE_OVER_120]+[ARCU]![UNAPPLIED_CREDIT]

Select the OK button to save the expression.

Query – Adding a field – Expr1

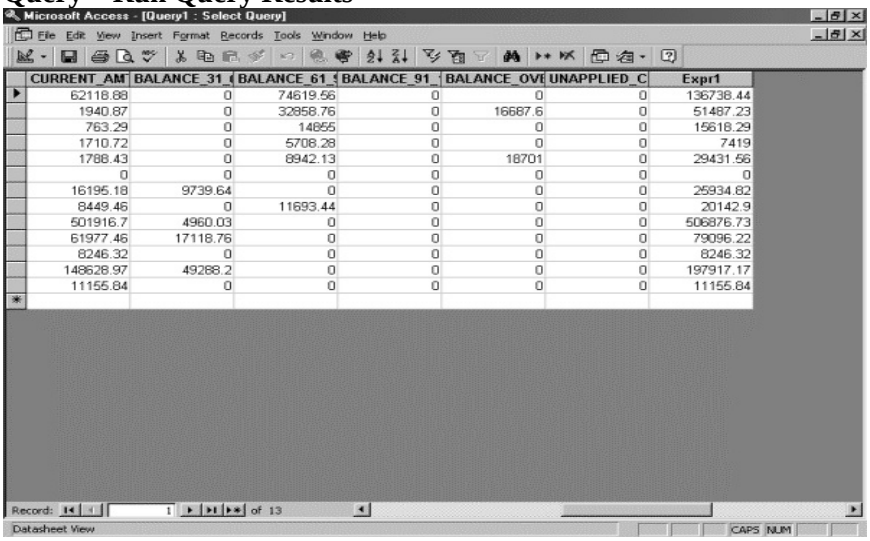


The field should say Expr1 and display the expression entered to create the field.

Place a check in the Show section to display the field on the query.

Run the query again.

Query – Run Query Results

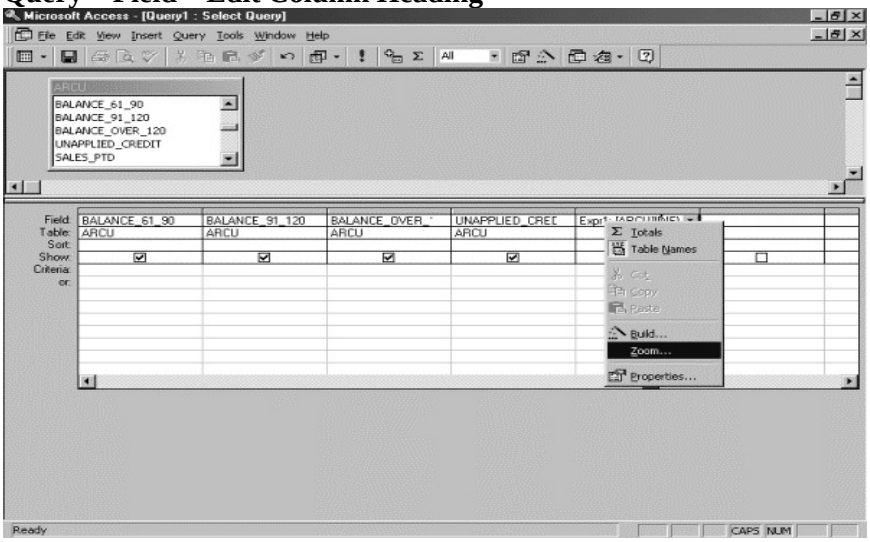


The last column now has the total amount due with the column heading of Expr1

Next, change the heading of the expression from Exp1 to Total Due.

Select Design View from the Run Query Results

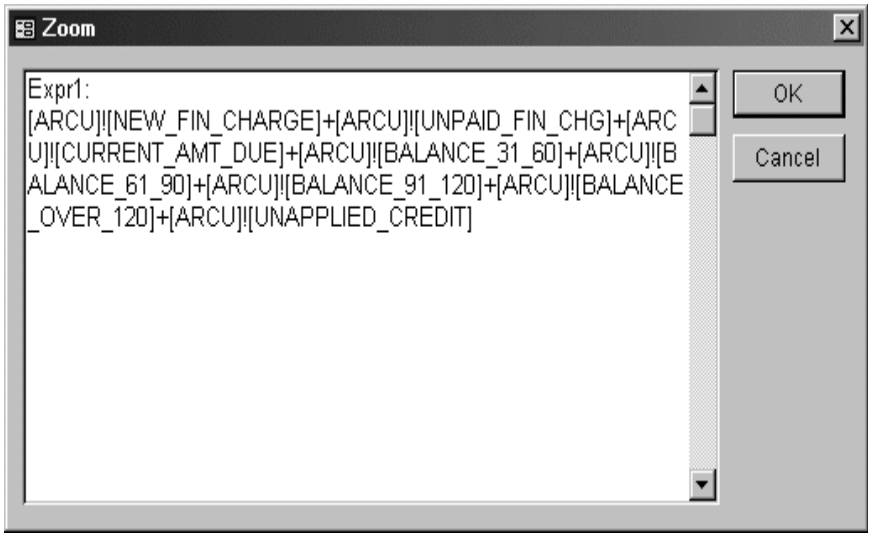
Query – Field – Edit Column Heading



Select the Exp1 field.

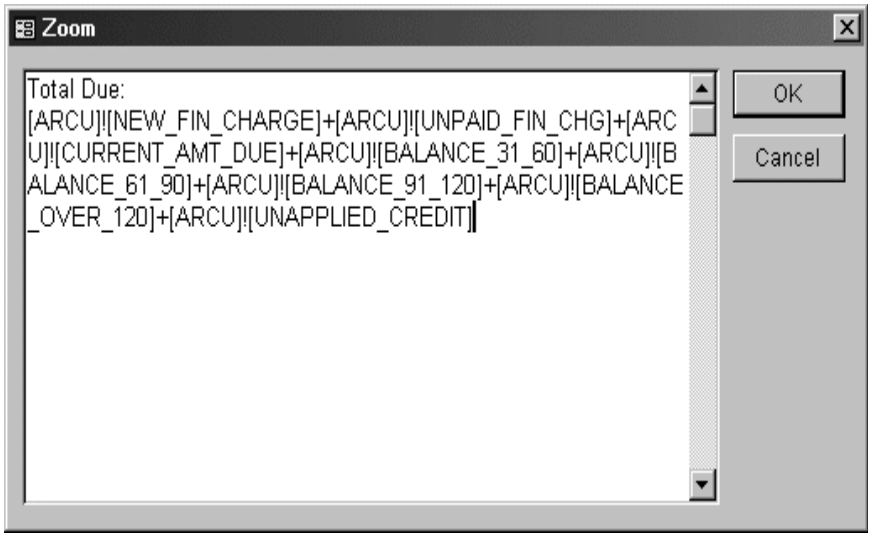
Right click in the field section and select Zoom of use Shift F2 to display the zoom window.

Zoom Window



The Zoom window is displayed

Zoom Window

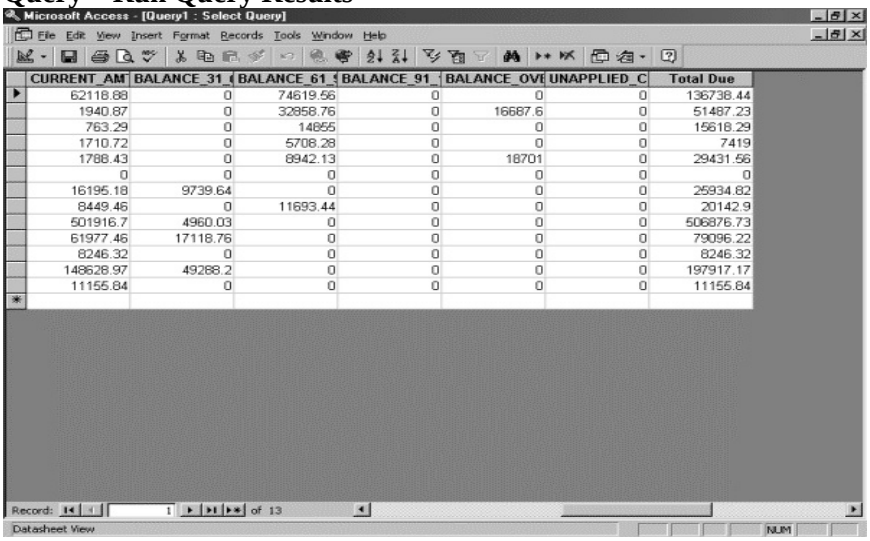


Change the Expr1 to Total Due.

Select OK to save the changes.

Run the query again.

Query – Run Query Results



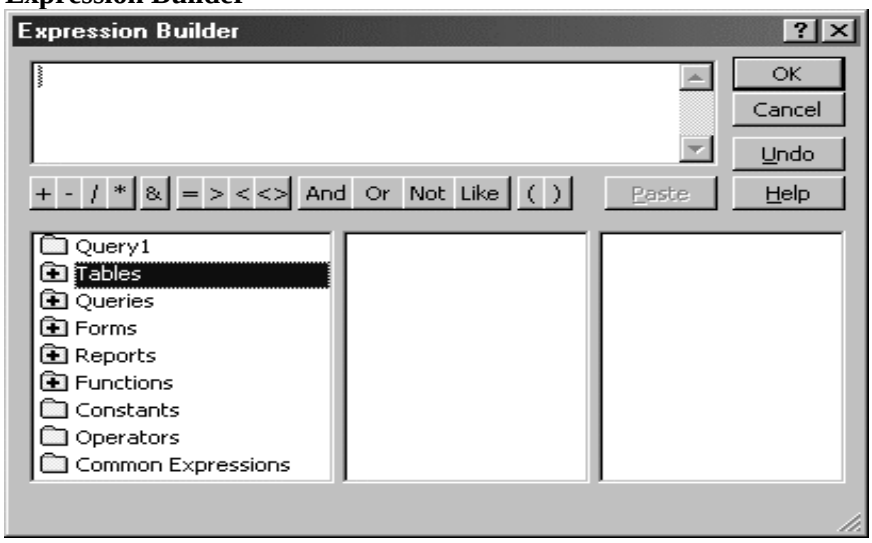
Now the column heading for the expression is Total Due.

Next, we will create a customized field for the City, State and Zip Code.

Return to the Design view of the query.

In the first blank field after Total Due right click and select Build Expression OR select the Build Expression icon from the toolbar.

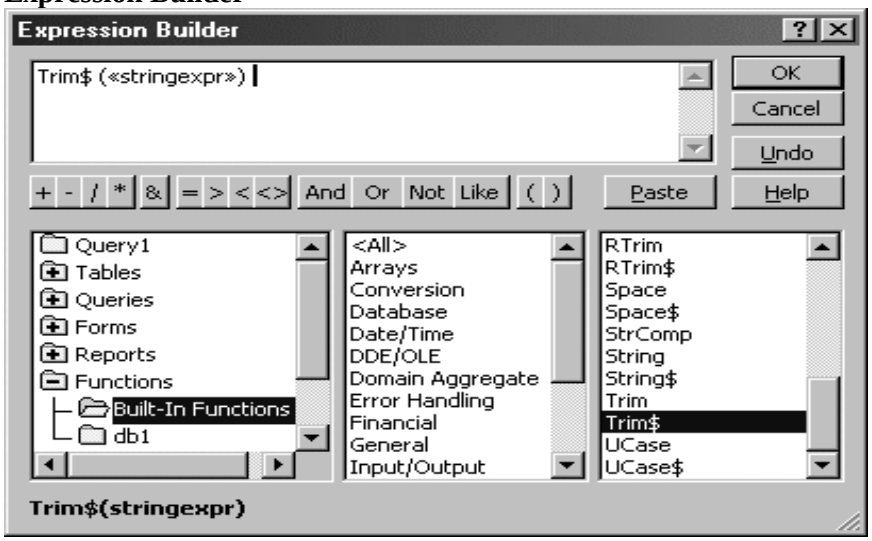
Expression Builder



The Expression Builder is displayed.

The field we are creating will strip away all blank spaces from the City, State and Zip Code fields and add formatting to print a comma and space after the city, and one space between the state and zip code.

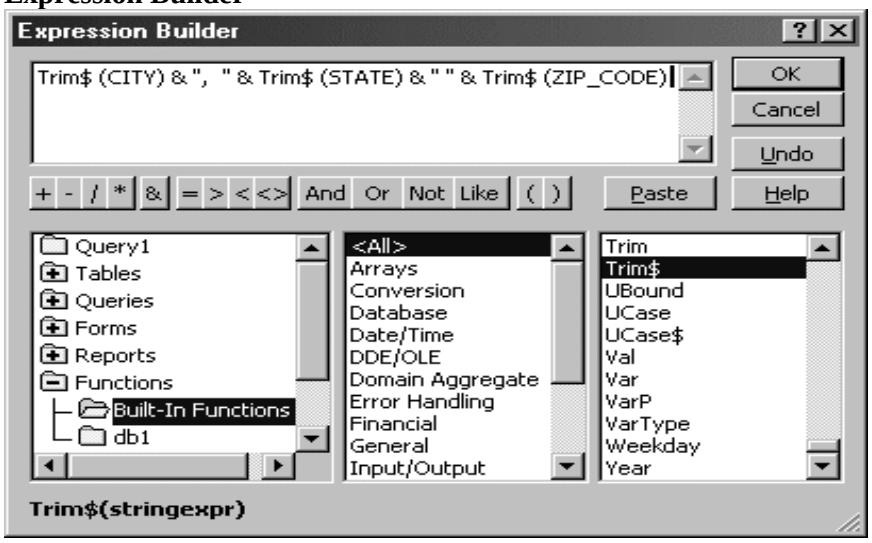
Expression Builder



Select Built In Functions in the first box. In the last box select the Trim$ function. Paste the Trim$ function to the top of the expression.

The Trim$ functions will strip away all blank spaces from the selected field.

Expression Builder



Within the parentheses type CITY to add the City field to the expression. After the right parenthesis select the & connector, then type “, “. This will strip away all blank spaces before and after the City field and print a comma and a space after the city.

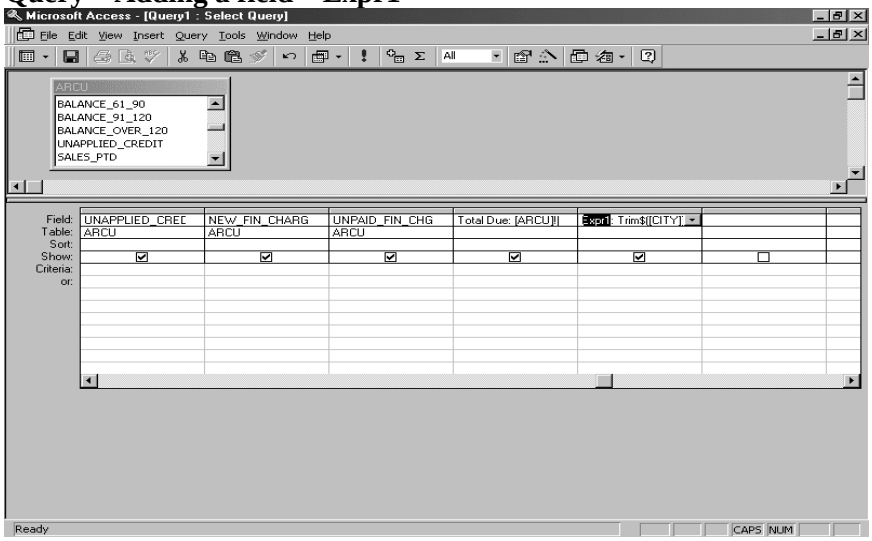
Type or past another & connector and select the Trim$ function. Enter STATE in the parentheses. Select the & connector again and type “ “. Select the Trim$ function again and type ZIP_CODE within the parentheses.

The expression should look like the following:

Trim$(CITY) & “, “ & Trim$(STATE) & “ “ & Trim$(ZIP_CODE)

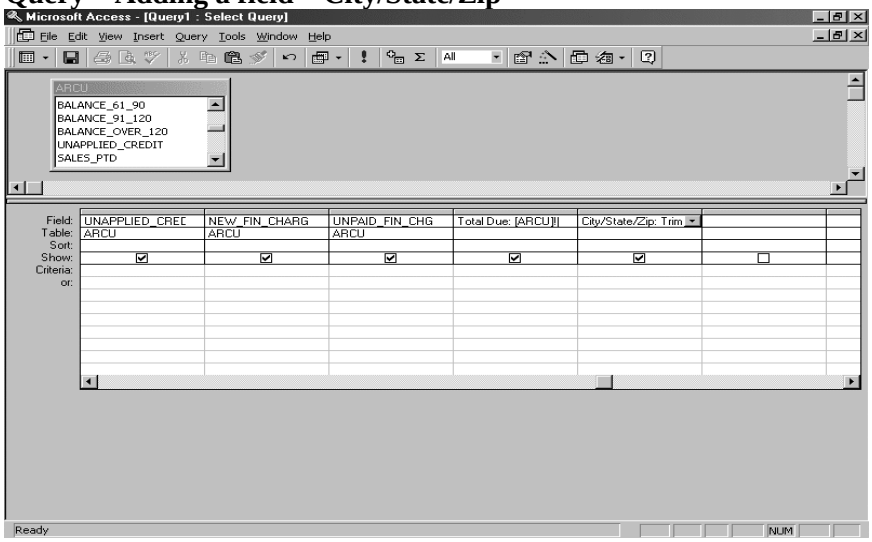
Select the OK button to save the expression.

Query – Adding a field – Expr1



The field is added to the query.

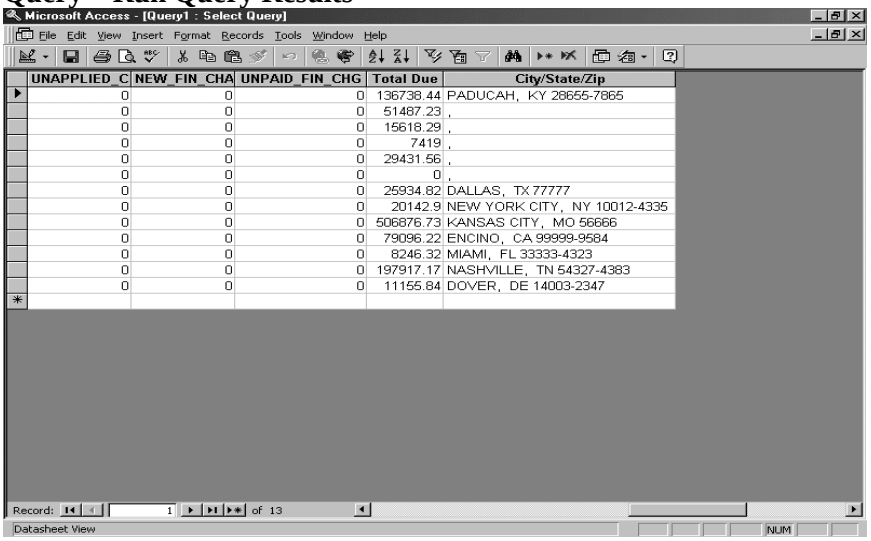
Query – Adding a field – City/State/Zip



Change the Expr1 label to City/State/Zip.

Run the query again.

Query – Run Query Results

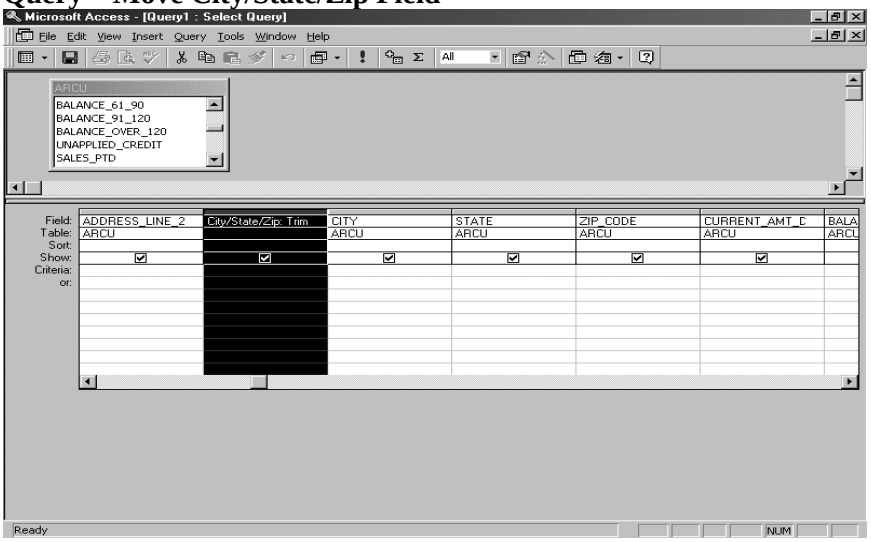


The City/State/Zip field now prints on the query.

Next, we will remove the City, State and Zip Code individual fields and replace them with the City/State/Zip Field.

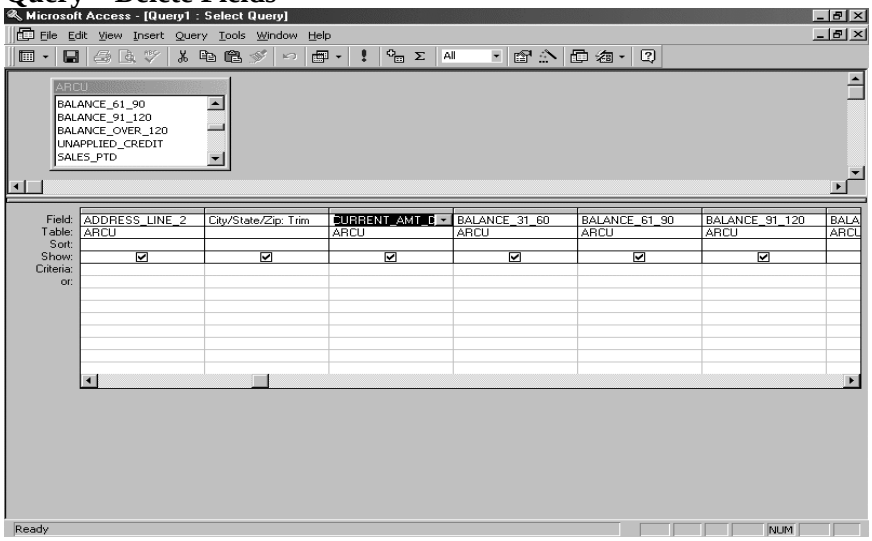
Return to the design view of the query.

Query – Move City/State/Zip Field



Move the City/State/Zip field so that it is after the Address Line 2 field.

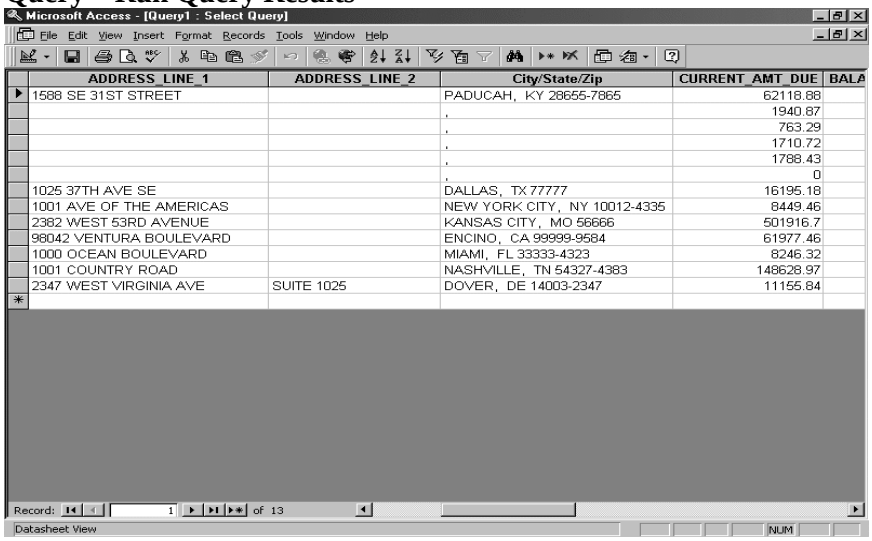
Query – Delete Fields



Delete the CITY, STATE and ZIP_CODE fields from the query.

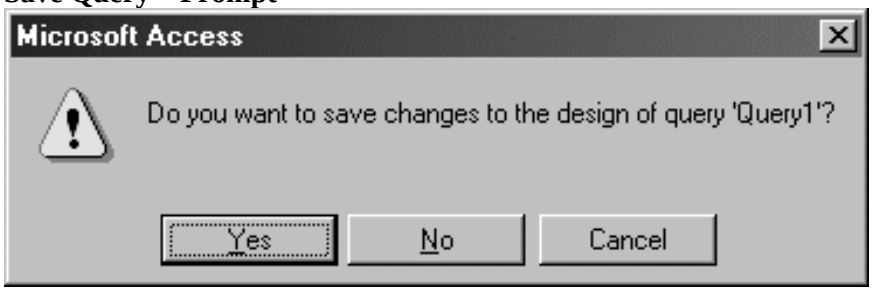
Run the query again.

Query – Run Query Results



The CITY, STATE and ZIP_CODE fields are not replaced with the City/State/Zip field.

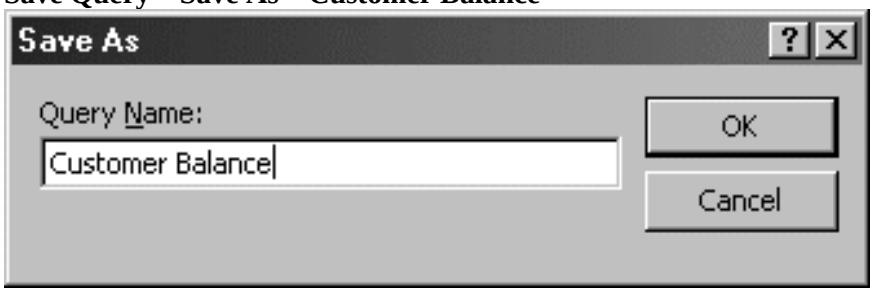
Save Query – Prompt



Exit Query.

When prompted to save the query save as Customer Balance.

Save Query – Save As – Customer Balance

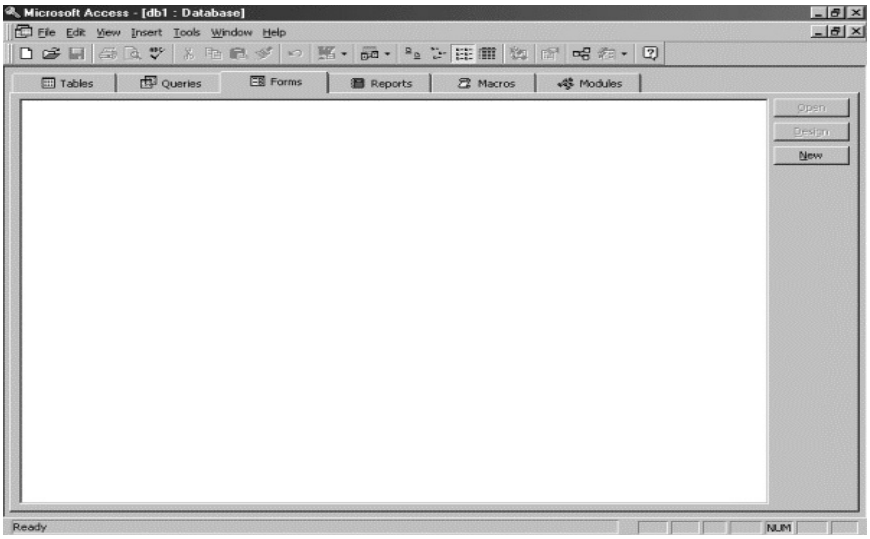


Creating a Form

You can use Forms in Access with the OSAS data files and ODBC to create special forms to view data, and with the Read/Writer drivers and Access 97, you can create forms for data entry.

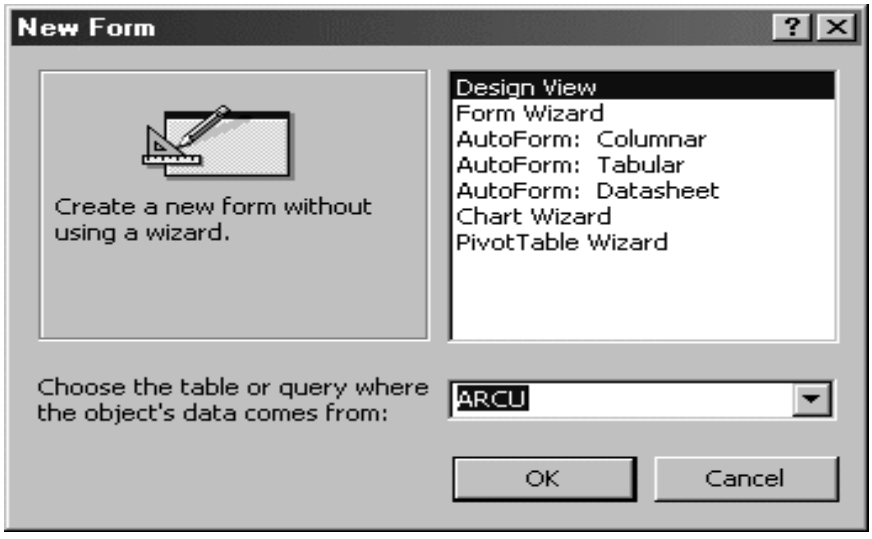
This example will walk you through the steps needed to create a simple form that displays the Customer ID and a chart for the customer showing the Sales Year to Date and Profit Year to Date amounts.

Database Container – Forms - New



Select the Forms tab on the database container. Select New to create a new form

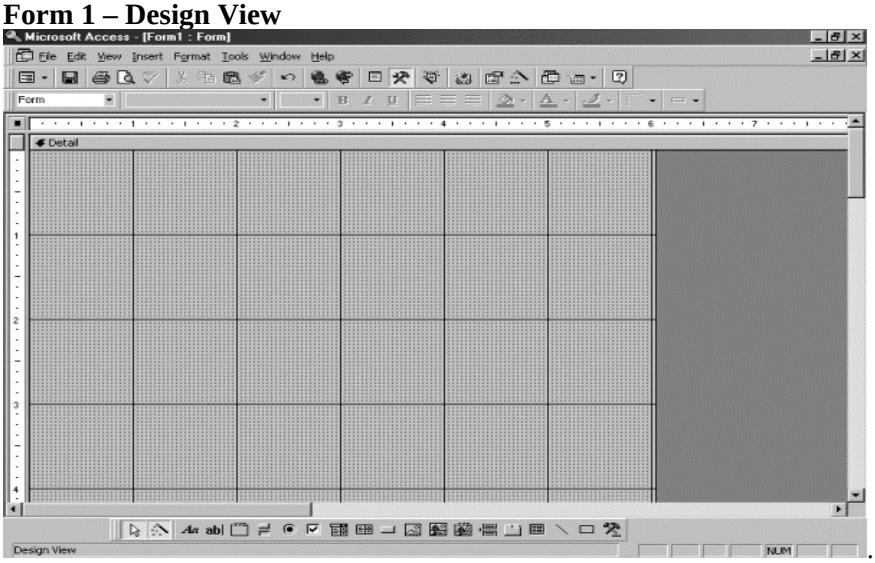
New Form Window



Select how you want to create the form and the Table or Query you want to use for the form.

For this form, select Design View and the ARCU table.

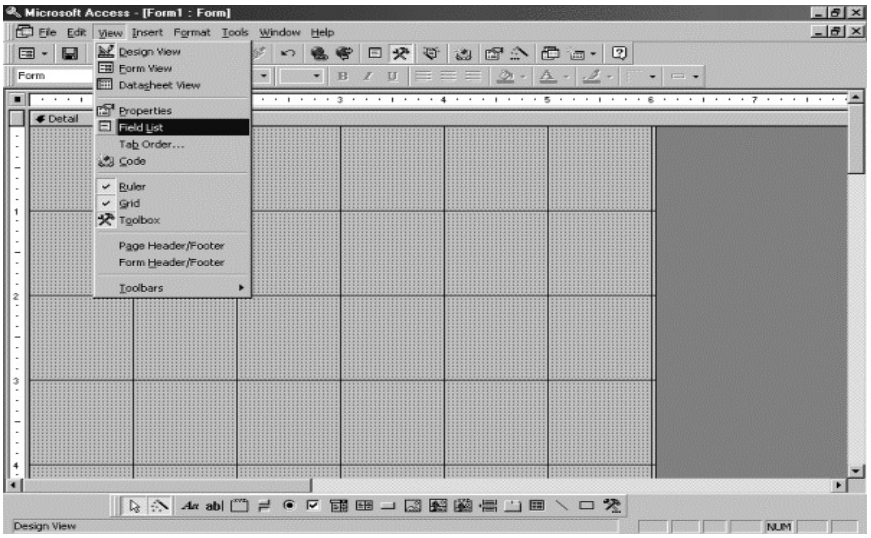
Form 1 – Design View



The Form1: Form screen is displayed

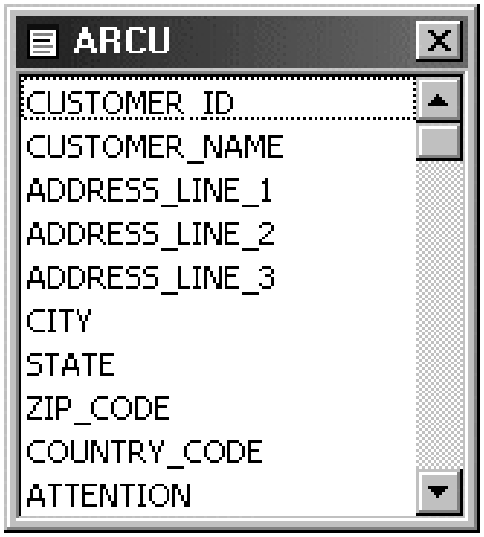
Resize the form to 6 inches across and 6 inches down.

View – Field List



Select View from the menu bar, and choose Field List.

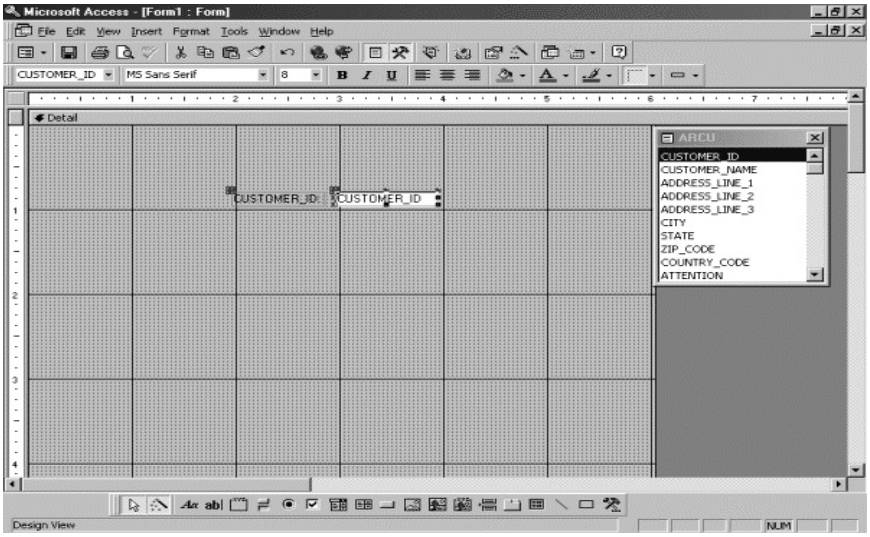
Field List – ARCU Table



The fields for the selected table are displayed.

Select the fields you want on the form.

Form1: Form – Customer ID Field

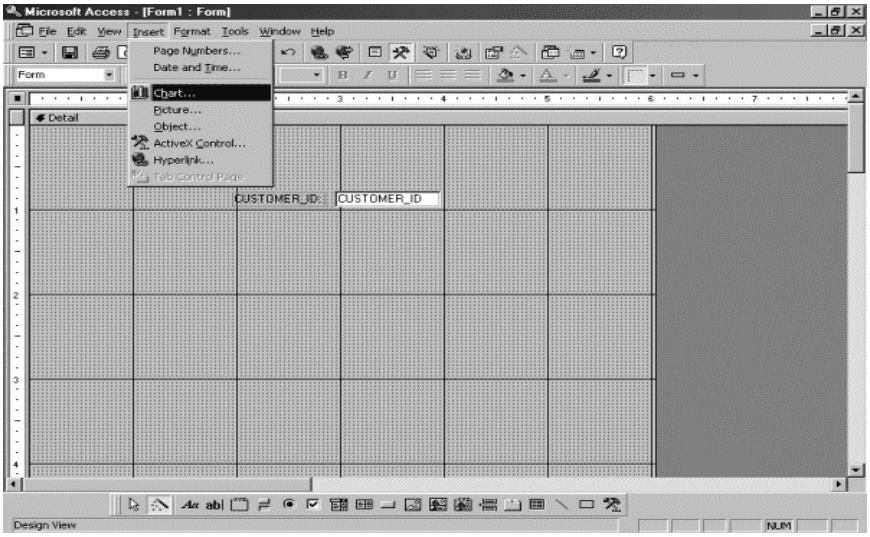


Select and hold the CUSTOMER_ID field and drag it to the form. Center it on the first row.

There are two fields added to the form. The first is the Field Label and the second is the Field.

Next, we will insert the chart to display the Sales YTD and Profit YTD amounts.

Form 1 – Insert Chart

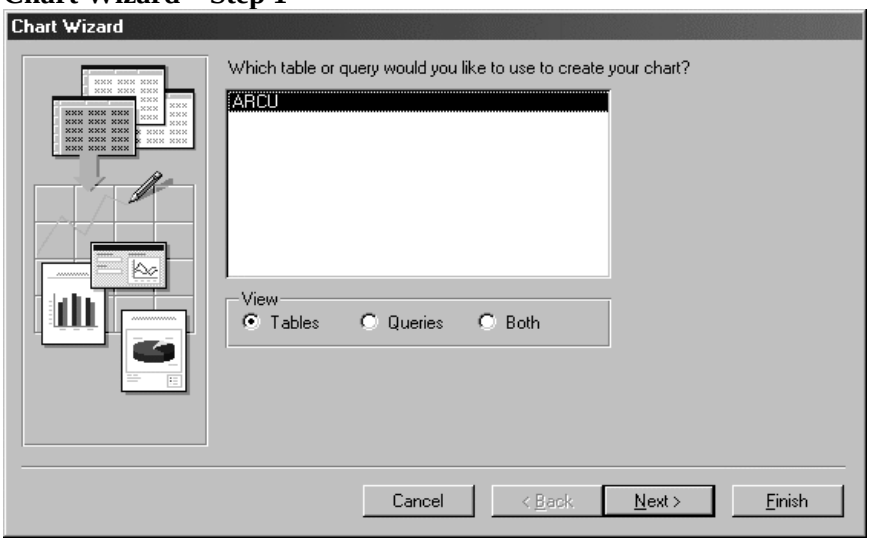


Select Insert from the menu bar and choose Chart.

The cursor changes to a small plus sign. You need to draw the space where you want to position the chart and the size of the chart.

Center the chart below the Customer ID field. Make it four squares across and four squares down.

Chart Wizard – Step 1



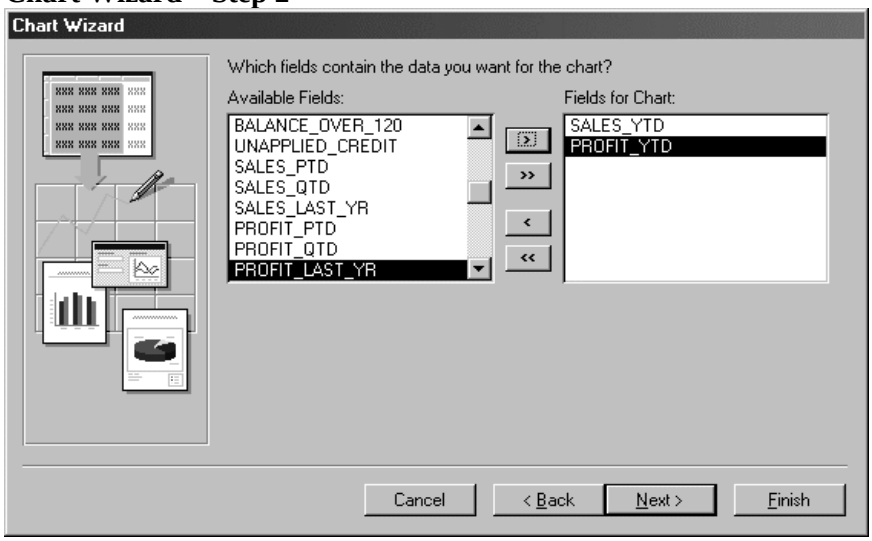
The Chart Wizard is displayed.

Select the Tables or Queries you want the data to come from.

For this chart, select the ARCU table.

Select the Next button.

Chart Wizard – Step 2

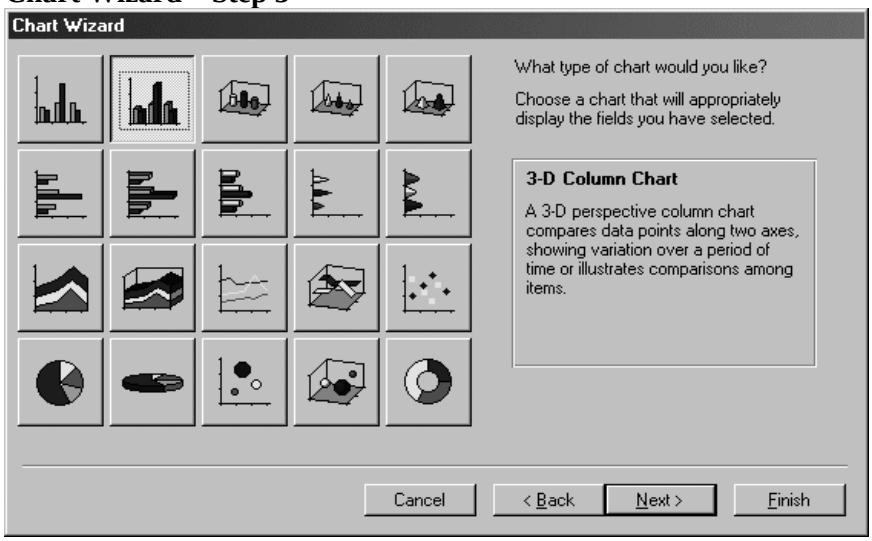


Next, select the fields you want to appear on the chart.

Select the SALES_YTD and PROFIT_YTD fields for this chart.

Select the Next button.

Chart Wizard – Step 3

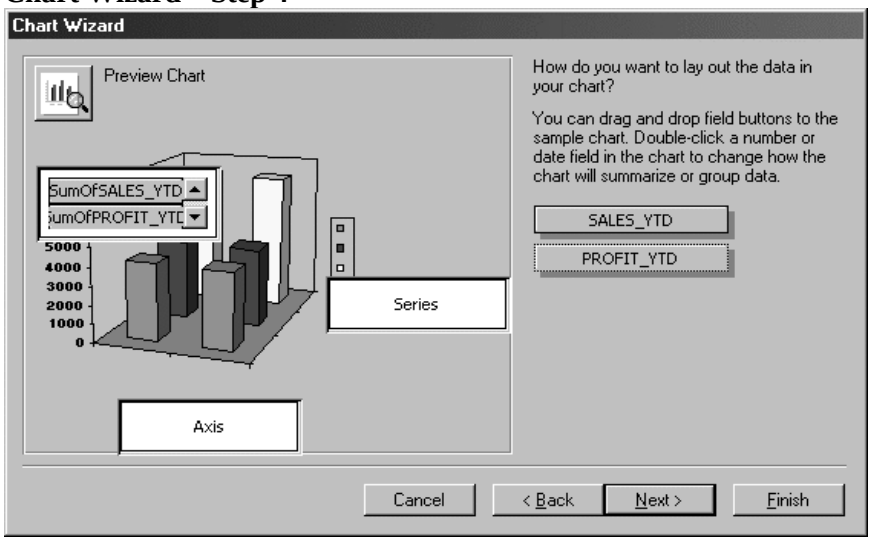


Next, select the type of chart you want to create.

Select Column Chart

Select the Next button.

Chart Wizard – Step 4



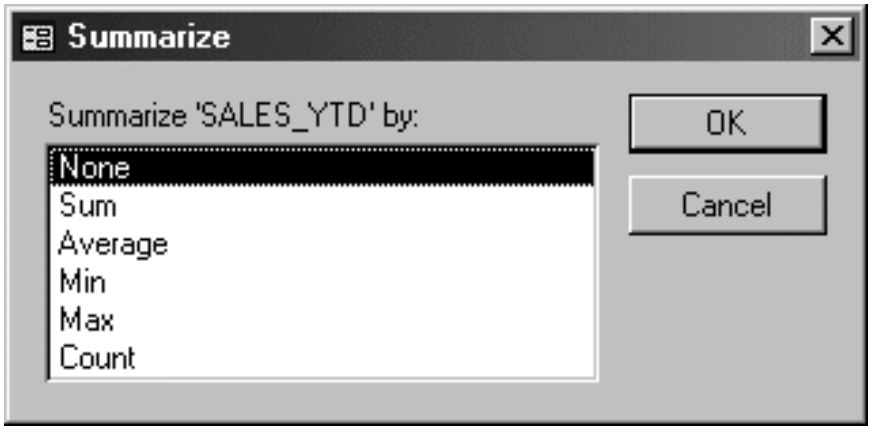
Next, select how you want the data to display on the chart.

Add the SALES_YTD and PROFIT_YTD fields to the Data section.

The fields now display as Sum of SALES_YTD and Sum of PROFIT_YTD.

Double click on the Sum of SALES_YTD field.

Summarize Screen



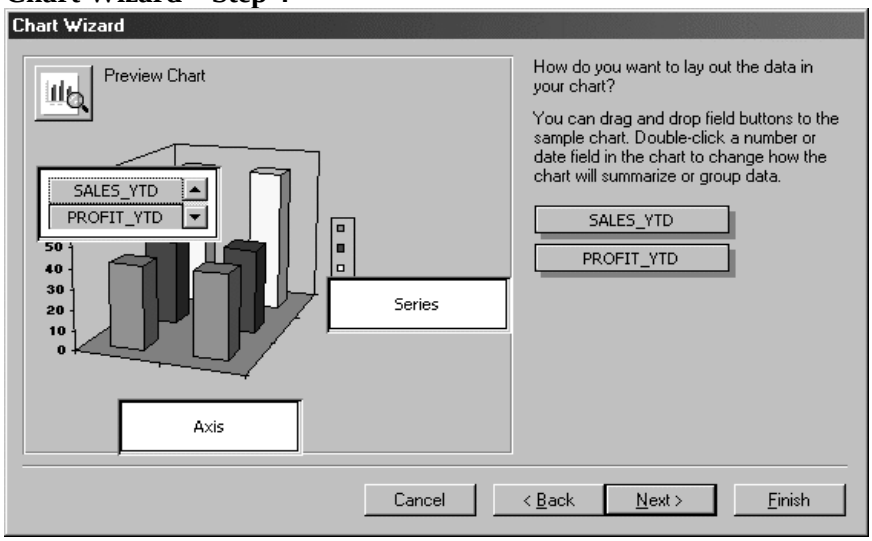
The Summarize screen for SALES_YTD field is displayed.

Select how you would like to total or summarize the data on the chart.

Select None for the SALES_YTD field and click the OK button to save the changes.

Repeat the process for the PROFIT_YTD field.

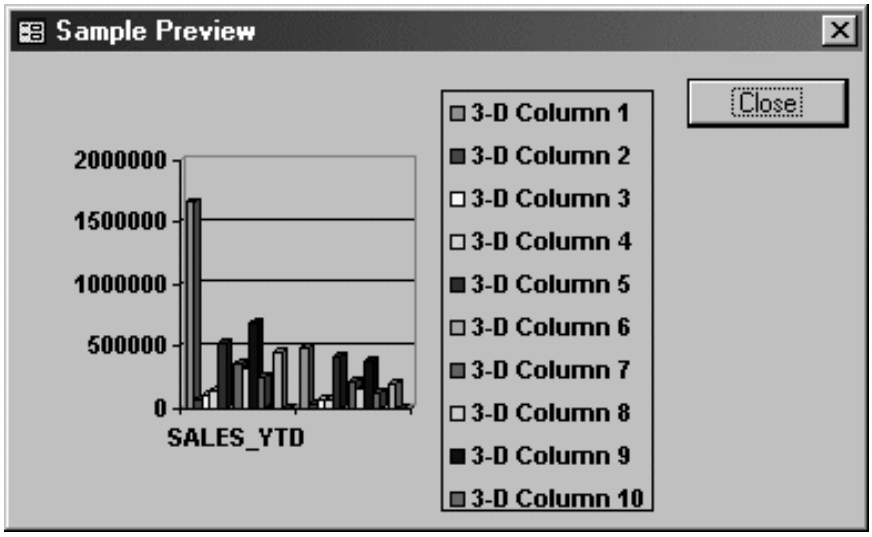
Chart Wizard – Step 4



Step 4 of the chart wizard is re-displayed.

The data fields now display as SALES_YTD and PROFIT_YTD.

Chart Preview

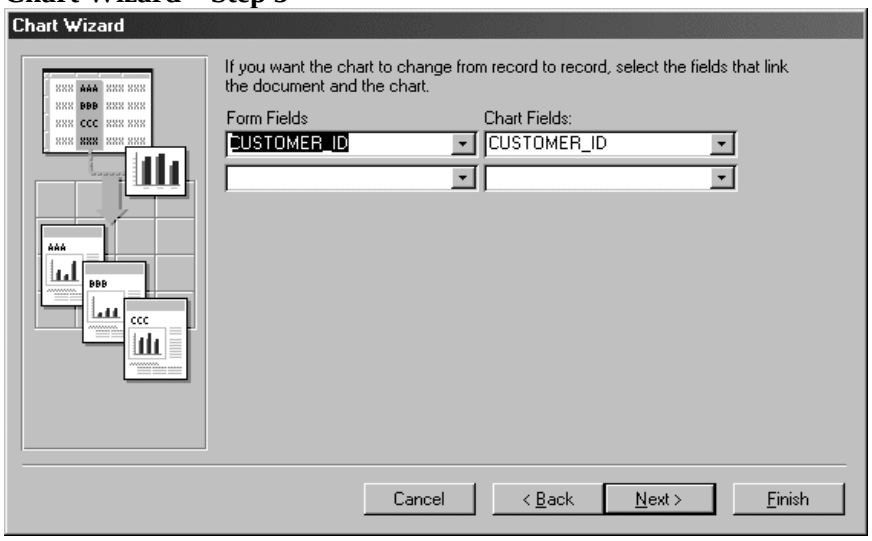


Select the Preview Chart button to see a sample of the chart.

Select the Close button when you are done with the preview

Select the Next button.

Chart Wizard – Step 5



Choose the fields on the form that link to the fields on the chart, so when the forms data is changed the charts data will change to match the form.

Select Customer ID for Form Fields and Chart Fields

Select the Next button.

Chart Wizard – Step 6

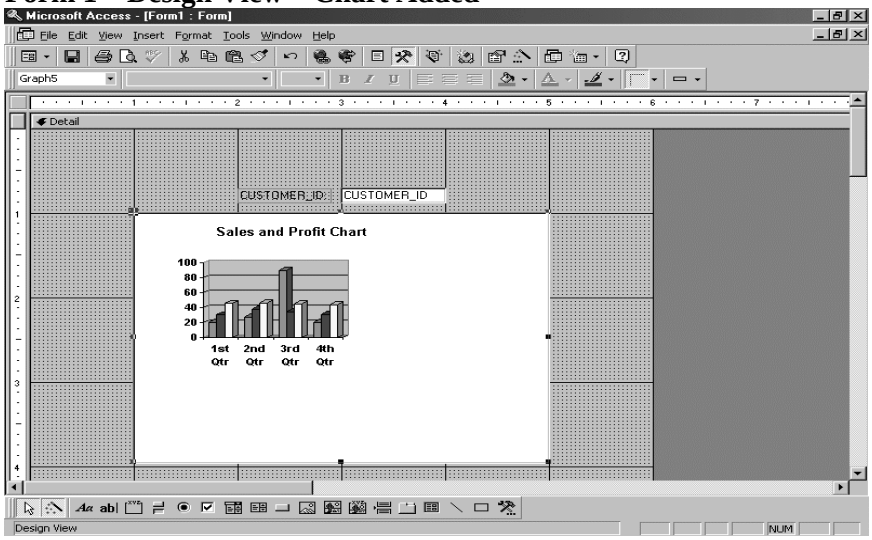
Enter the name of the chart or accept the default name.

Select if you want to display a legend on the chart and if you want to display help with charts.

Enter Sales and Profit Chart for the chart name and select No, don't display a legend.

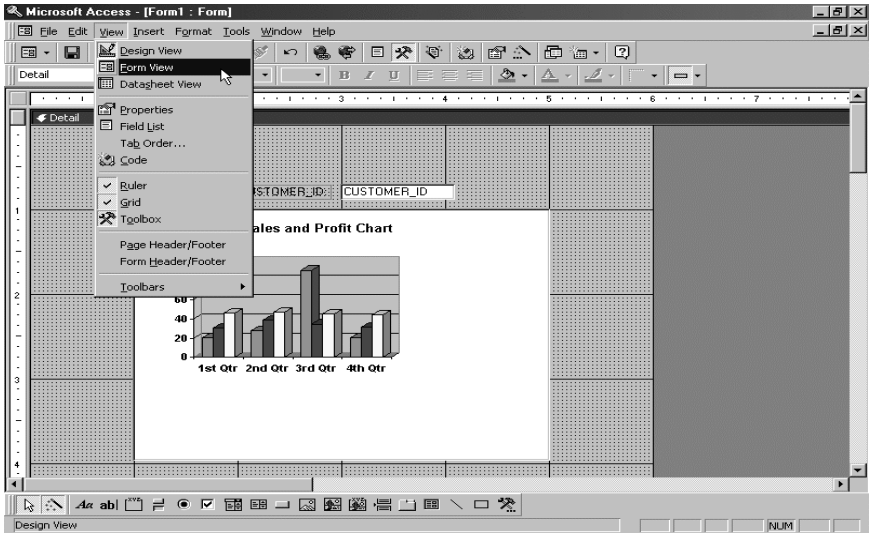
Select the Finish button.

Form 1 – Design View – Chart Added



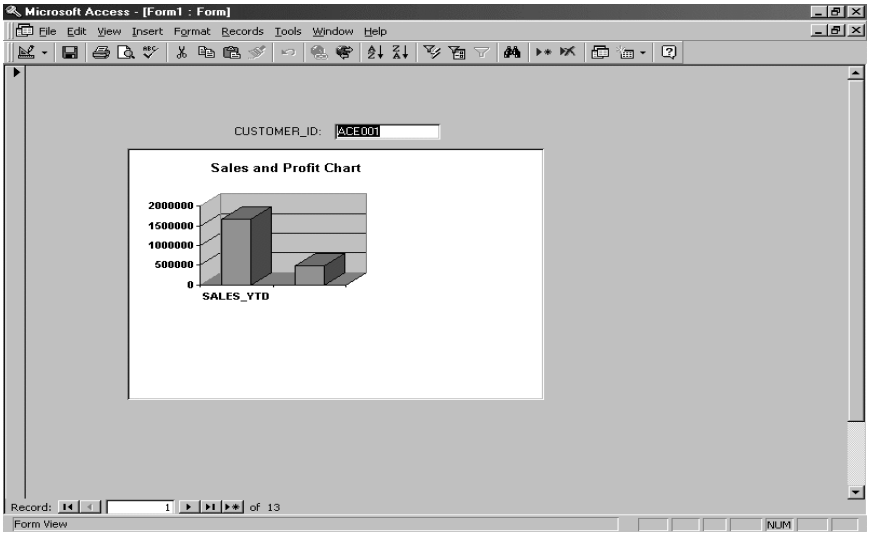
The design view screen is re-displayed, with the chart added.

Form 1 – Select Form View



Select View from the menu bar and choose Form View.

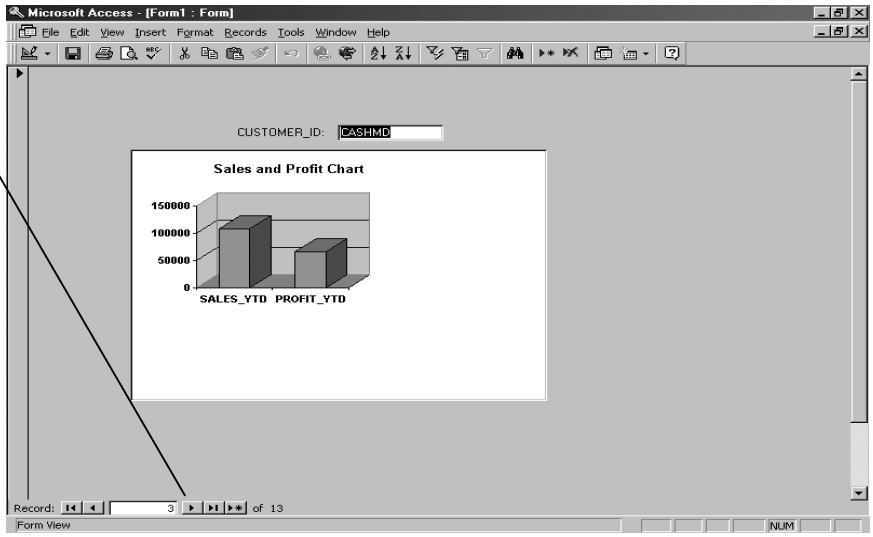
Customer ID Form/Chart – ACE001



The Form and chart are displayed showing the first customer in the file with the year to date sales and profit amounts displayed in the chart.

Select this button to proceed to the next record in the file.

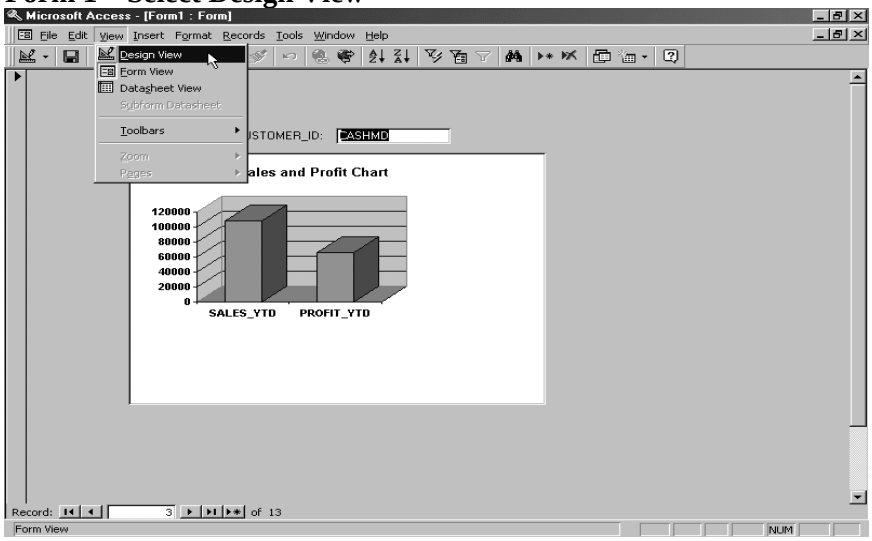
Customer ID Form/Chart – CASHMD



You can scroll through the customers by clicking to the next record.

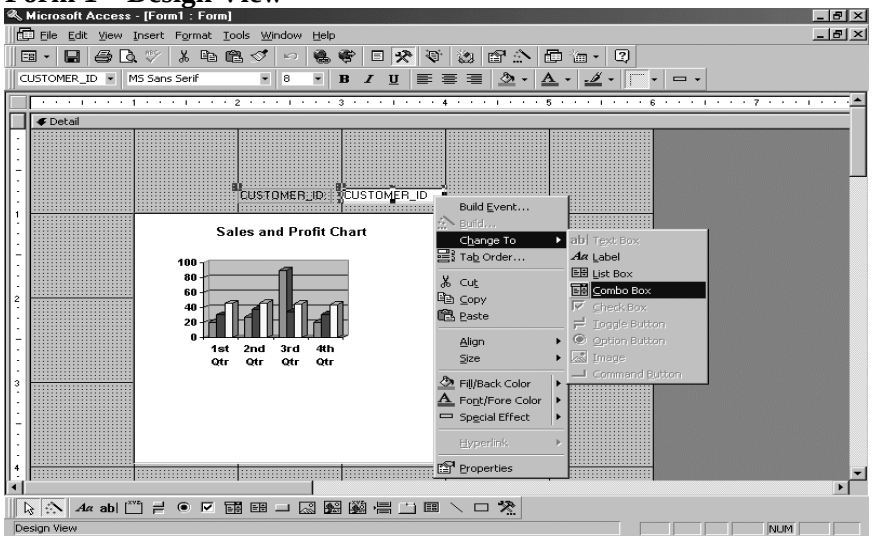
Next, we will make the Customer ID field a combo box, so we can use a drop down box to select the customer for the form and chart, and we will edit the chart to make it a little larger and to display the data values on the chart.

Form 1 – Select Design View



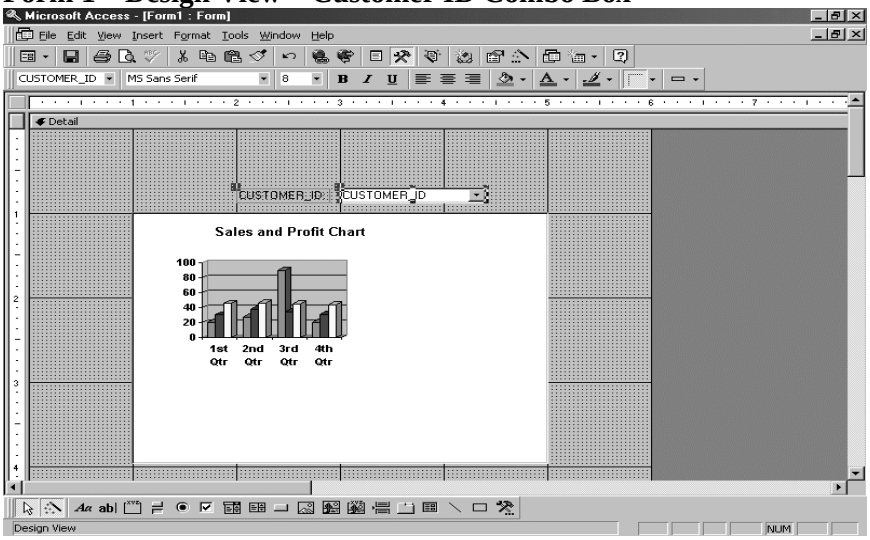
Select View from the menu bar and choose Design View

Form 1 – Design View



In design view, right click on the Customer ID field. Select the Change To function and choose Combo Box.

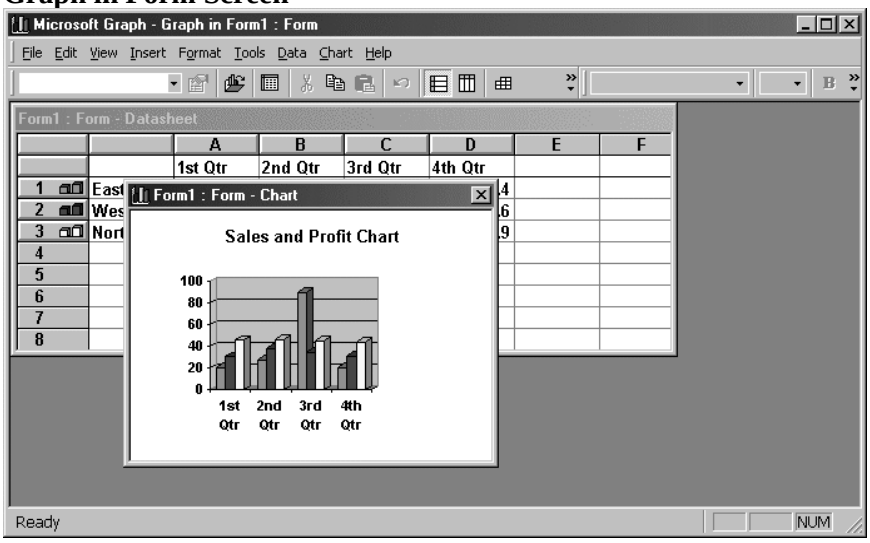
Form 1 – Design View – Customer ID Combo Box



The Customer ID field now has a combo box.

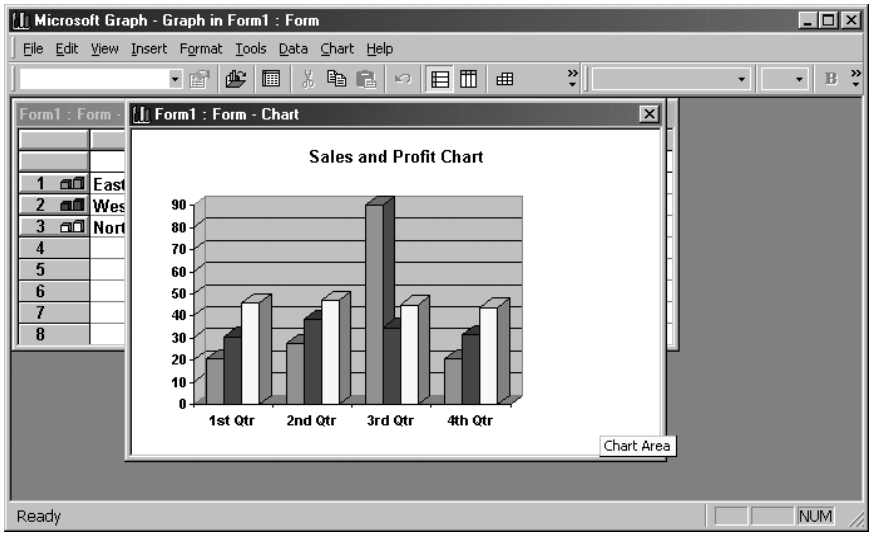
Double click on the chart field to edit the chart.

Graph in Form Screen



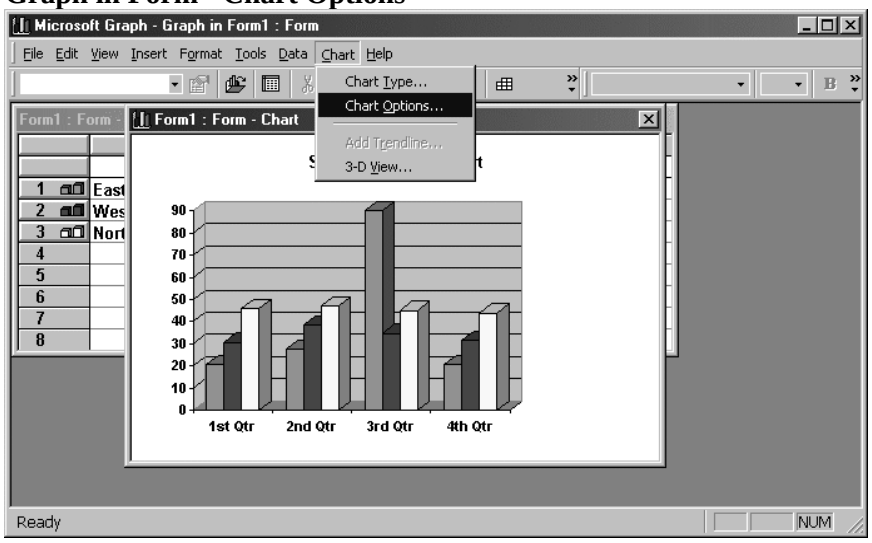
The Graph in Form screen is displayed.

Resize Chart Area



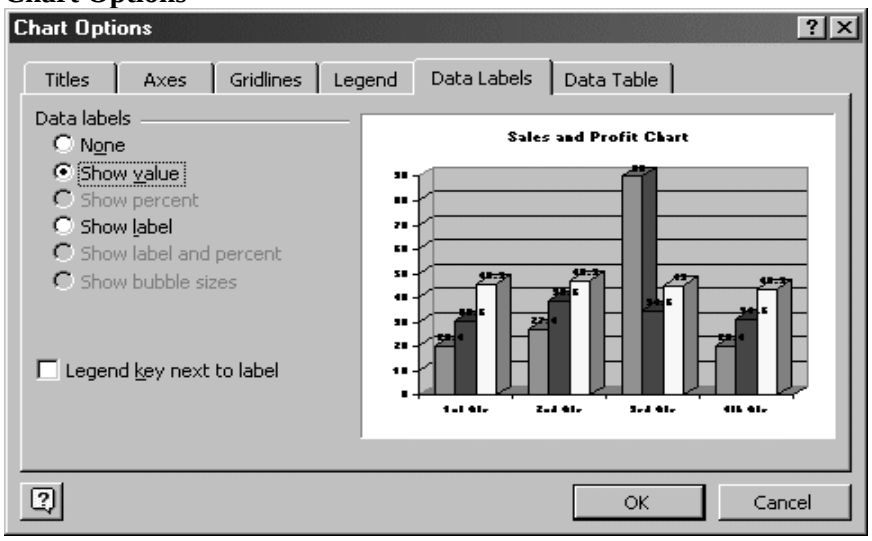
Increase the size of the chart by dragging the edges out until the chart is the size you would like.

Graph in Form - Chart Options



Select Chart from the menu bar and choose Chart Options.

Chart Options

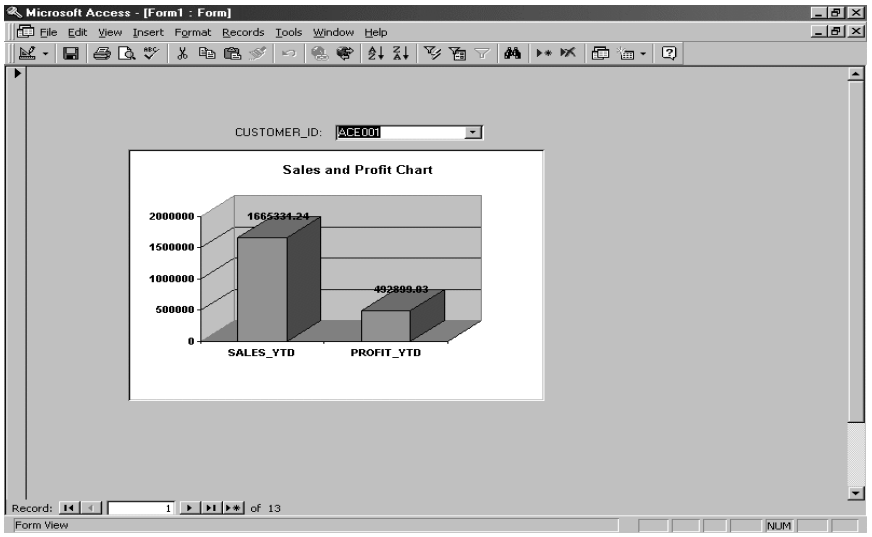


Select the Data Labels tab and choose Show value.

Select the OK button.

Select View from the menu bar and choose Form View.

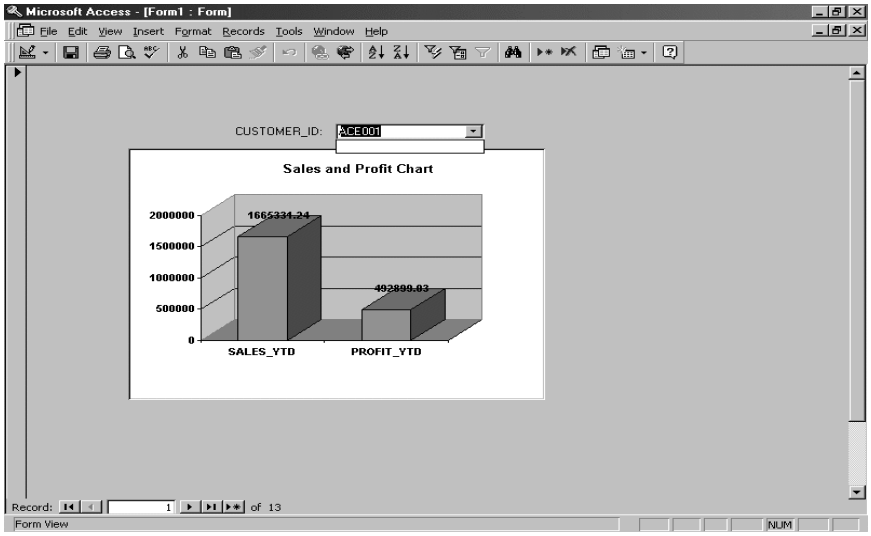
Customer ID Form/Chart – ACE001



The chart is re-displayed with labels to show the exact amount for the customer's sales and profit amounts.

The Customer ID is also displayed as a combo box.

Form 1 – Form View – Customer ID Combo Box



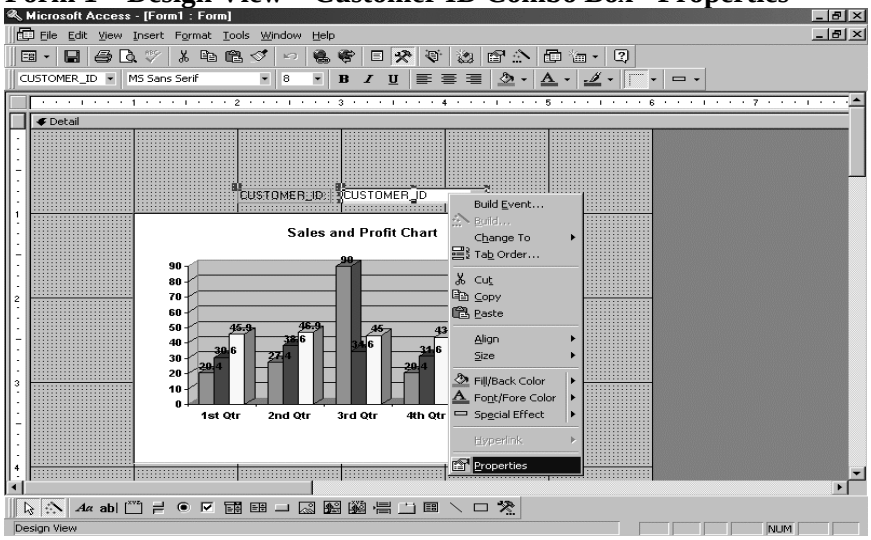
When the combo box is selected, only the first customer is displayed and the box is empty.

This is because the combo box is setup to use a Control Source, but combo boxes must use a Row Source instead of a Control Source.

The properties of the Customer ID field must be changed to display the information correctly.

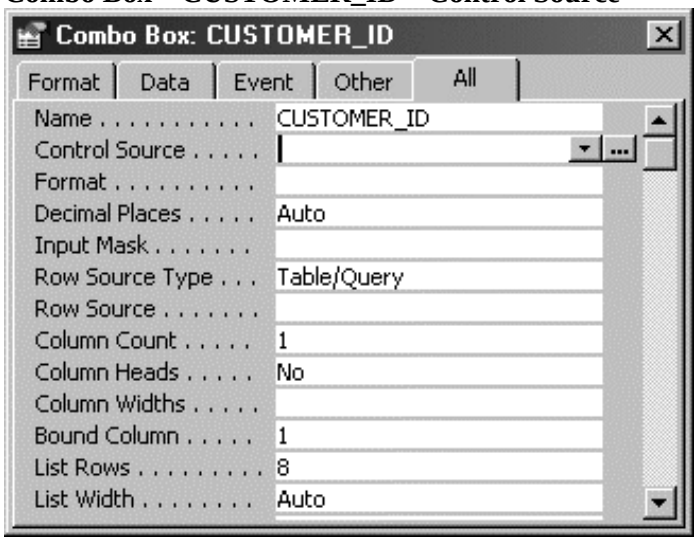
Return to the design view of the form.

Form 1 – Design View – Customer ID Combo Box - Properties



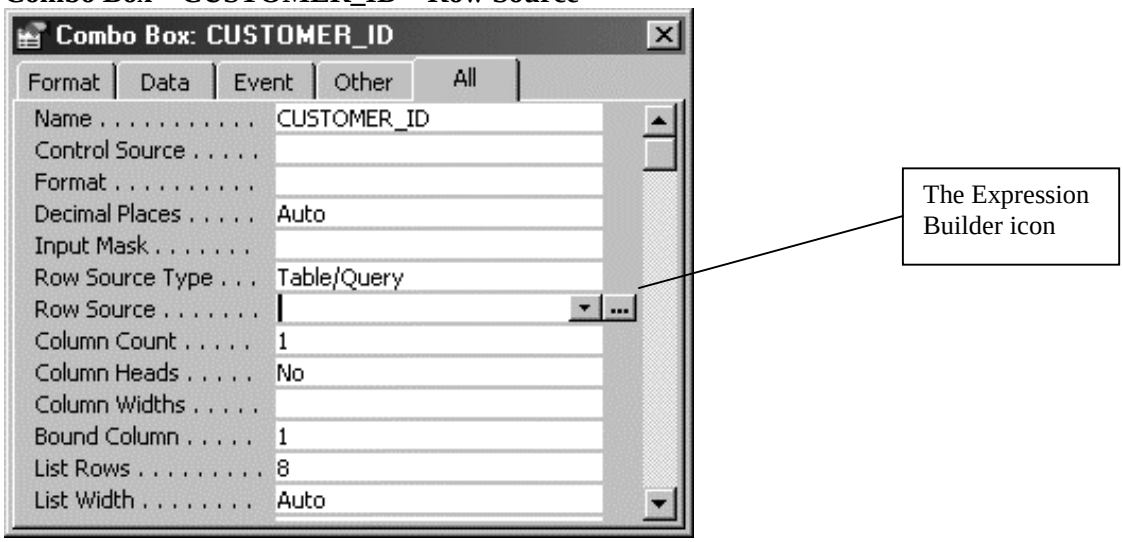
Right click on the Customer ID field and select properties.

Combo Box – CUSTOMER_ID – Control Source



In the Control Source field, remove the CUSTOMER_ID.

Combo Box – CUSTOMER_ID – Row Source

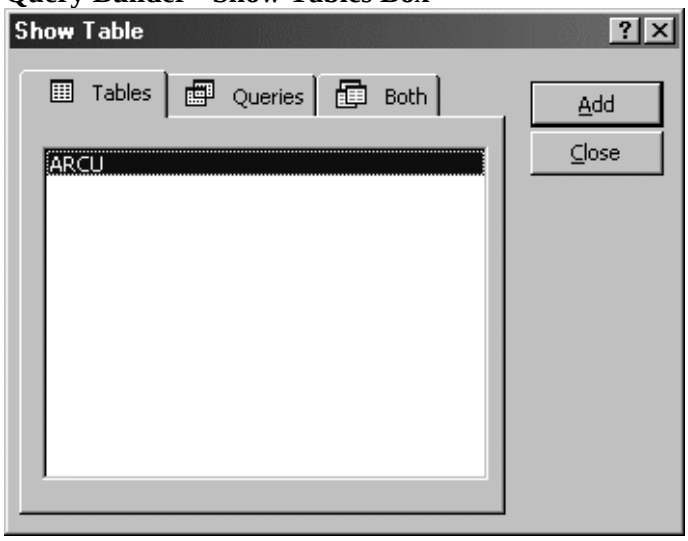


Select the Row Source field.

You have two options here, you can select to control the combo box with a table or query by using the drop down box and selecting the table or query you want to use OR you can use the expression builder to select fields from a table or query to control the Row Source.

Select the expression builder icon.

Query Builder - Show Tables Box

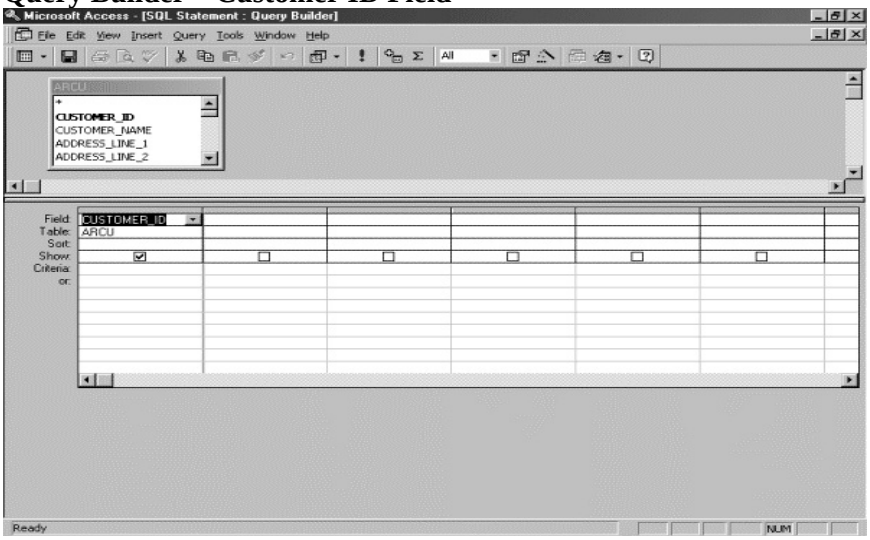


The Query Builder Show Tables Box is displayed.

Select the table or query that the fields will come from.

Select the ARCU table.

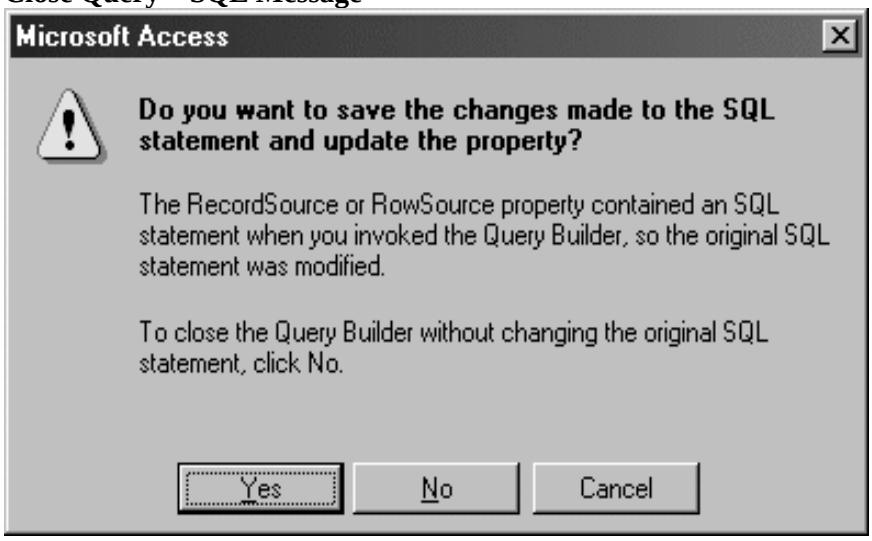
Query Builder – Customer ID Field



Select the Customer ID field.

After selecting the field, you can save or close the query.

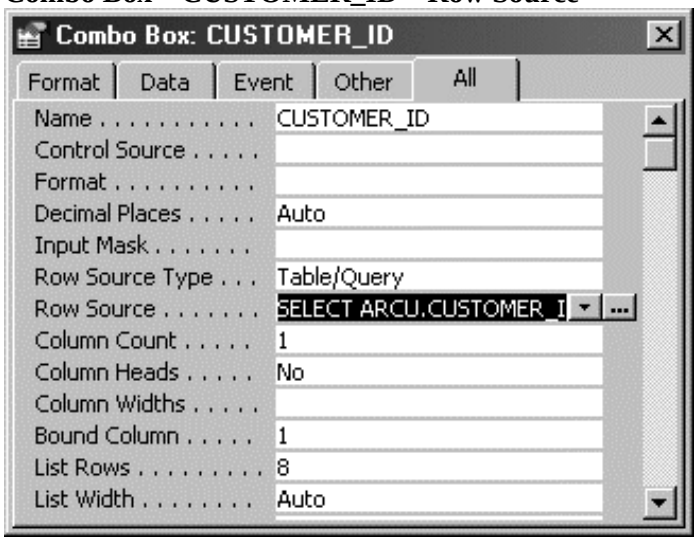
Close Query – SQL Message



Access prompts you to save the SQL statement so the Row Source is updated correctly.

Select Yes to save the changes.

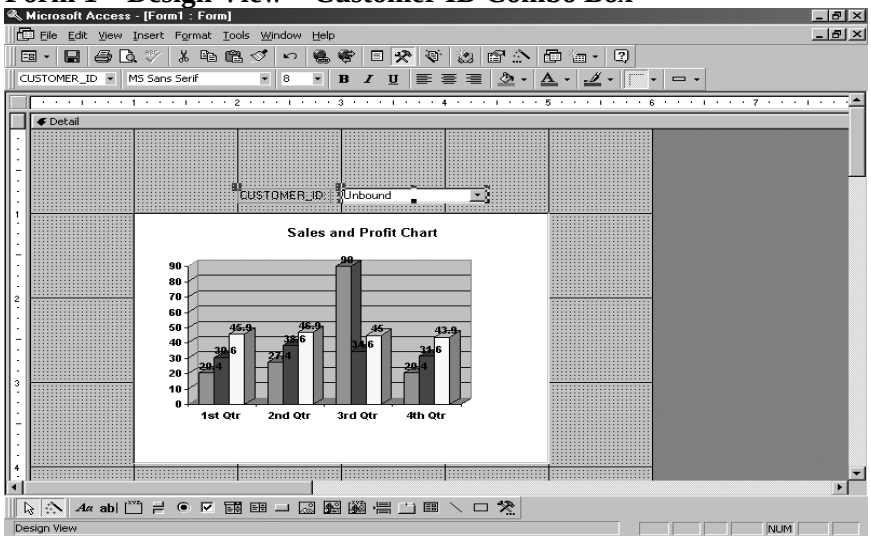
Combo Box – CUSTOMER_ID – Row Source



The property box is re-displayed, showing the expression created with the SQL statement.

Close the property box.

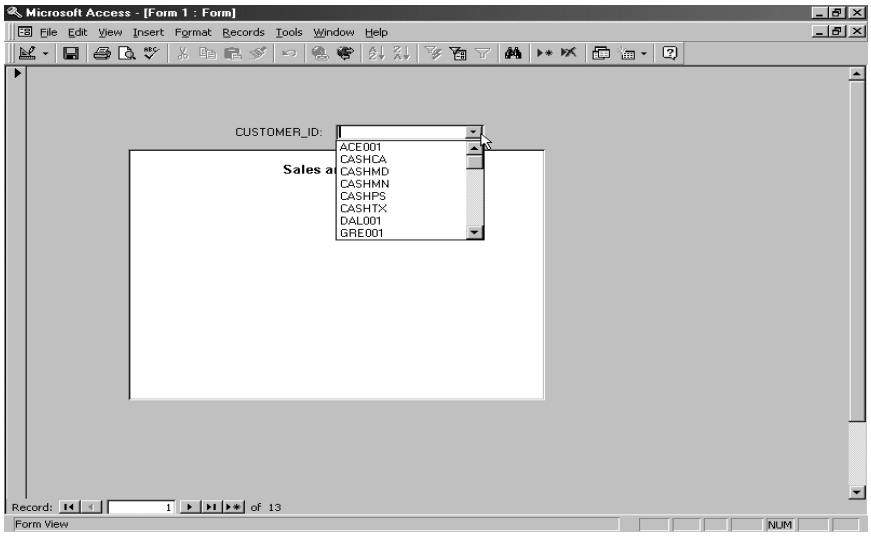
Form 1 – Design View – Customer ID Combo Box



The Customer ID combo box now displays as Unbound.

Select View from the menu bar and choose Form View.

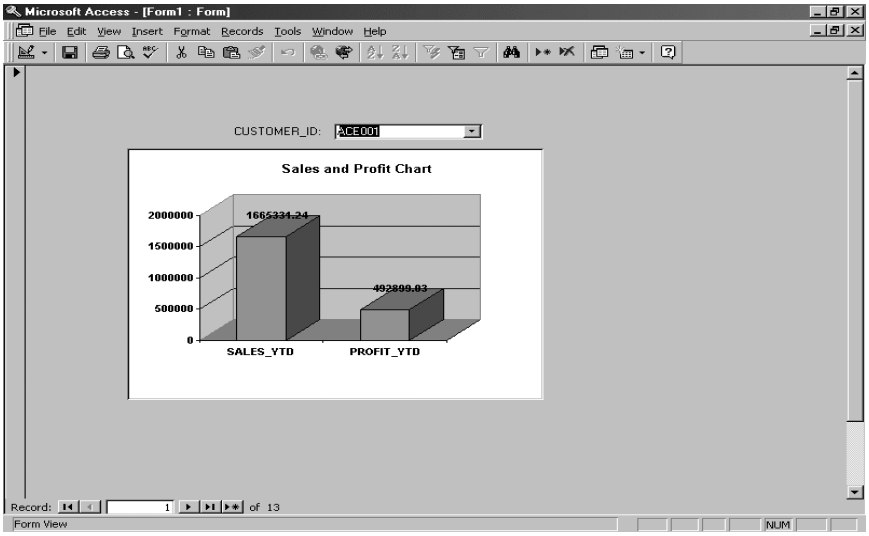
Form 1 – Form View – Customer ID Combo Box



The form is re-displayed.

Now when you select the combo button the list of customers displays correctly.

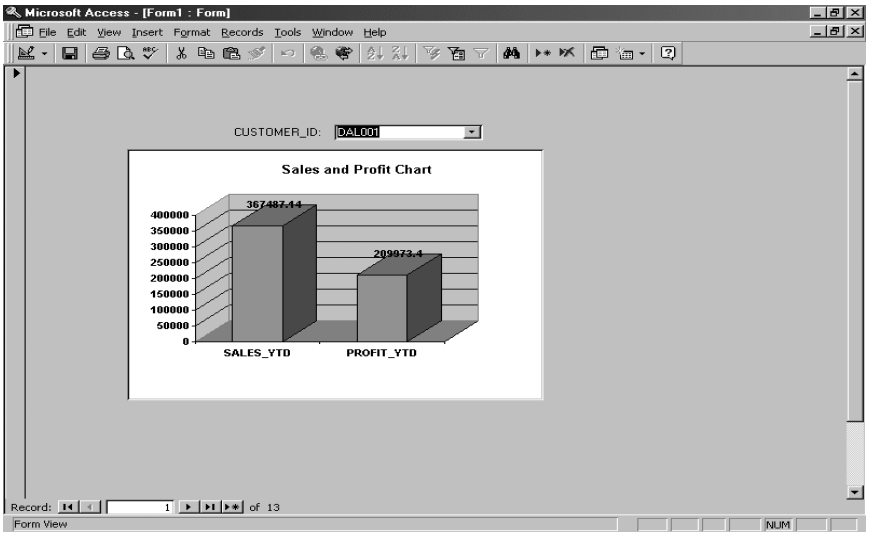
Form 1 – Form View – Customer ID ACE001



Select ACE001 in the combo box.

The chart shows the Sales Ytd and Profit Ytd for ACE001

Form 1 – Form View – Customer ID DAL001

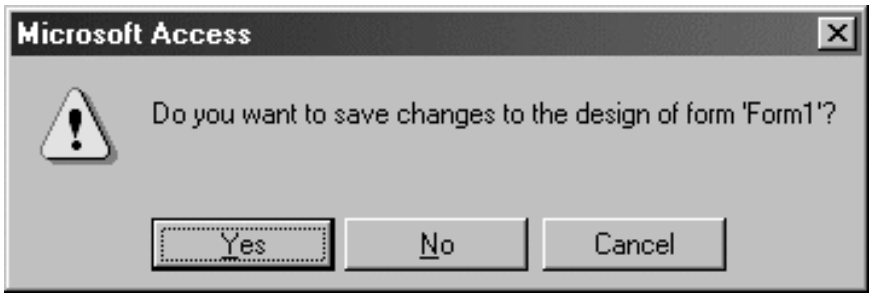


Select another Customer ID.

Example DAL001.

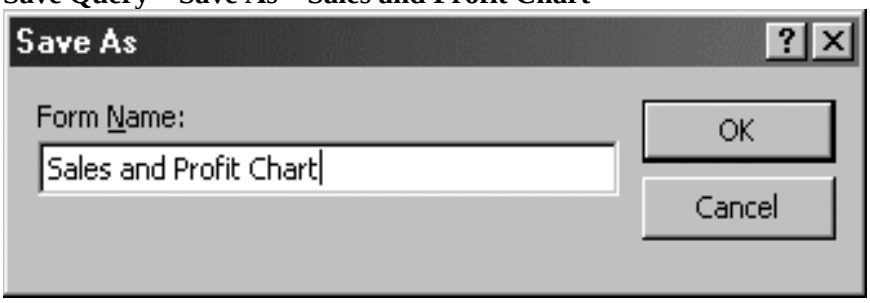
The chart changes for this customers Sales and Profit YTD.

Save Form – Prompt



Close the form and save as Sales and Profit Chart

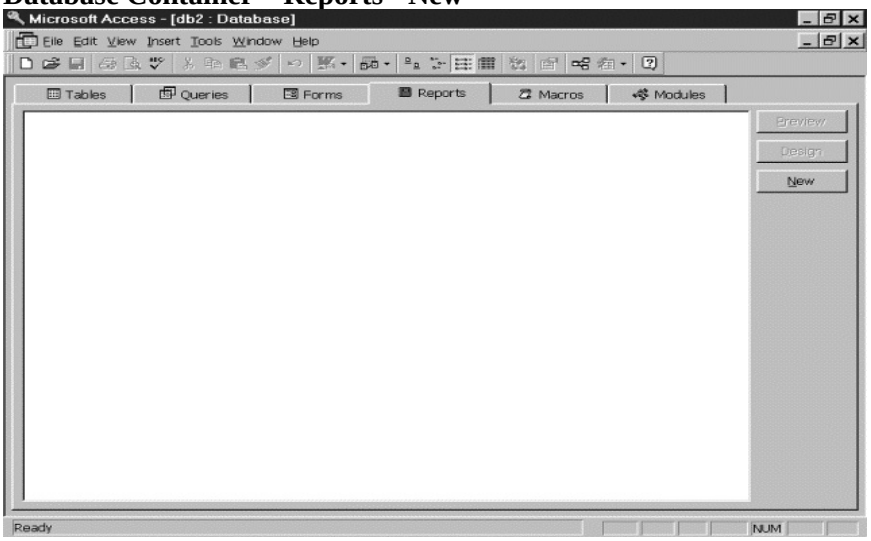
Save Query – Save As – Sales and Profit Chart



Creating a Report

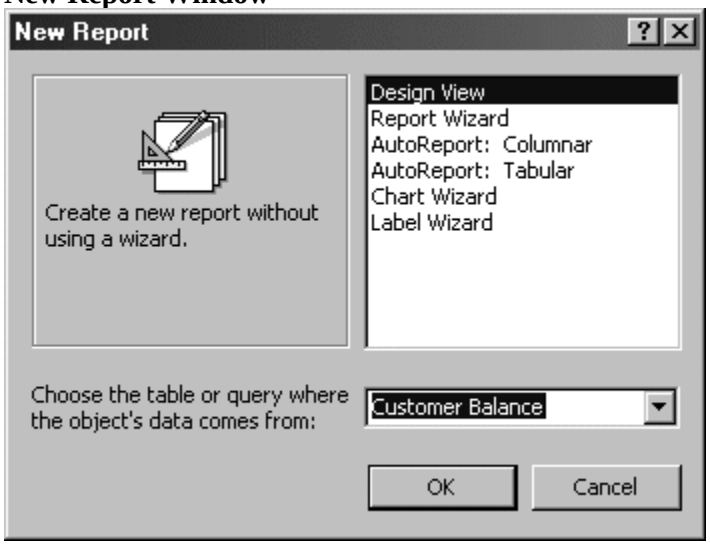
This example will walk you through the steps needed to create an Accounts Receivable/Sales Order dunning report based on the Customer Balance query created earlier.

Database Container – Reports - New



Select the Report tab on the database container. Select New to create a new report.

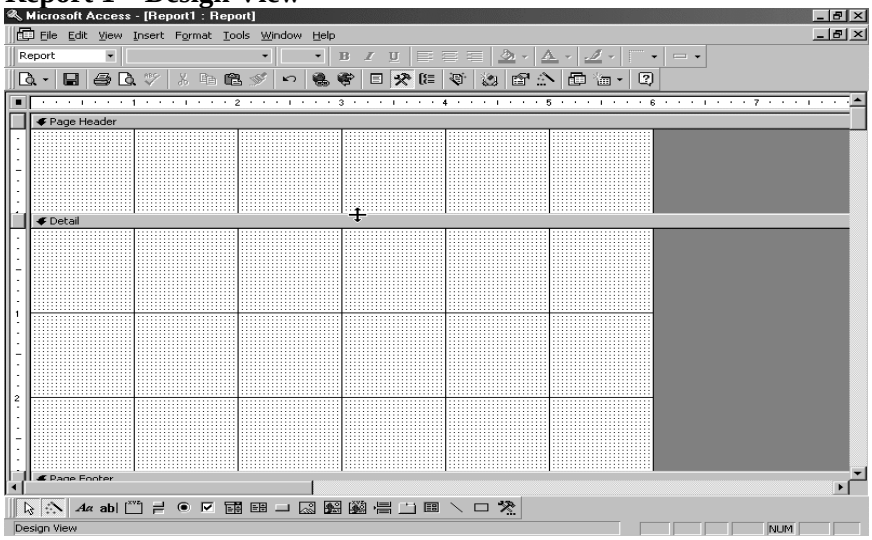
New Report Window



Select how you want to create the report and the table or query you want to use to create the report.

For this report, select Design View and the Training1 query.

Report 1 – Design View



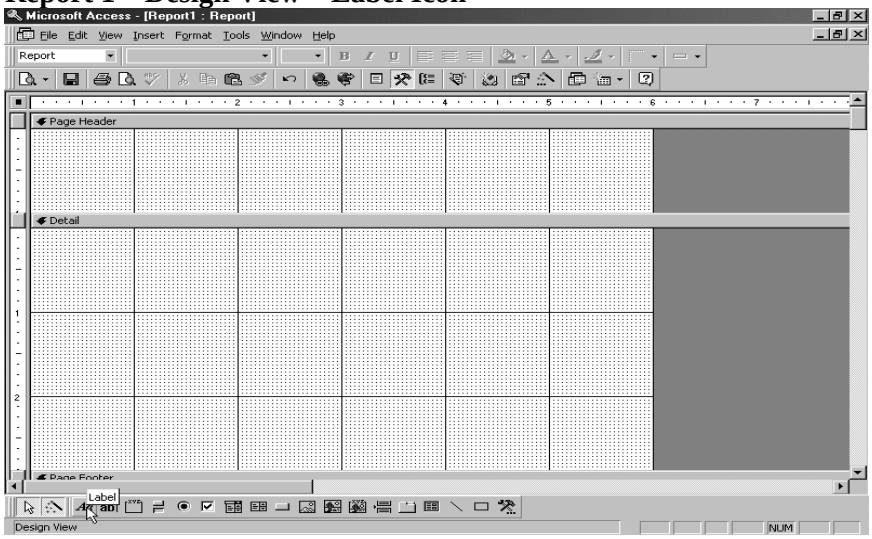
The Report1: Report screen is displayed.

Increase the space between the Page Header section and the Detail section.

In the page header, we will create a company letterhead, displaying the company name and address.

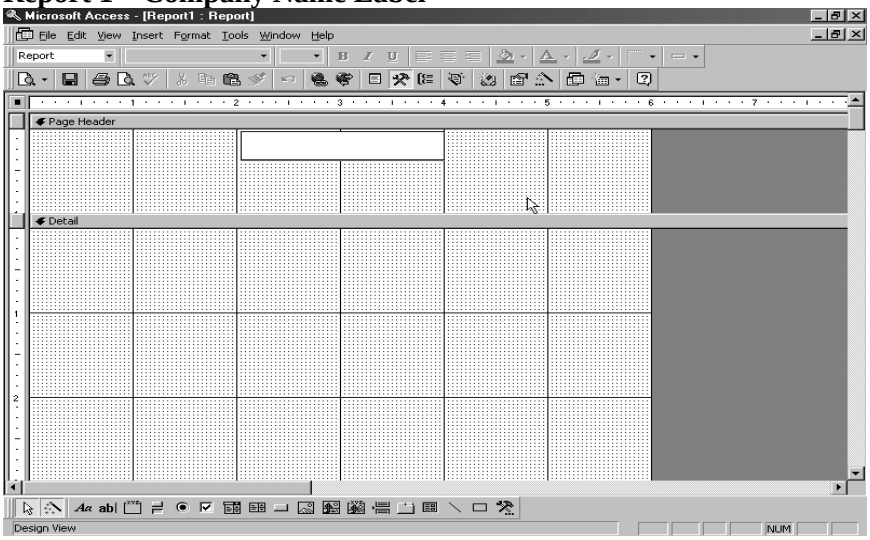
First, create a label field for the Company name.

Report 1 – Design View – Label Icon



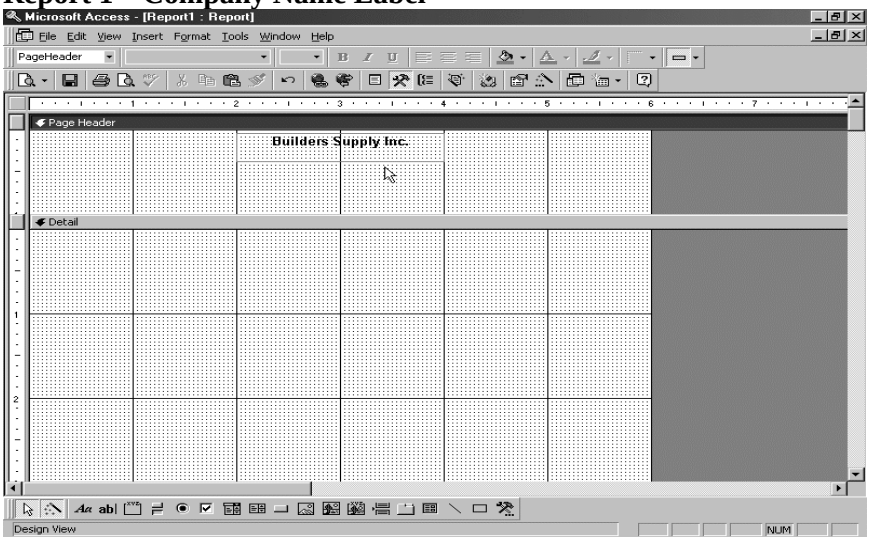
Select the Label icon (**Aa**) from the Toolbox toolbar.

Report 1 – Company Name Label



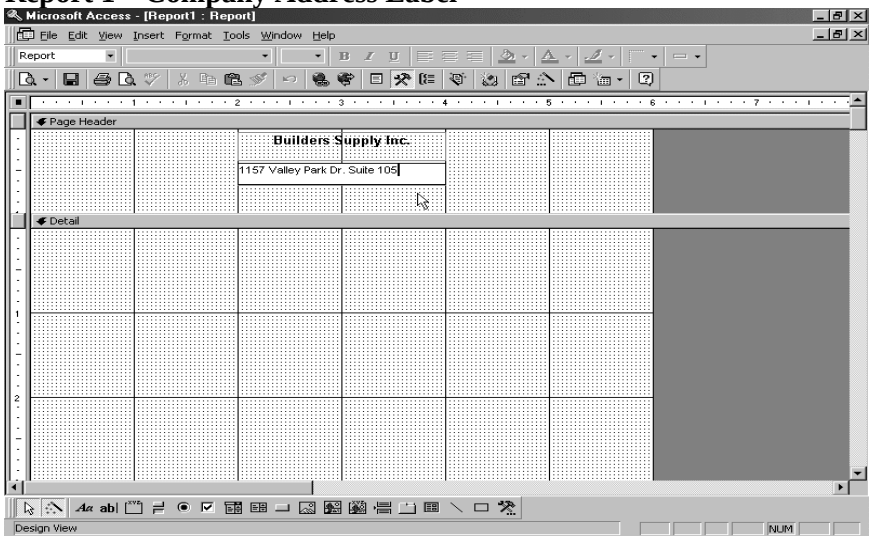
Draw the label box in the top center of the header section. If it is not exactly centered you can change that later.

Report 1 – Company Name Label



Once the box is drawn, type **Builders Supply Inc**. Center the words in the box by clicking the center icon from the toolbar and make bold.

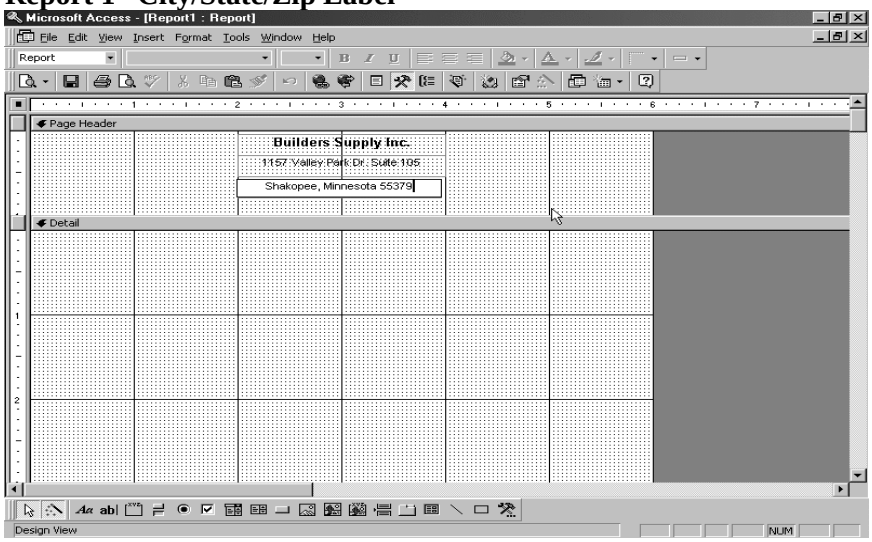
Report 1 – Company Address Label



Create a second label box. Once the label has been created type **1157 Valley Park Dr. Suite 105**.

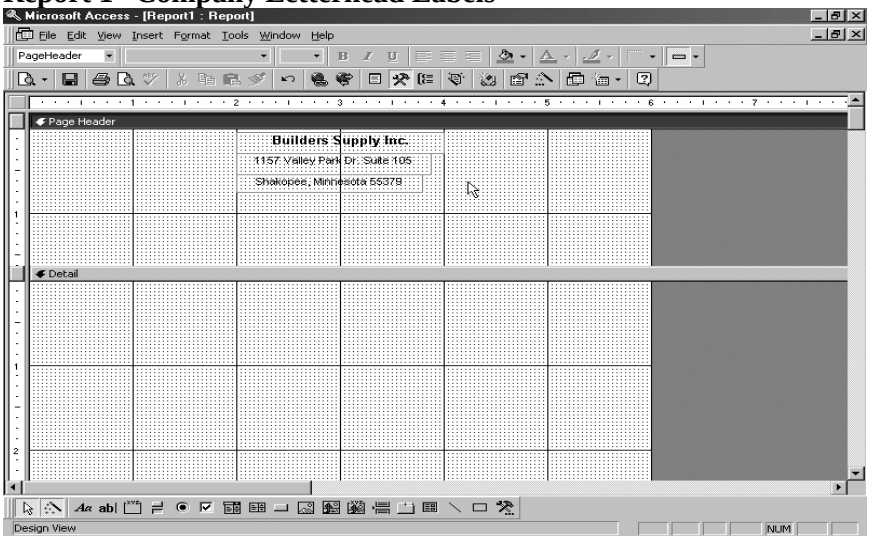
Move this box so that it is directly underneath the first box. Do not worry about the size of the boxes that can be fixed later.

Report 1 –City/State/Zip Label



Create a third label box and type **Shakopee, Minnesota 55379**

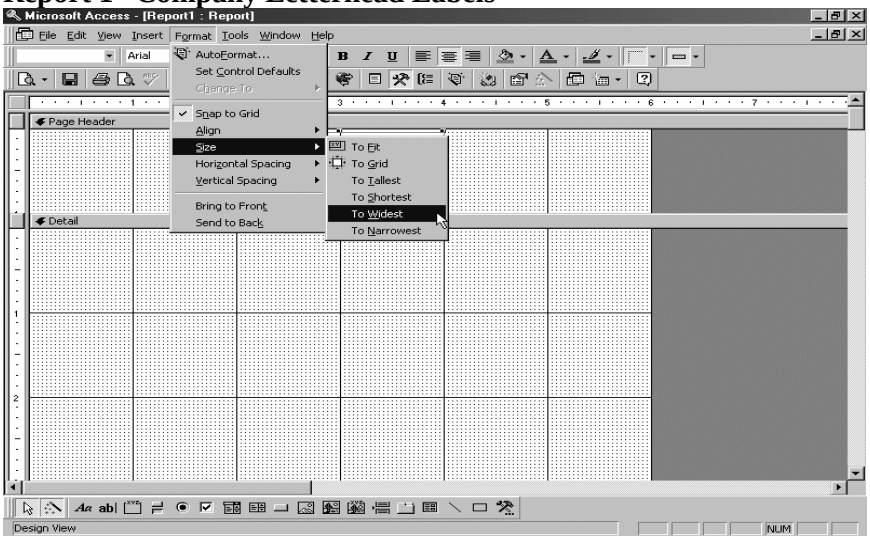
Report 1 –Company Letterhead Labels



Move this box so that it is directly underneath the second box.

Center both of these boxes.

Report 1 –Company Letterhead Labels



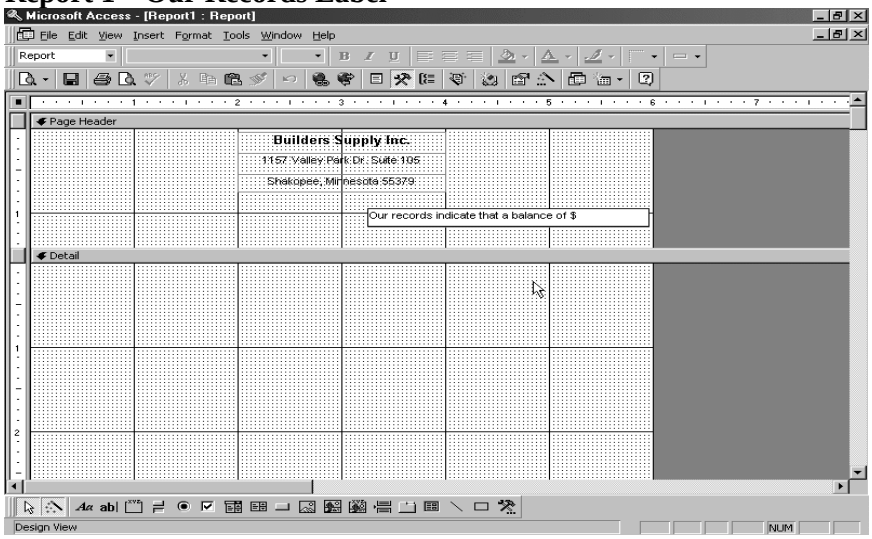
Next, make all the boxes the same width.

Hold the shift key down and click the three label boxes just created so all three are selected.

Select **Format** from the menu bar then choose **Size** followed by **To Widest**.

The next two label fields will not print in the header, but will be added to an expression created later.

Report 1 – Our Records Label

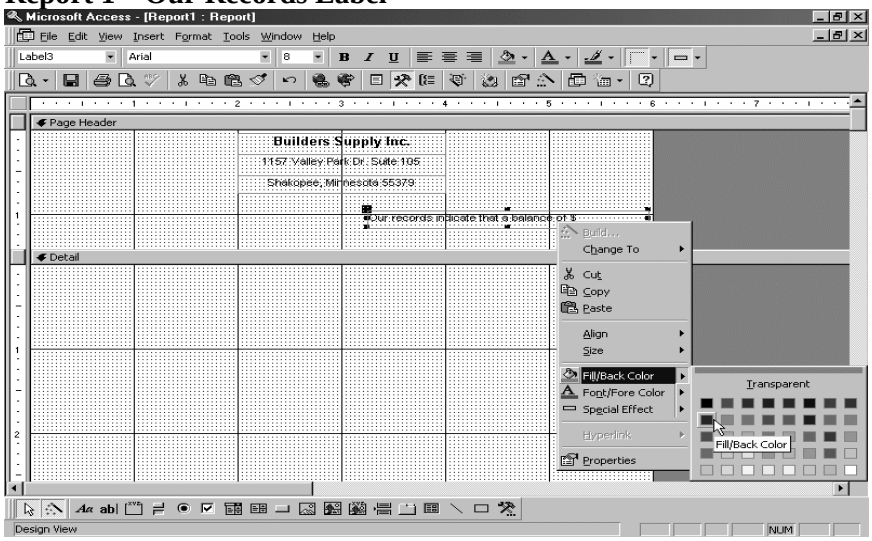


Create a fourth label box anywhere within the Page Header.

Type **Our records indicate that a balance of $** .

The position of this in the header doesn't matter because this label will be invisible and will not print in the report header.

Report 1 – Our Records Label

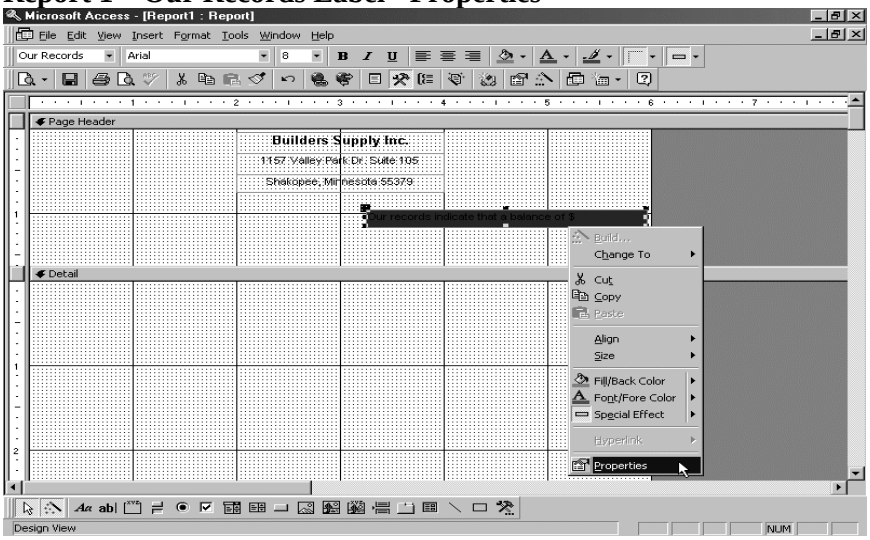


Because this field is not going to show on the report lets change the background color as a way to denote this.

Right click in the field then select **Fill/Back Color.**

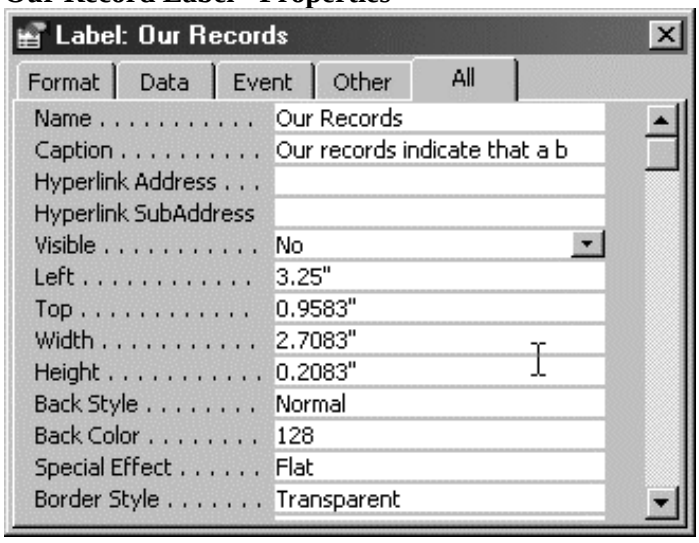
Select the color you want for the background of this field. Changing the background color is an optional step.

Report 1 – Our Records Label - Properties



Right click on the field and select **Properties**.

Our Record Label - Properties



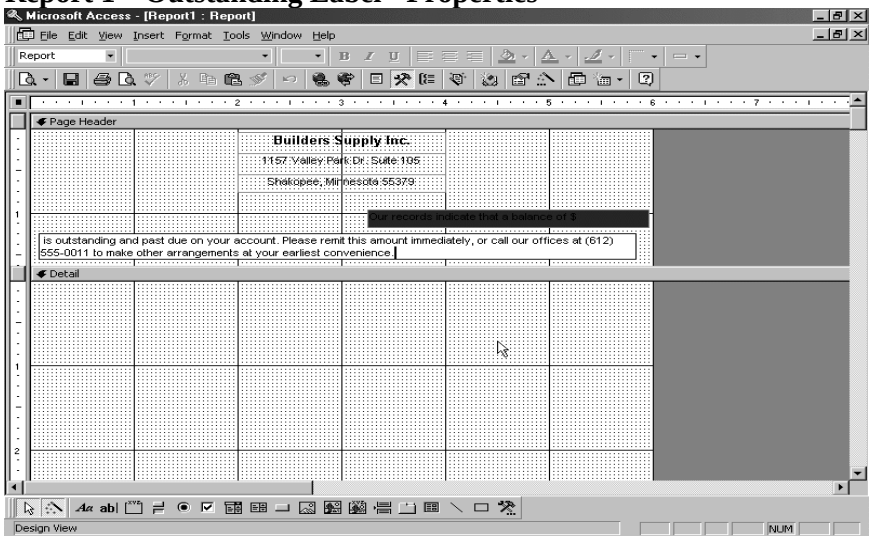
Select the **All** tab.

Change the Name of this label field to Our Records. The name is needed later when we create the expression for the dunning message.

Change the Visible field to **NO**.

Now when the report is printed, this field will not show in the header.

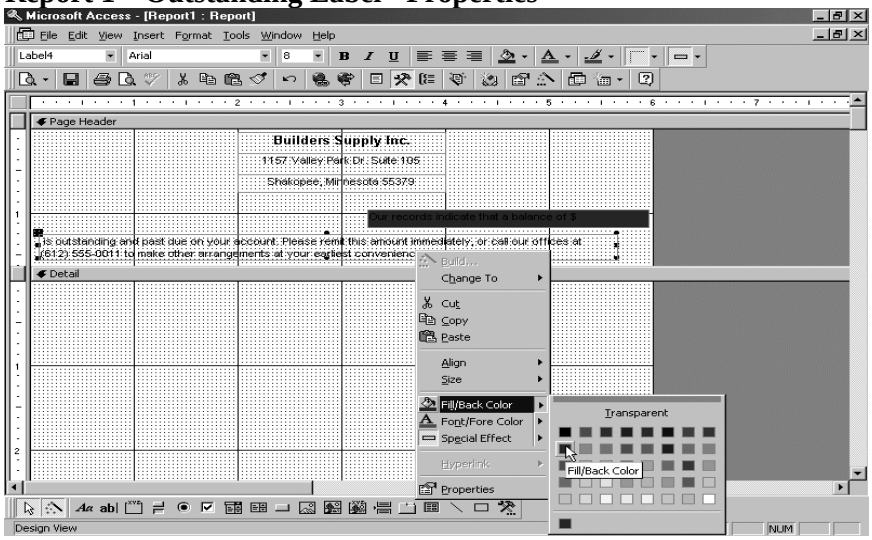
Report 1 – Outstanding Label - Properties



Create a fifth label box anywhere with in the Page Header

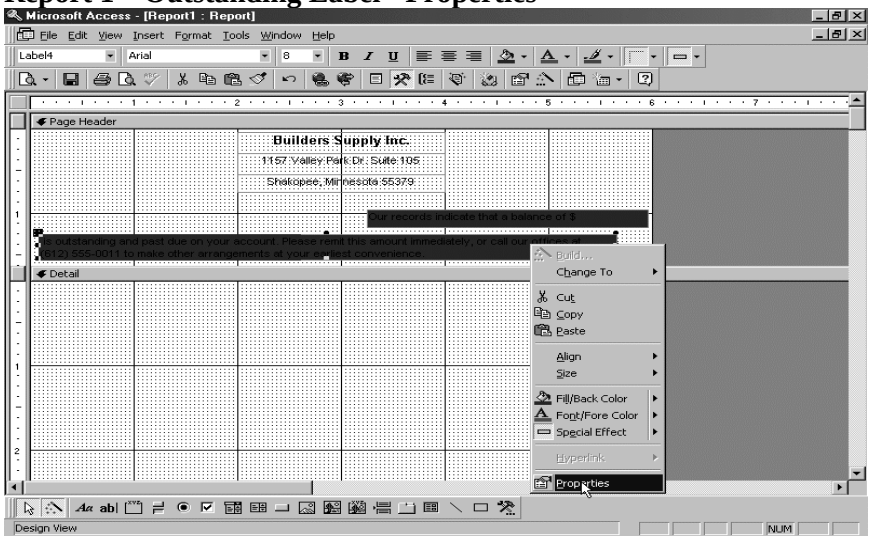
Type **is outstanding and past due on your account. Please remit this amount immediately, or call our offices at (612) 555-0011 to make other arrangements at your earliest convenience**.

Report 1 – Outstanding Label - Properties



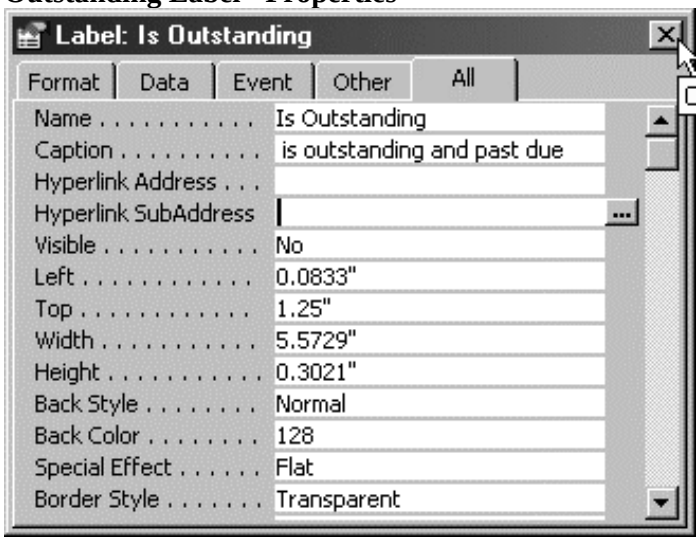
Fill the background color of this field as you did with the previous field.

Report 1 – Outstanding Label - Properties



Right click on the field and select **Properties**.

Outstanding Label - Properties



Select the **All** tab.

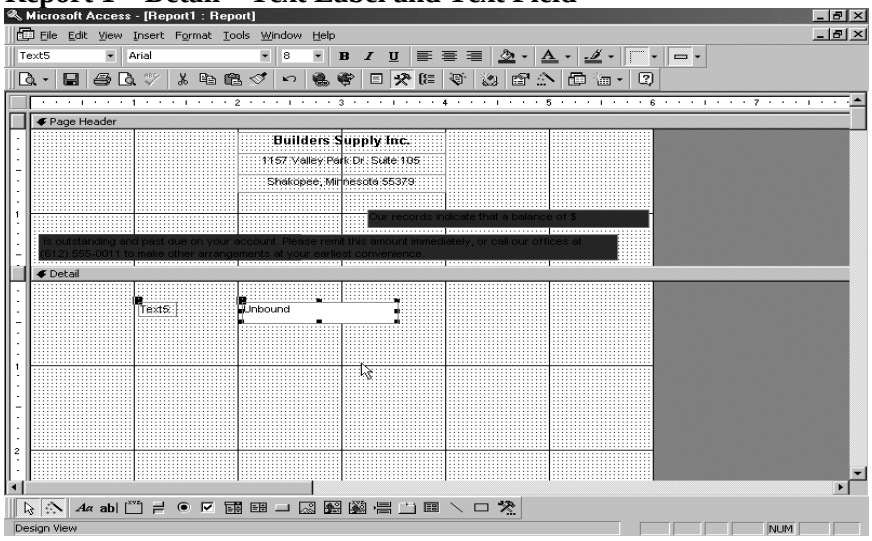
Change the Name of this label field to Is Outstanding. The name is needed later when we create the expression for the dunning message.

Change the Visible field to **NO**.

Now when the report is printed, this field will not show in the header.

Now we are ready to create the detail for the report.

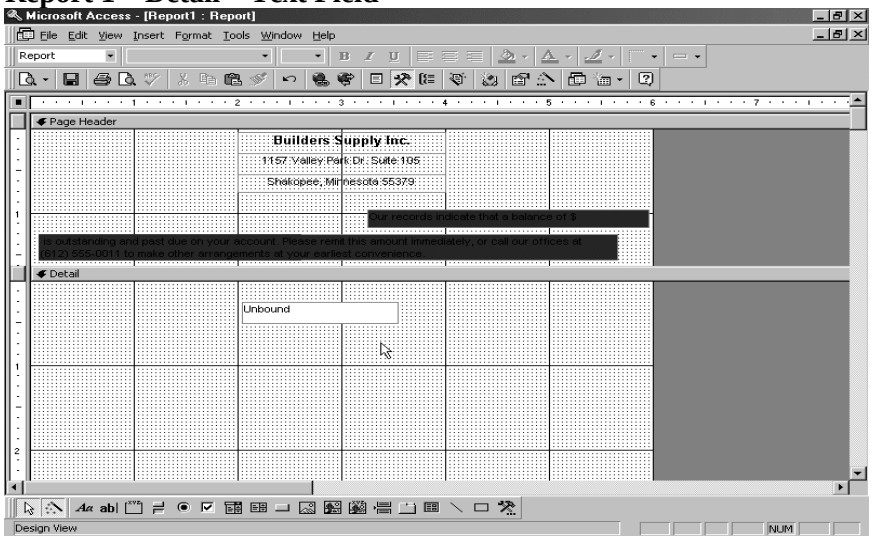
Report 1 – Detail – Text Label and Text Field



Select the Text icon (**ab**) from the toolbox toolbar.

Draw a text box anywhere in the Detail section.

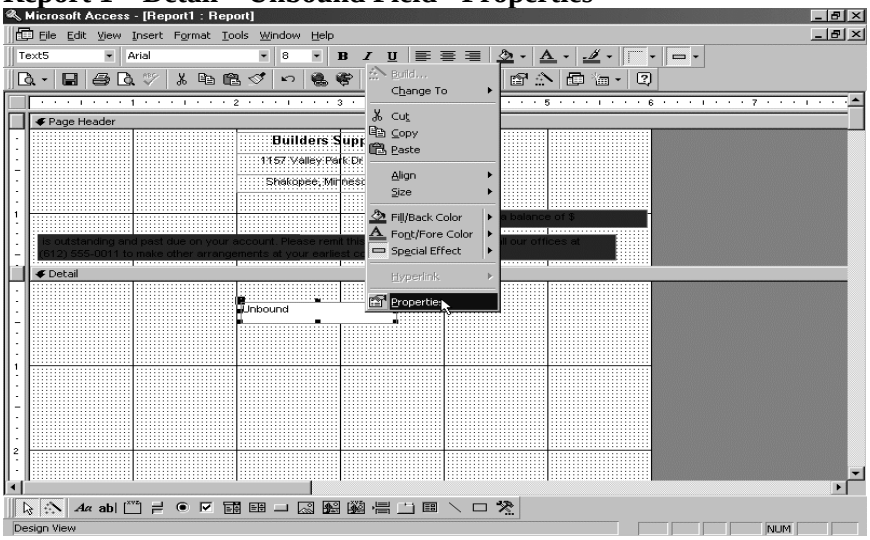
Report 1 – Detail – Text Field



Select and highlight the text label.

Delete the text label so only the text field remains on the report.

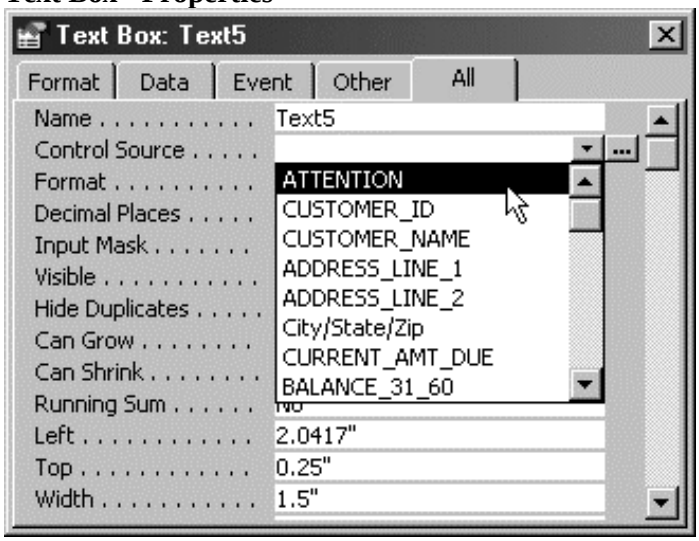
Report 1 – Detail – Unbound Field - Properties



The text field is unbound because it has not been linked to any specific field.

Right click on the text field and select **Properties**.

Text Box - Properties

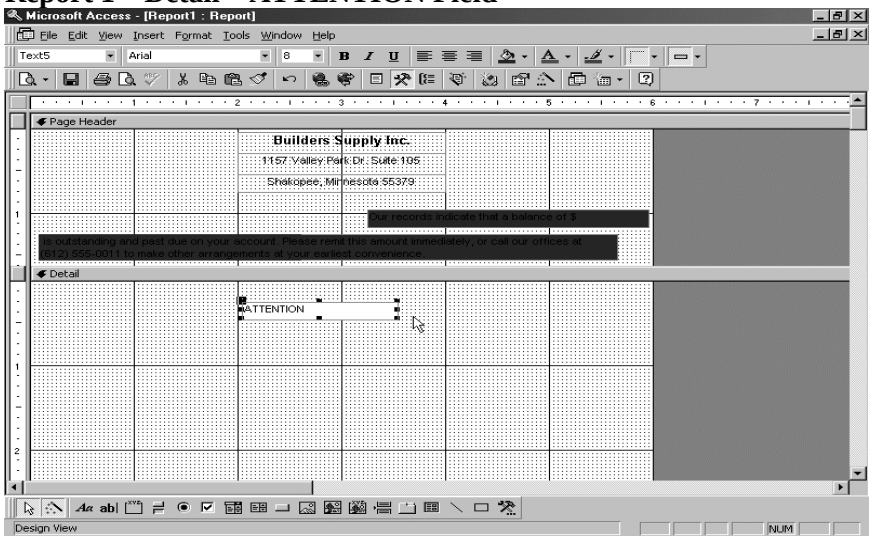


Select the Control Source field to tie the unbound field to a specific field in the table or query.

Use the combo box and select the **ATTENTION** field.

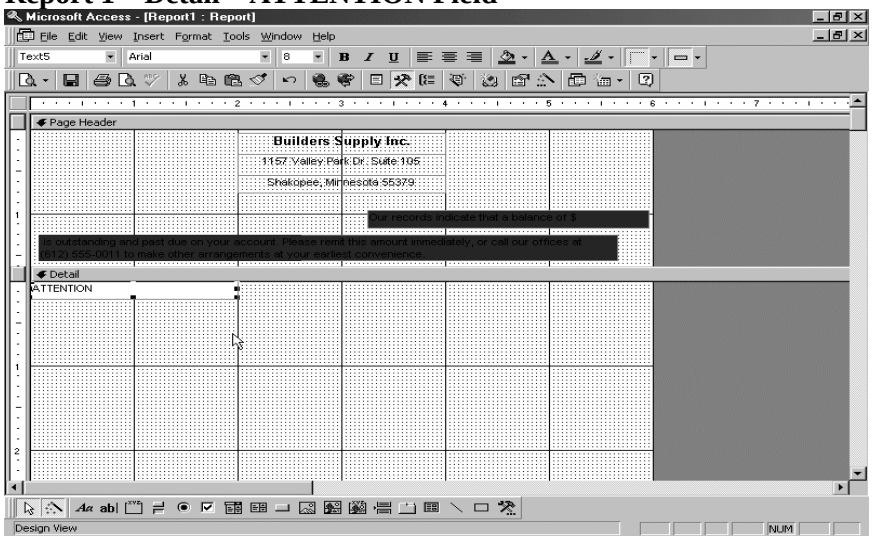
Close the properties box.

Report 1 – Detail – ATTENTION Field



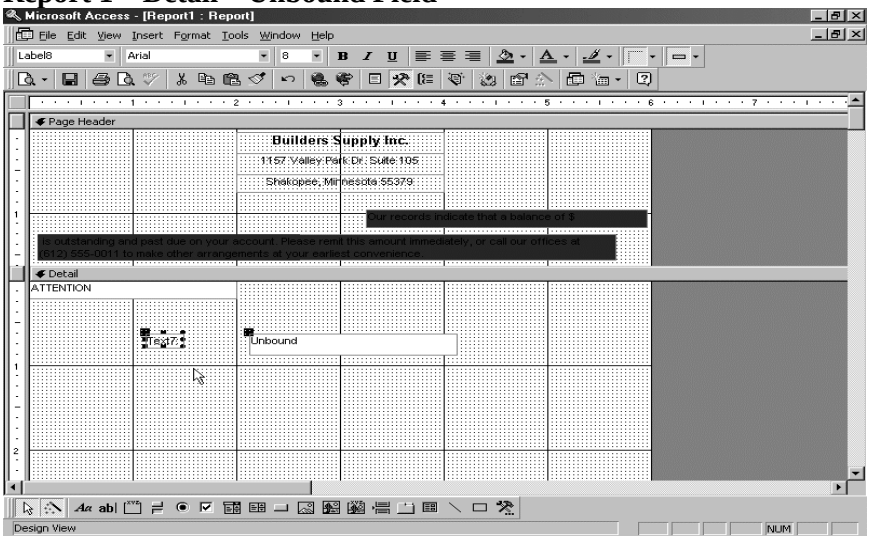
Unbound is now changed to ATTENTION.

Report 1 – Detail – ATTENTION Field



Move the field to the first square of the Detail section.

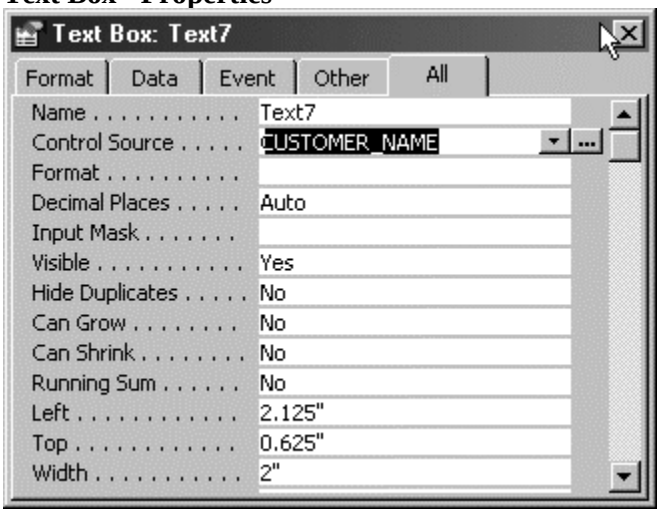
Report 1 – Detail – Unbound Field



Create another text field.

Delete the text label.

Text Box - Properties

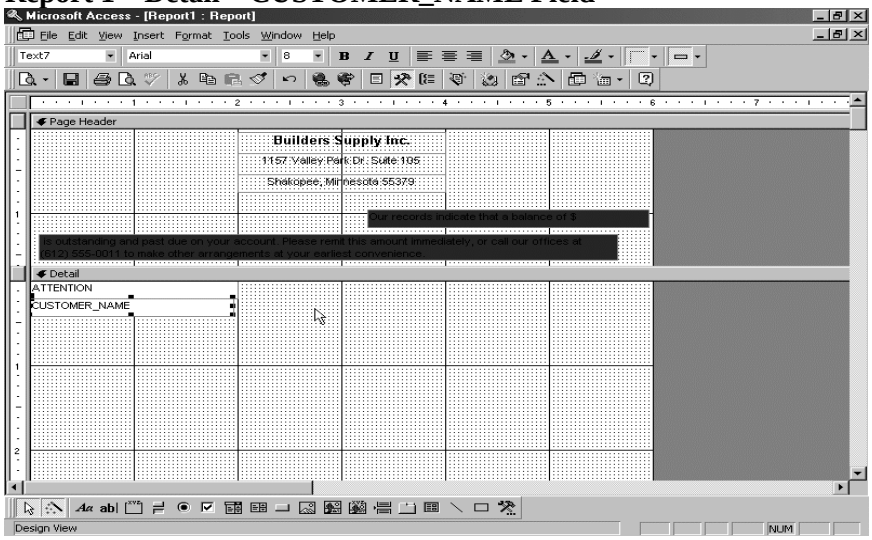


Right click this field and select Properties.

Select Control Source and use the combo box to select CUSTOMER_NAME.

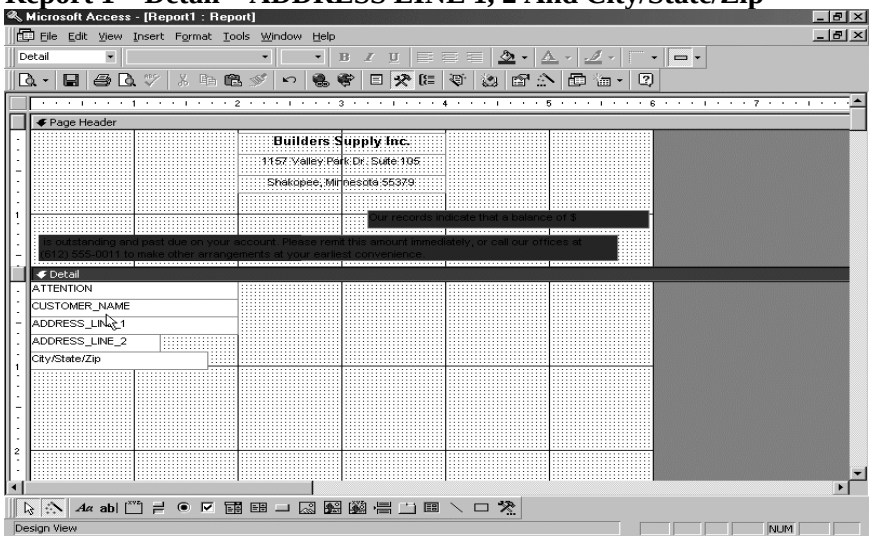
Close the properties box.

Report 1 – Detail – CUSTOMER_NAME Field



Move this field below the ATTENTION field.

Report 1 – Detail – ADDRESS LINE 1, 2 And City/State/Zip

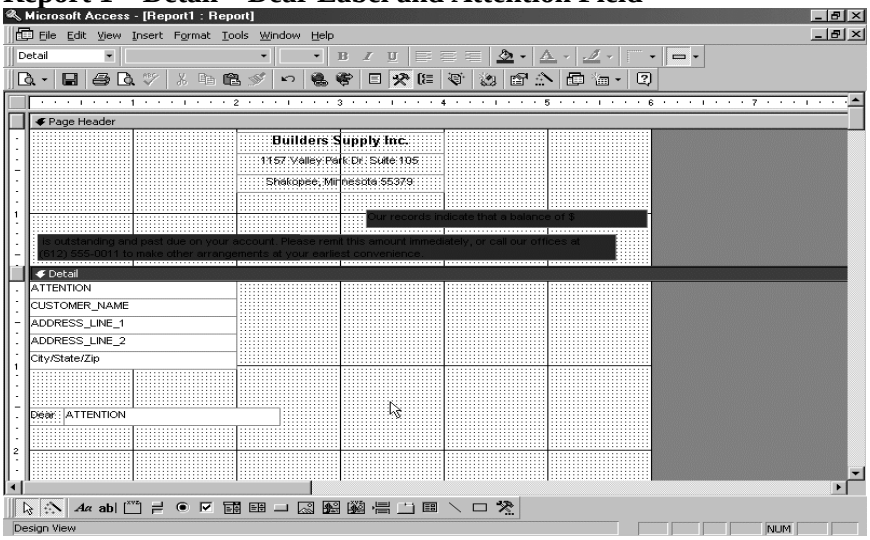


Create 3 more text fields. One for ADDRESS_LINE_1 one for ADDRESS_LINE_2 and one for the City/State/Zip field. Delete the text labels for each field. Right click, select properties, and change the Control Source for each field. Move the fields below CUSTOMER_NAME.

Hold the shift key down and select ATTENTION, CUSTOMER_NAME, ADDRESS_LINE_1, ADDRESS_LINE_2, and City/State/Zip.

Select **Format** from the menu bar, then **Size** followed by **To Widest**.

Report 1 – Detail – Dear Label and Attention Field

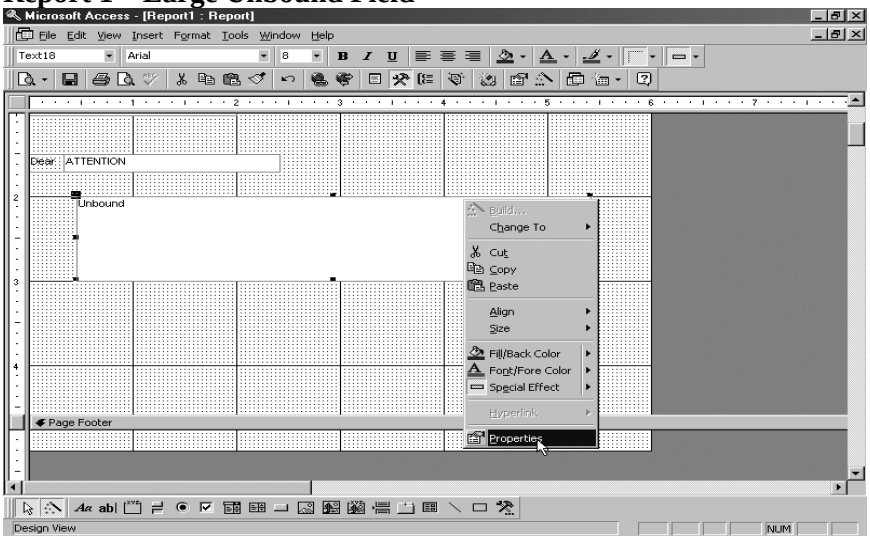


In the row below City/State/Zip, create a label field and type in Dear.

Next to the Dear field create a text field.

Delete the text label and change the Control source to ATTENTION.

Report 1 – Large Unbound Field

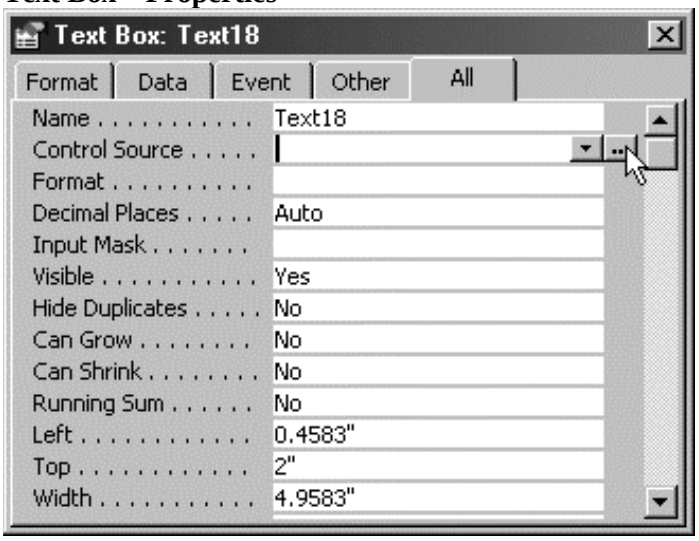


Below ATTENTION, create a large text field.

Delete the text label.

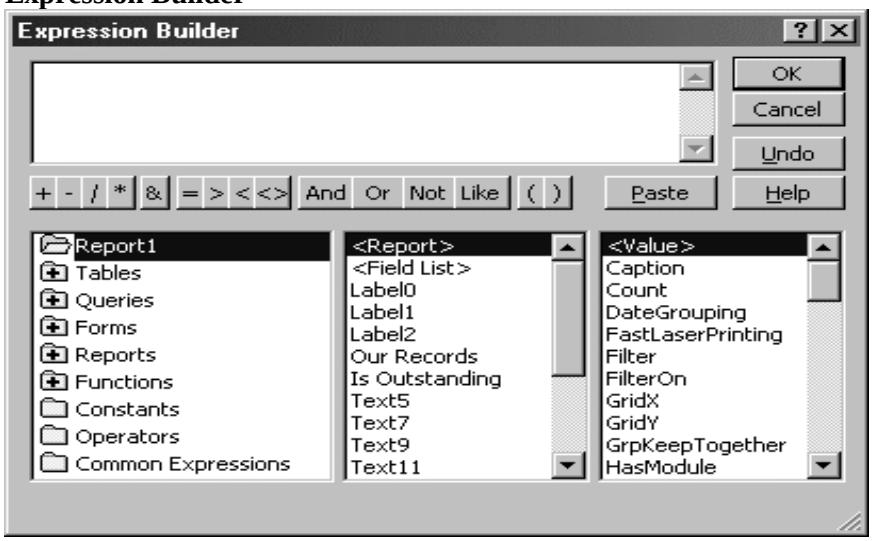
Right click and select **Properties**.

Text Box – Properties



In the Control Source field, click the expression builder icon.

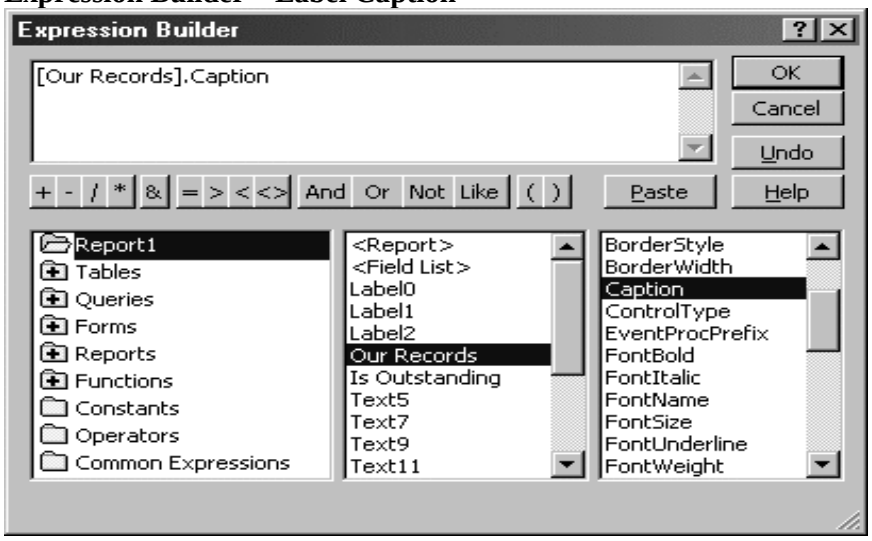
Expression Builder



The expression builder box is displayed.

We will create the expression to display the dunning amount for each customer.

Expression Builder – Label Caption

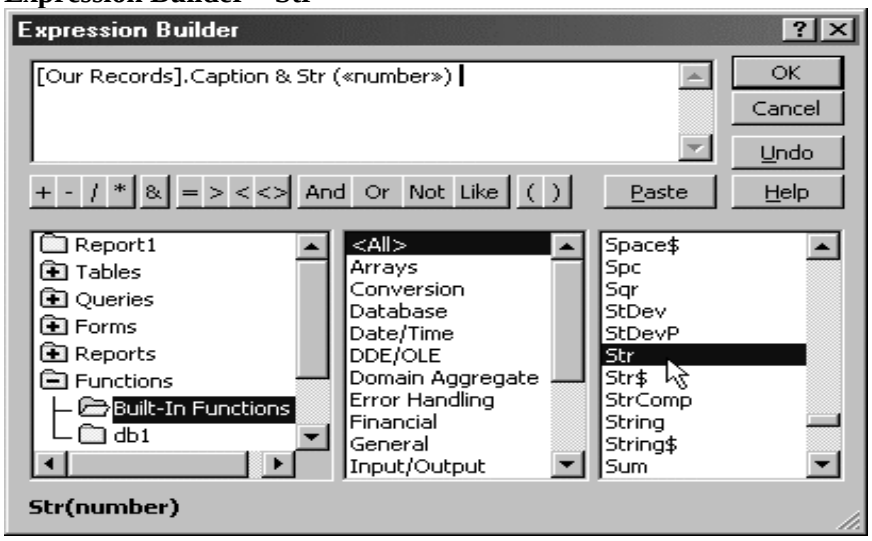


In the first box, select **Report1.**

In the middle box, select the Our Records label created earlier.

In the third section, select **Caption.** Select the **Paste** button.

Expression Builder – Str



Paste a "&" to the top section (without the quotes).

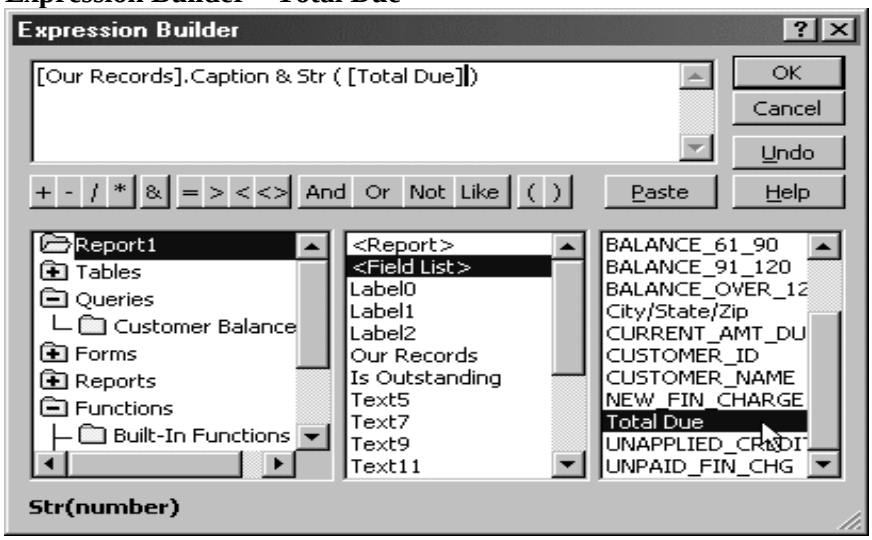
In the first section, select **Built In Functions.**

In the middle section select **<All>** and then the Our Records label created earlier.

In the third section, select **Str.** Select the **Paste** button

This will change a numeric value to a string value so you can add the 2 strings together.

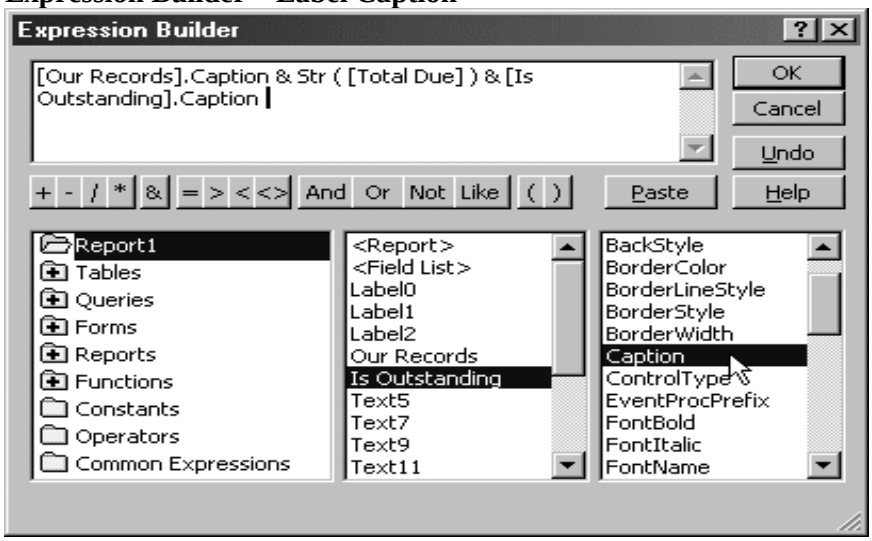
Expression Builder – Total Due



Within the parentheses paste the Total Due field by selecting Report1 in the first section, then select **<Field List>** in the middle section and Total Due in the last section.

Select the paste button to add the Total Due to the top section.

Expression Builder – Label Caption



Paste a "&" to the top section (without the quotes).

The last step for this expression is to add the Is Outstanding caption.

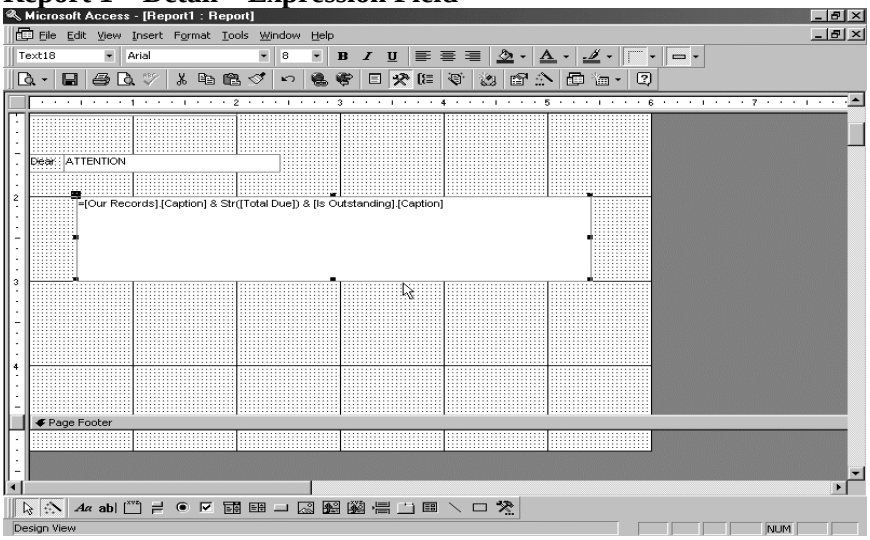
In the first box, select Report1

In the middle box, select the Is Outstanding label created earlier.

In the last section select **Caption** and click the **Paste** button.

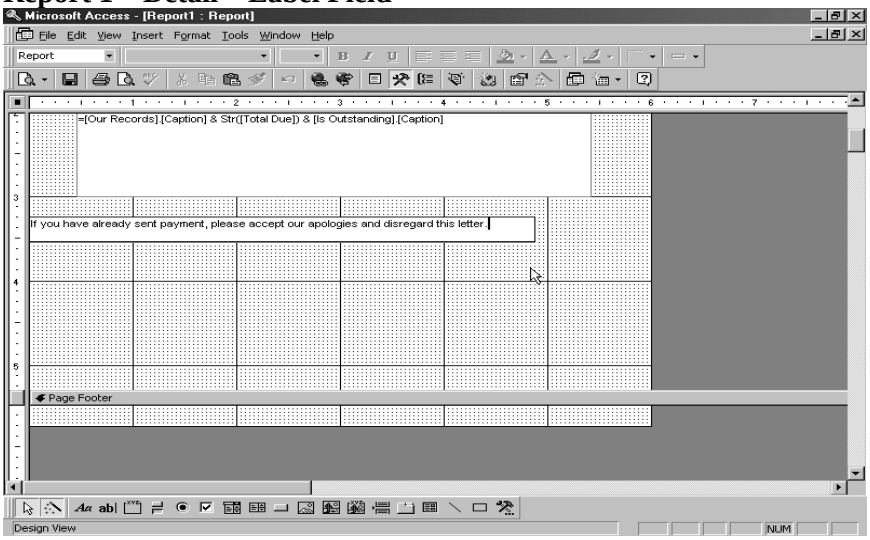
Select **OK** to save the expression and close the properties box.

Report 1 – Detail – Expression Field



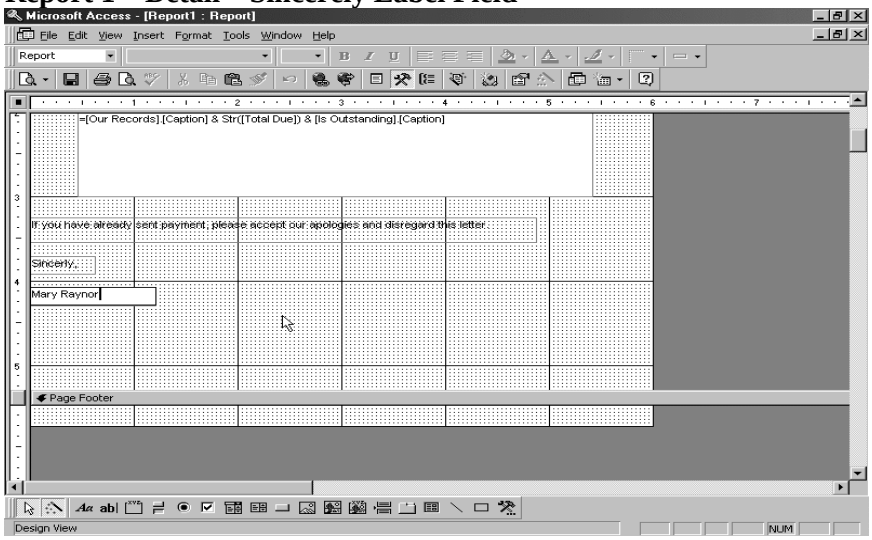
The expression is displayed in the text box.

Report 1 – Detail – Label Field



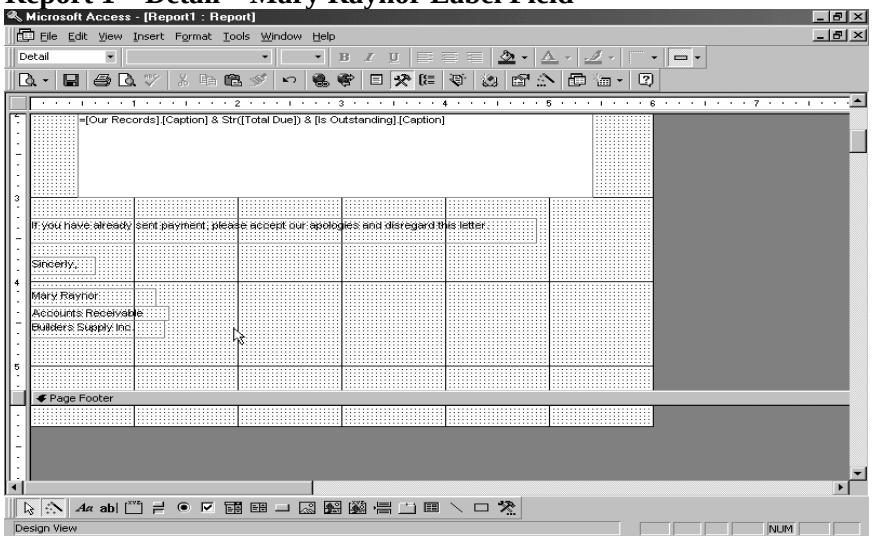
Below the text box, create a label box and type **If you have already sent payment, please accept our apologies and disregard this letter.**

Report 1 – Detail – Sincerely Label Field



Below that label create another label and type **Sincerely**,

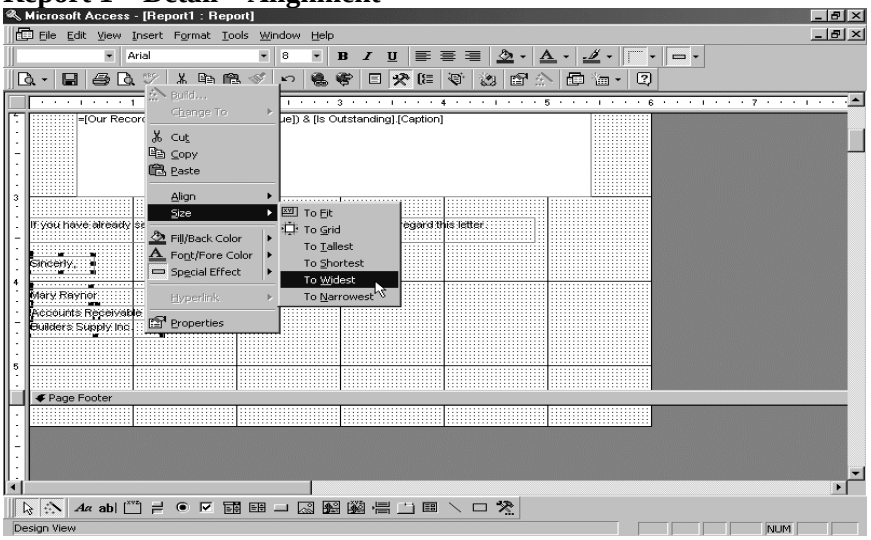
Report 1 – Detail – Mary Raynor Label Field



A few spaces below Sincerely create another label box and type in the name of the person sending the letter.

Example **Mary Raynor.**

Report 1 – Detail – Alignment



Below those fields, create another label field and type in **Accounts Receivable**.

Move it directly below the Mary Raynor field..

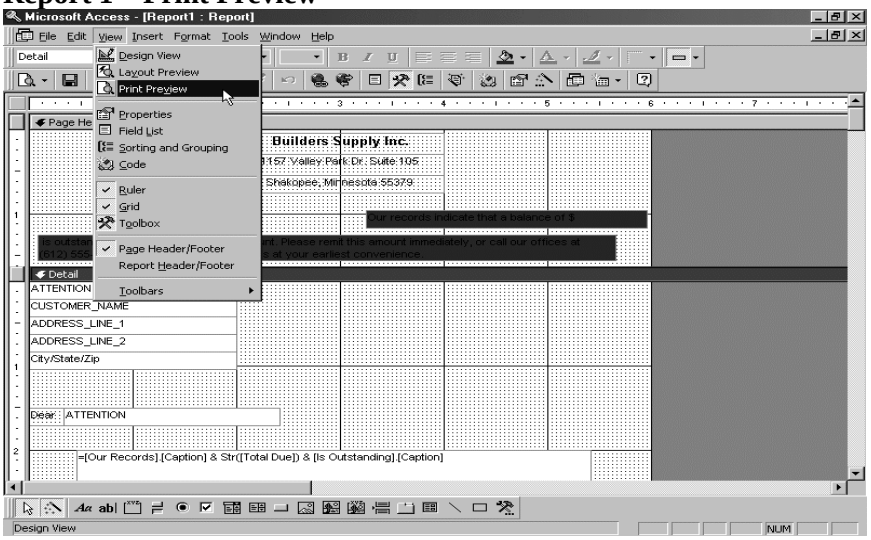
Create another label field and type in **Builders Supply Inc**.

Move this below the Accounts Receivable field.

Hold the shift key down and select Sincerely, Mary Raynor, Accounts Receivable and Builders Supply Inc.

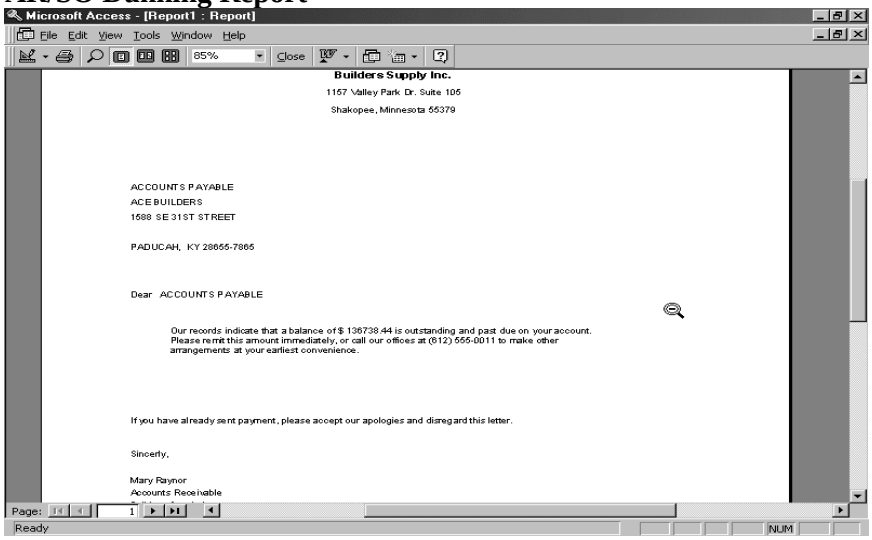
Select **Format** from the menu bar and the **Size** followed by **To Widest**.

Report 1 – Print Preview



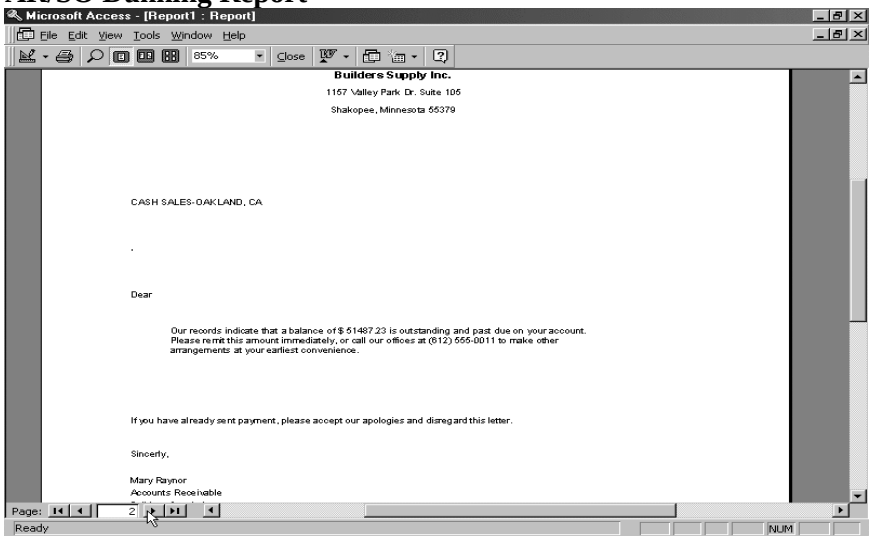
Select View from the menu bar and then choose Print Preview or Layout Preview.

AR/SO Dunning Report



The report is displayed.

AR/SO Dunning Report

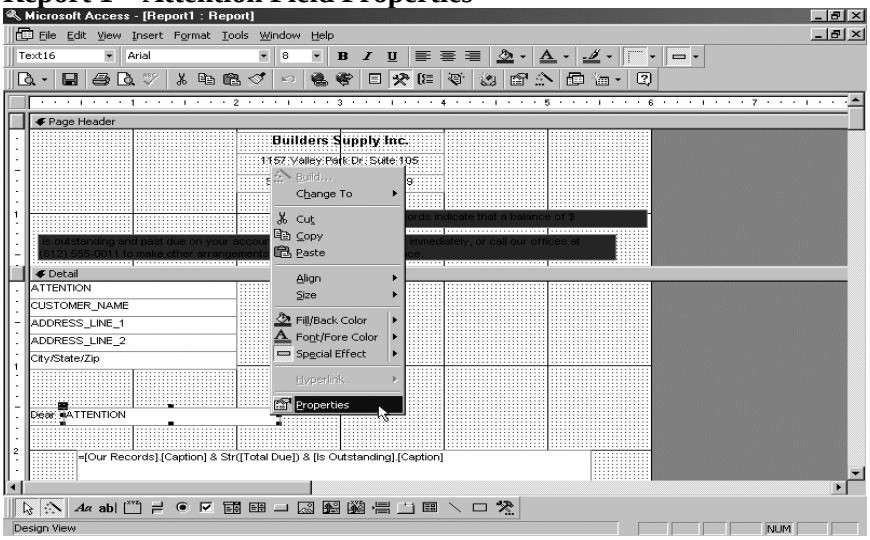


You can scroll through the records and see the different totals.

You will notice that some of the Dear Attention fields are blank. This is because the attention field is blank in OSAS. We will change that field to print the Customer Name if the Attention field is blank.

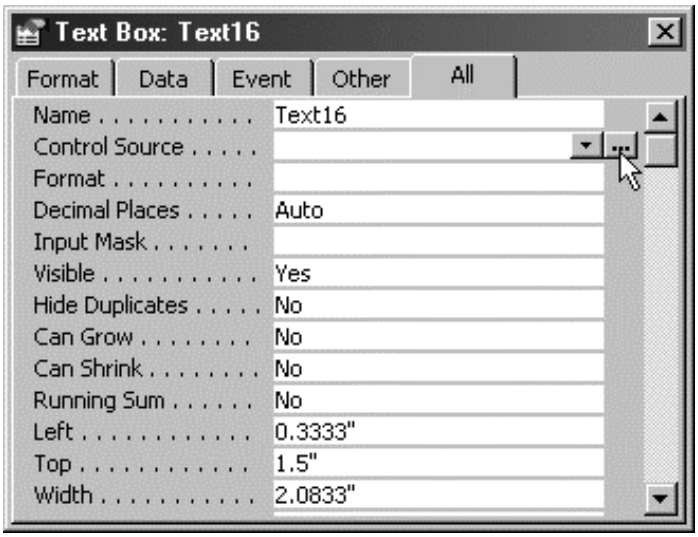
Select View from the menu bar and choose Design View.

Report 1 – Attention Field Properties



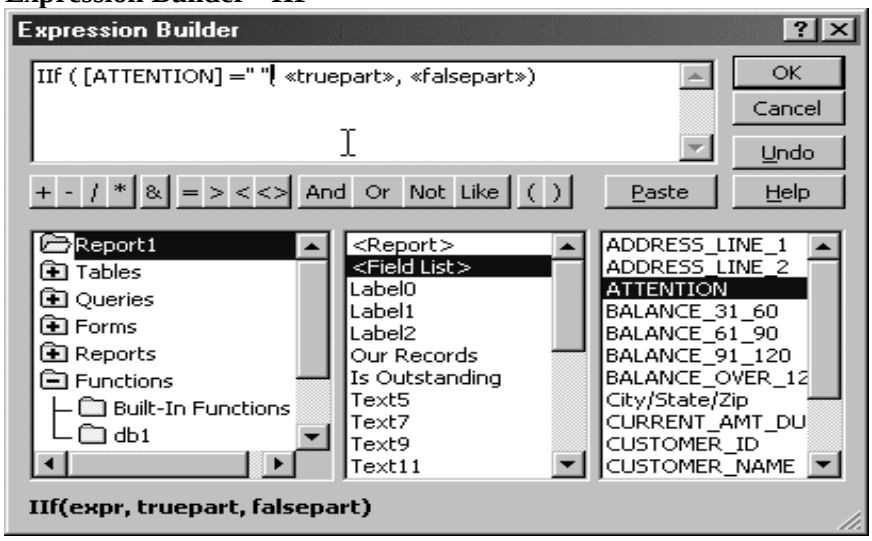
Select the ATTENTION field next to the Dear label. Right click on the field and select properties.

ATTENTION – Tex Box



Delete ATTENTION from the Control Source field and choose the expression builder icon.

Expression Builder - IIF

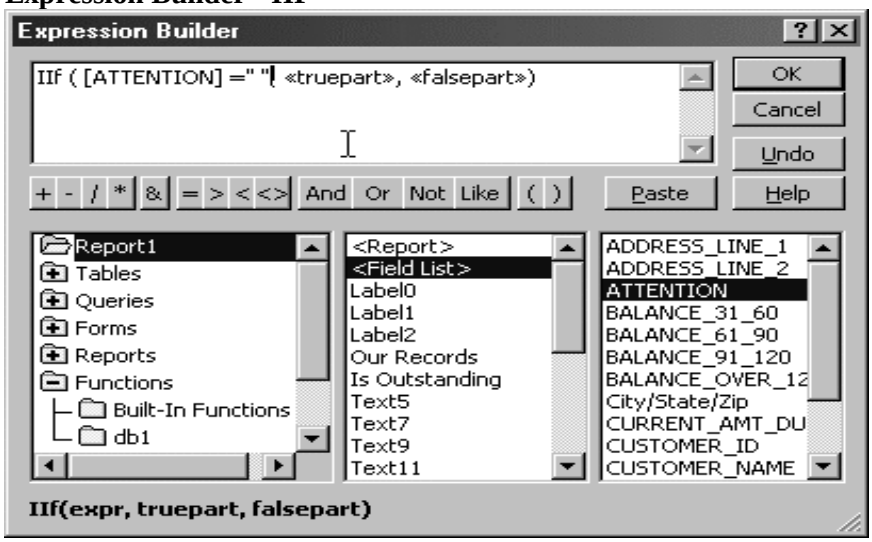


The Expression Builder is displayed.

In the first box, select Build In Functions. In the middle box, select <All> In the last box, select IIF.

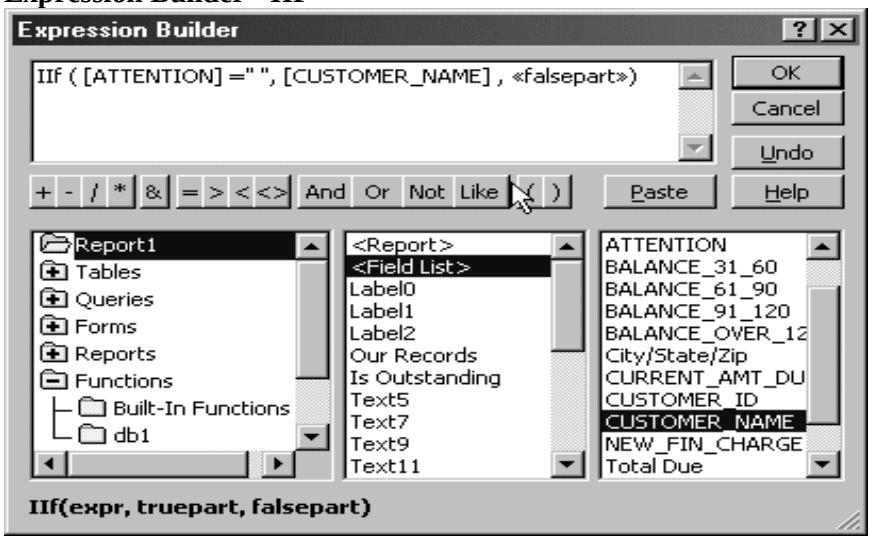
The IIF function allows you to select and expression. If they expression is true, the first value is returned, if the expression is false, the second value is returned.

Expression Builder - IIF



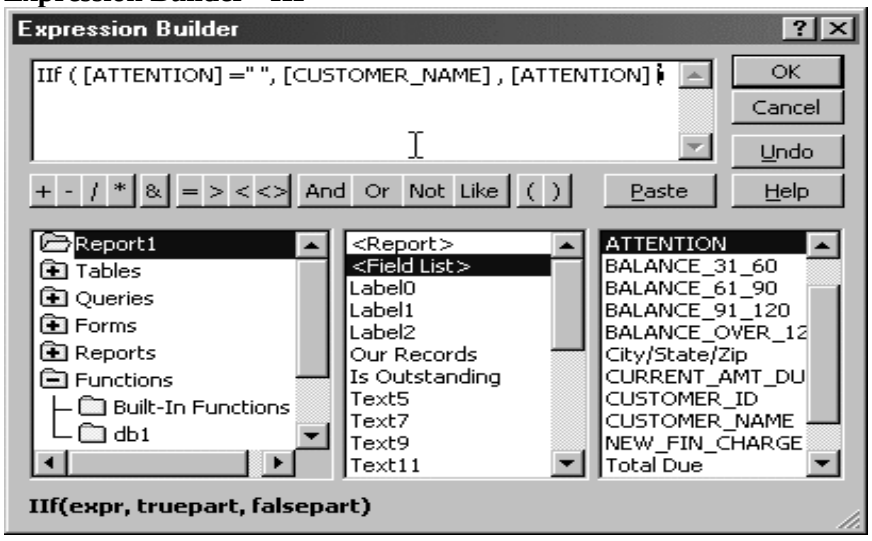
In the <expr> field, enter ATTENTION =" " . You can select the field by selecting Report1 in the first box, choosing <Field List> in the second box and selecting the ATTENTION field from the third box.

Expression Builder - IIF



Select the CUSTOMER_NAME field for the <truepart> field of the expression.

Expression Builder - IIF



Select the ATTENTION field for the <falsepart> field of the expression

The expression should look like the following:

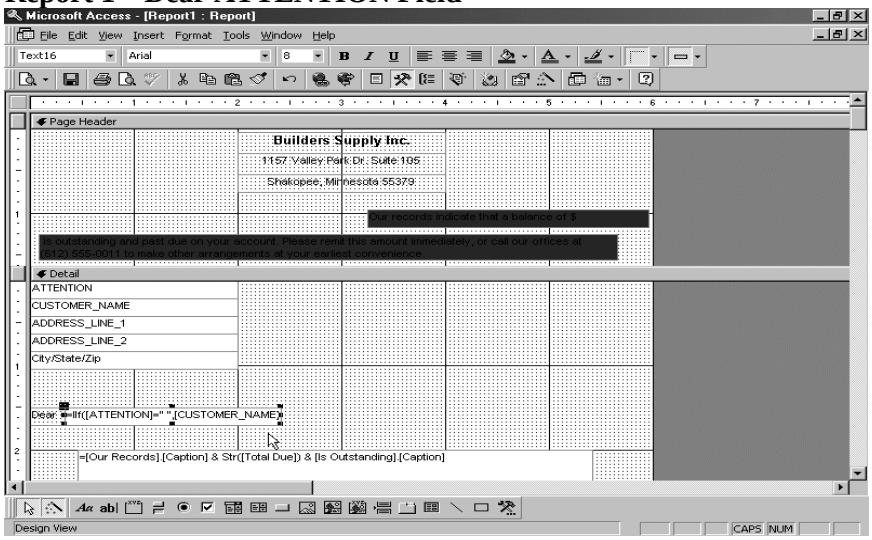
IIf ([ATTENTION] = " " , [CUSTOMER_NAME], [ATTENTION])

With this expression if the Attention field is blank, the customer name will print, if not the attention field will print.

Select the OK button to save the expression.

Close the text box.

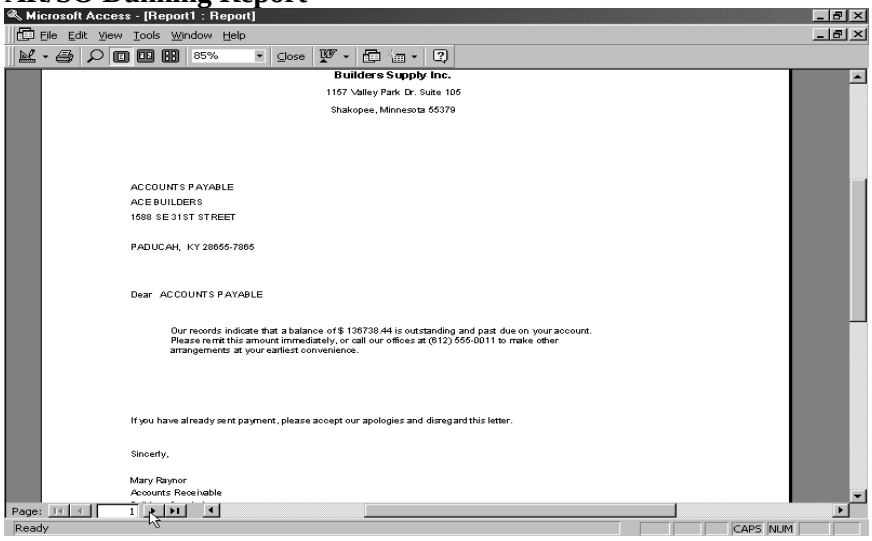
Report 1 – Dear ATTENTION Field



The new expression replaces the ATTENTION field.

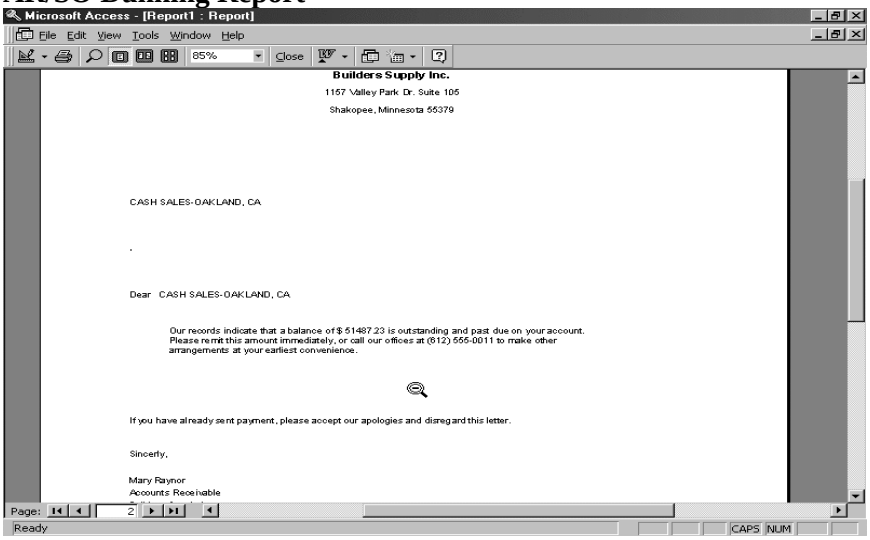
Select View from the menu bar and choose Form View.

AR/SO Dunning Report



The report is redisplayed.

AR/SO Dunning Report



You can scroll through the records and see the different totals.

Now the Attention or Customer Name print next to the word Dear for each customer.

APPENDIX

Appendix A - Build Shadow Dictionary

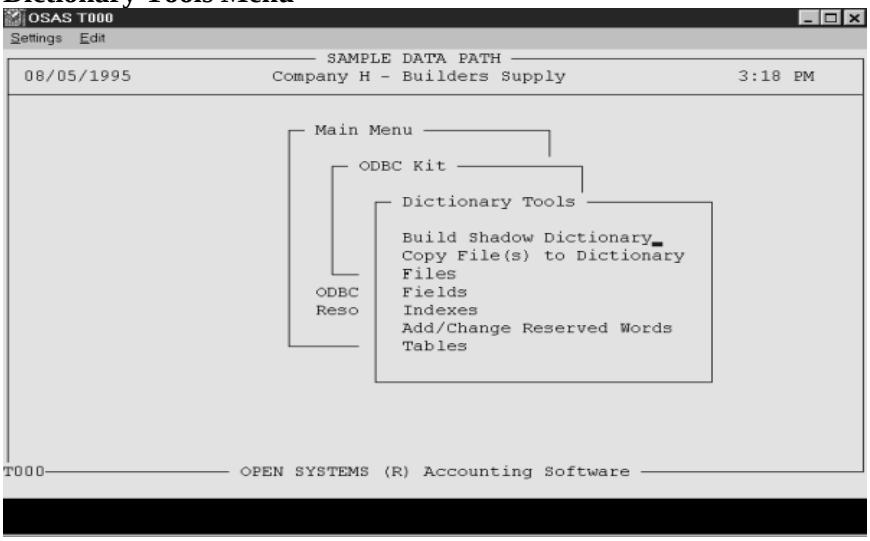
If you are using the version 1.1 of the Basis ODBC Drivers, (OSAS version 6.02 or earlier) you must run the Build Shadow Dictionary function to access the OSAS data.

A *shadow dictionary* is a streamlined copy of the main data dictionary that is used by the ODBC driver to access the data in the data files. The shadow dictionary is used because it is more efficient for data retrieval than the main dictionary.

Creating a shadow dictionary allows faster access to your data when you use the driver. Once you have created the shadow dictionary, you can check the **"Fast Connect"** and **"No Shadow Dictionary Consistency Check"** options in the ODBC driver setup to allow the faster access.

Use the Build Shadow Dictionary function to create the shadow dictionary, and to update the shadow dictionary after changes are made to the main data dictionary.

Dictionary Tools Menu



Build Shadow Dictionary Screen

To create the shadow dictionaries perform the following:

Select Build Shadow Dictionary from the Dictionary Tools menu.

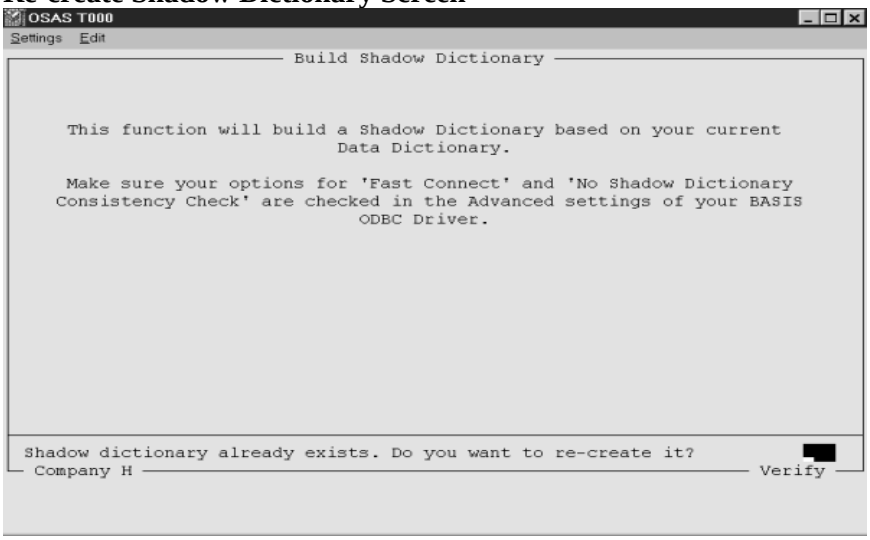
The first time you run the Build Shadow Dictionary function, the **Proceed** command, **PgDn** or **Esc P**, is displayed to create the shadow dictionaries.

There is also a reminder – ***Make sure you options for 'Fast Connect' and 'No Shadow Dictionary Consistency Check' are checked in the Advanced settings of your BASIS ODBC Driver.***[6]

The system creates a shadow dictionary for all OSAS data dictionaries installed, and for any files, fields or indexes added through those functions.

[6] The Fast Connect and No Shadow Dictionary Consistency Check options are selected when you create a data source using the BASIS ODBC Driver version 1.1. This function is not done through OSAS.

Re-create Shadow Dictionary Screen



If the shadow dictionaries have already been created you are prompted, "***Shadow dictionary already exists. Do you want to re-create it?"***

Select, **Y**, for Yes, if you want to overwrite the old set of shadow dictionaries and create a new set.

Select **N**, for No, if you do not want to rebuild the shadow dictionaries.

Note: You only need to run the Build Shadow Dictionary function once, unless an application is installed after the shadow dictionaries have been created[7] or if you create or edit files, fields or indexes after the shadow dictionaries have been created.

[7] In version 5.2 the ODBC Kit must also be reinstalled if you add an application after the shadow dictionaries have been built.

Appendix B –Creating a Data Source

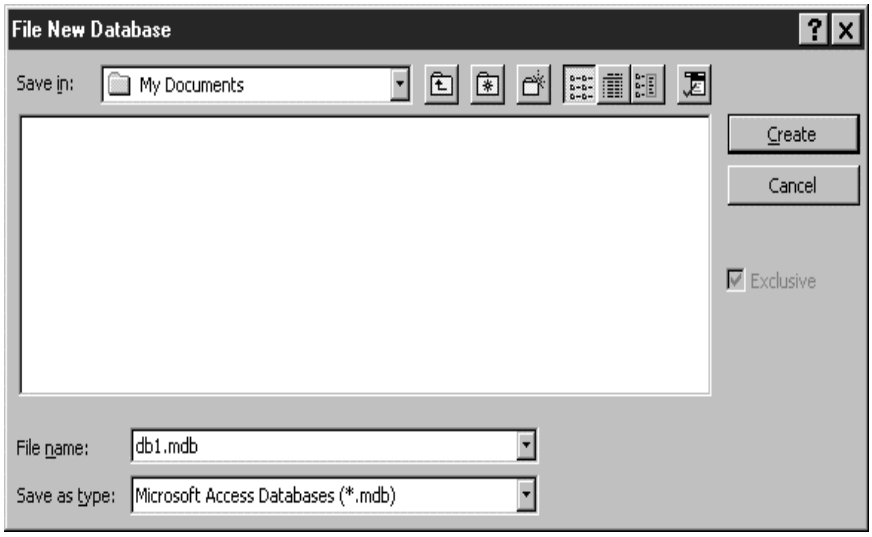
Basis ODBC 3.0 and 2.3 Drivers

Using Access to create the data source

Create a New Database Screen

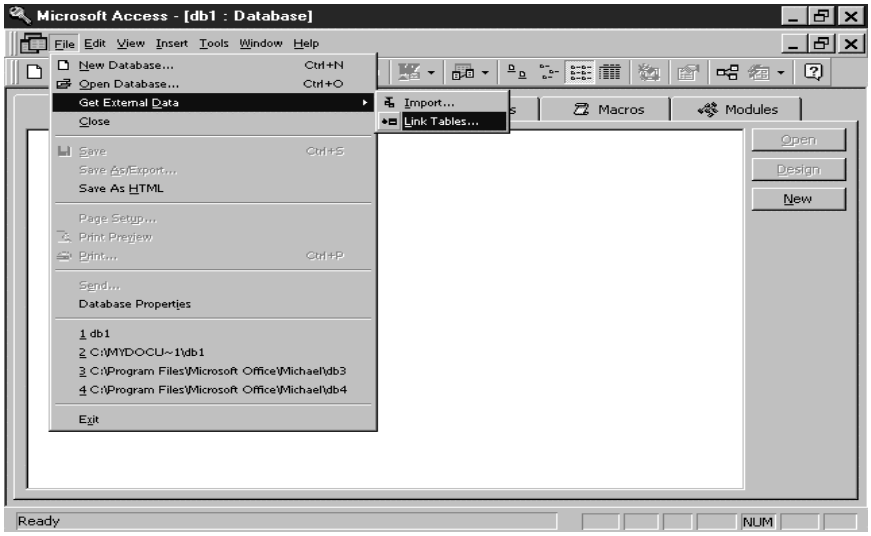
Start Microsoft Access. Select the database you want to use with ODBC. If the database you want to use is not listed, create a blank database. This example uses a blank database.

File New Database Screen



Choose the path and file name for the database. Select the Create button.

Link Tables

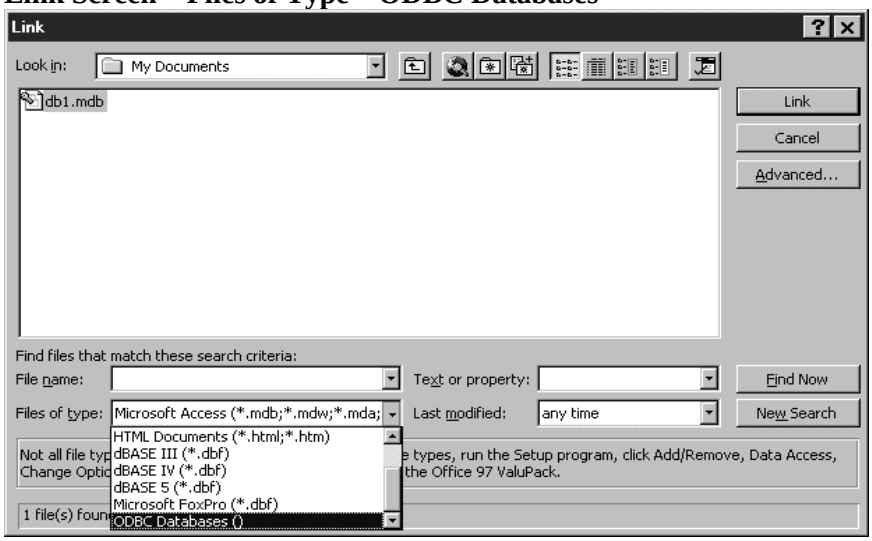


The database is displayed.

Select the Tables tab.

From the menu bar, select File, then choose Get External Data, and select Link Tables

Link Screen – Files of Type – ODBC Databases

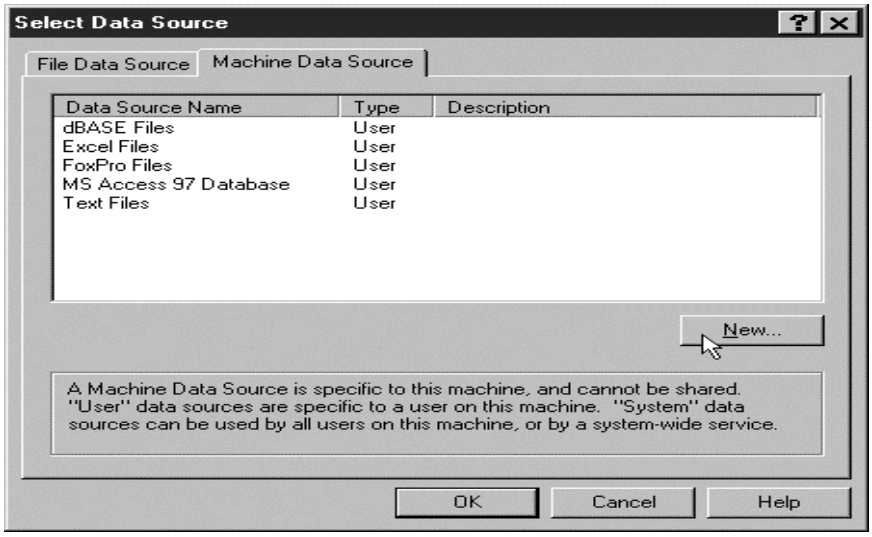


The Link screen is displayed.

In the Files of Type field, select ODBC Databases.

Use the combo button to select the ODBC Databases.

Select Data Source Screen



The Select Data Source screen is displayed.

Select the Machine Data Source tab[8].

Select the data source you want to use to link to the OSAS data.

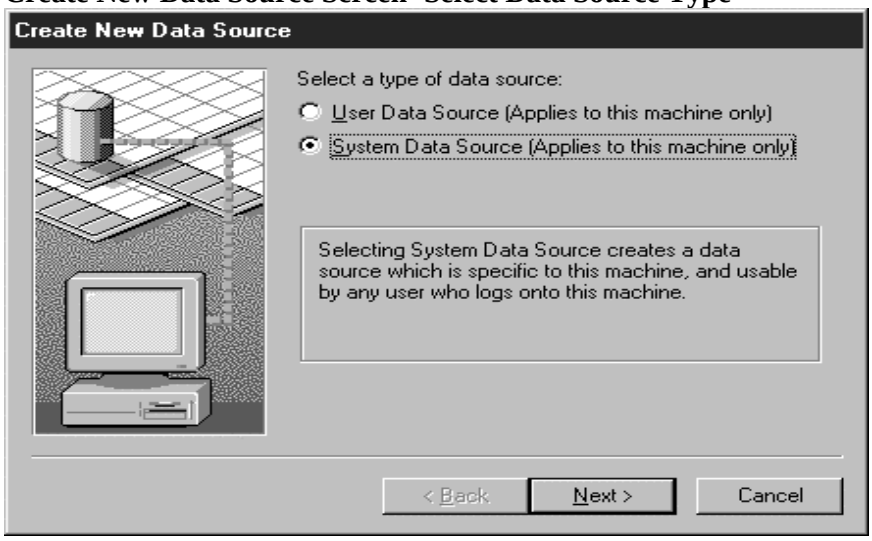
If the data source is not listed, click the New button to create a data source.

Select New.

[8] You must always use a Machine Data Source to link to that OSAS data from Access.

The Create New Data Source screen is displayed.

Create New Data Source Screen- Select Data Source Type

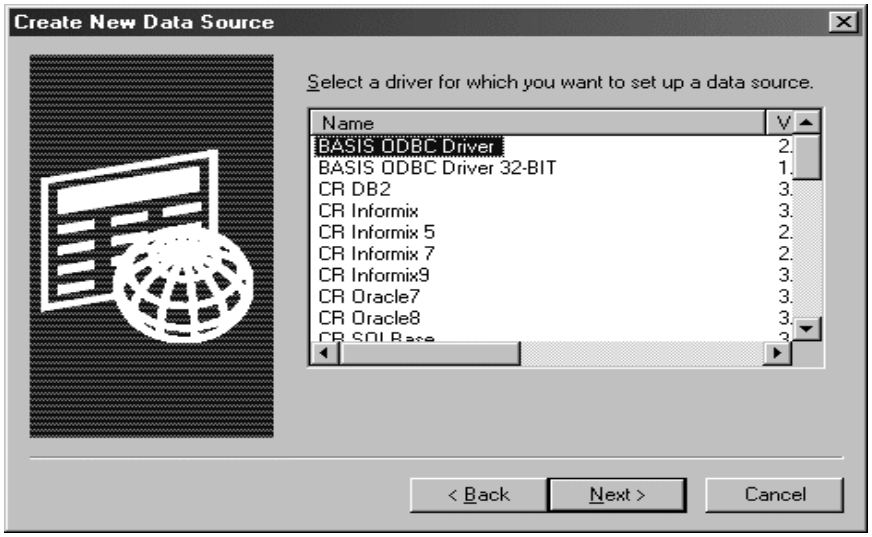


Select the type of data source you are creating.

Selection	Description
User Data Source	Creates a data source for this machine that only the user creating it can access.
System Data Source	Creates a data source for this machine that anyone who uses this machine can access.

Select the Next button.

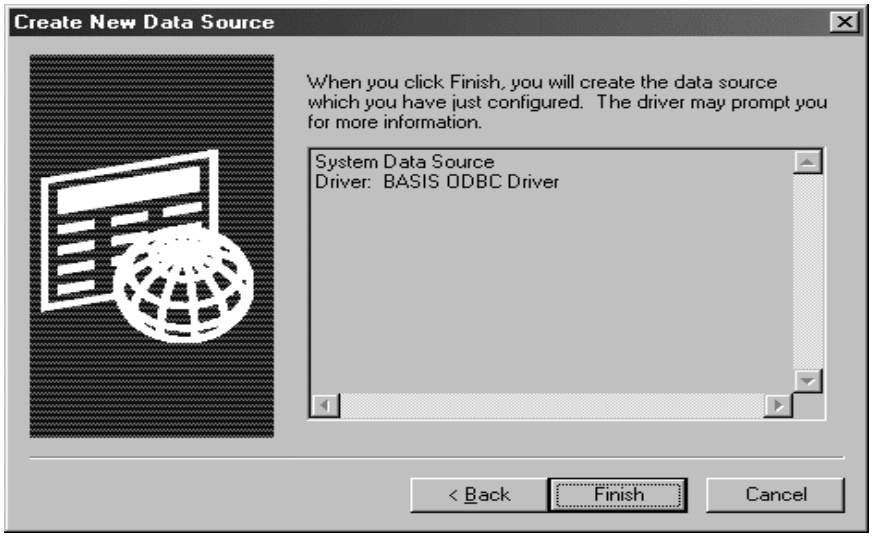
Create New Data Source Screen- Select Driver



Select the driver for the data source. For OSAS data select the BASIS ODBC Driver.

Select the Next button.

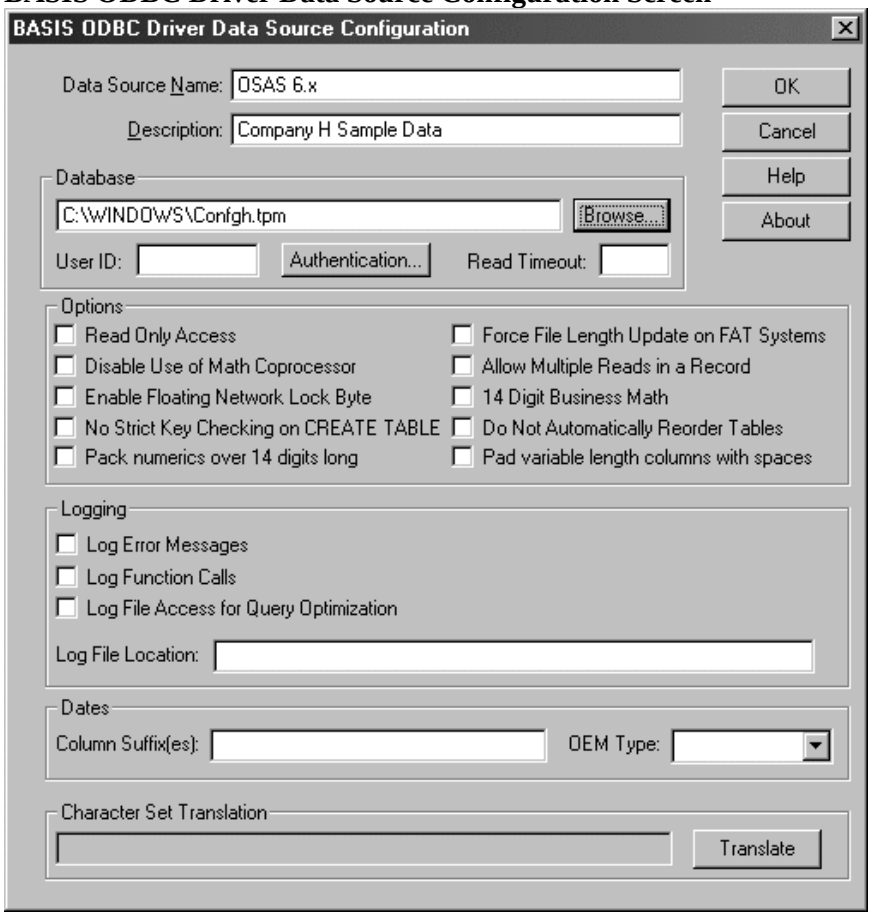
Create New Data Source Screen - Finish



The last screen summarizes the type of data source you are creating and the driver used for the data source. Verify everything to make sure it is correct.

Select Finish

BASIS ODBC Driver Data Source Configuration Screen

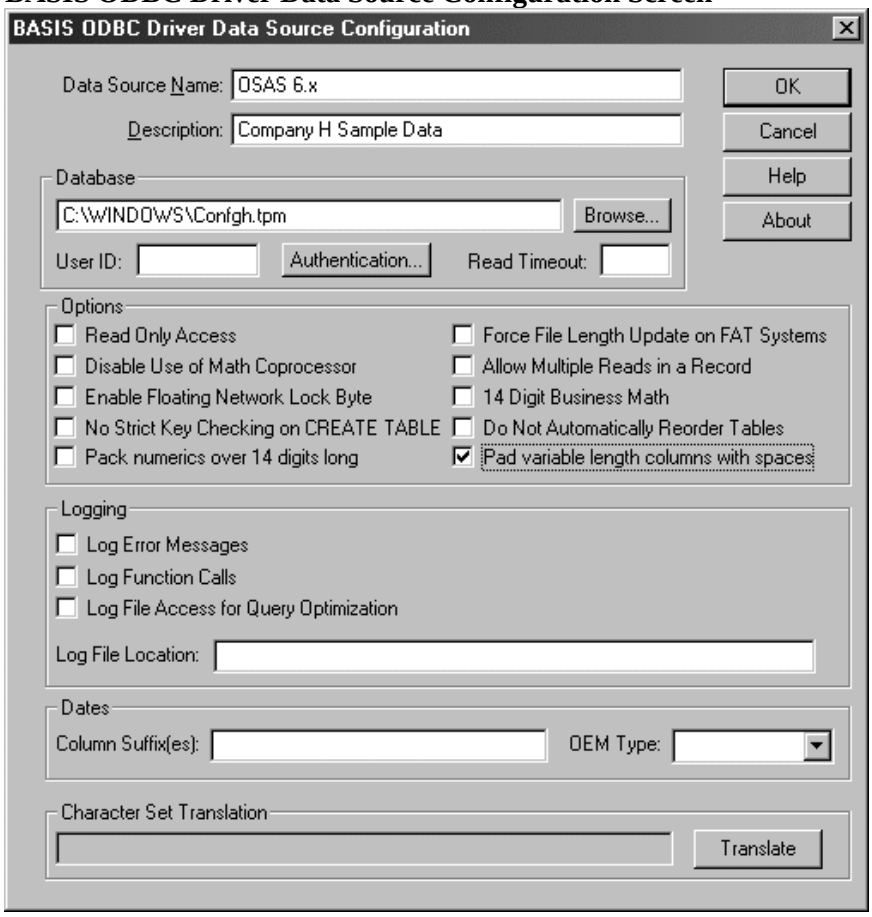


The BASIS ODBC Driver Data Source Configuration screen is displayed.

Enter the following:

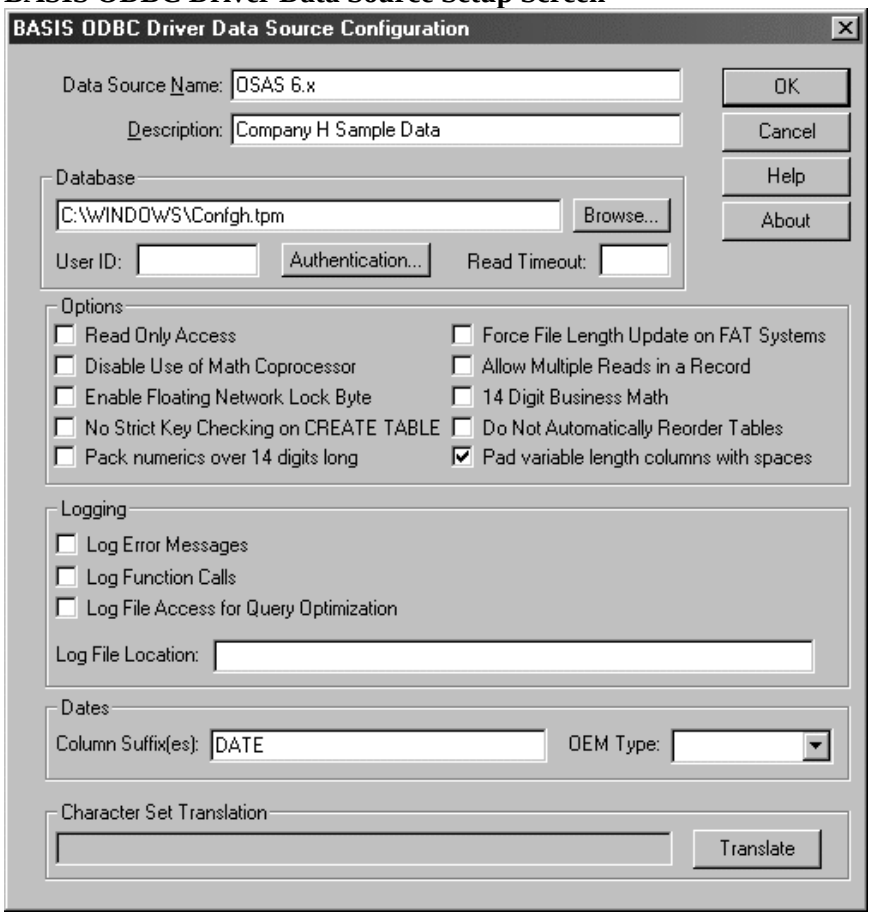
Field	**Description**
Data Source Name	Enter a name for the data source.
Description	Enter a description for the data source.
Database	Enter the path and filename of the configuration file you created with the Edit CONFIG.TPM function. Use the Browse button to search for the file. The default location is the RWdata directory in OSAS.
User ID	If you are using a data server with OSAS, you must enter a valid network user ID to use with this data source file. If you do not enter a valid user ID, you will not be able to access your OSAS data stored on the data server. Root, Admin, Supervisor, and Administrator are not allowed.
Authentication	Click this button for secure data servers that require user authentication. You can enter a User ID, Password and Domain, to authenticate the user logging in, or an Authentication String.
Read Timeout	Enter a number between 0 and 255 to indicate the number of seconds to wait for a locked record to become available. The default is 10.

BASIS ODBC Driver Data Source Configuration Screen



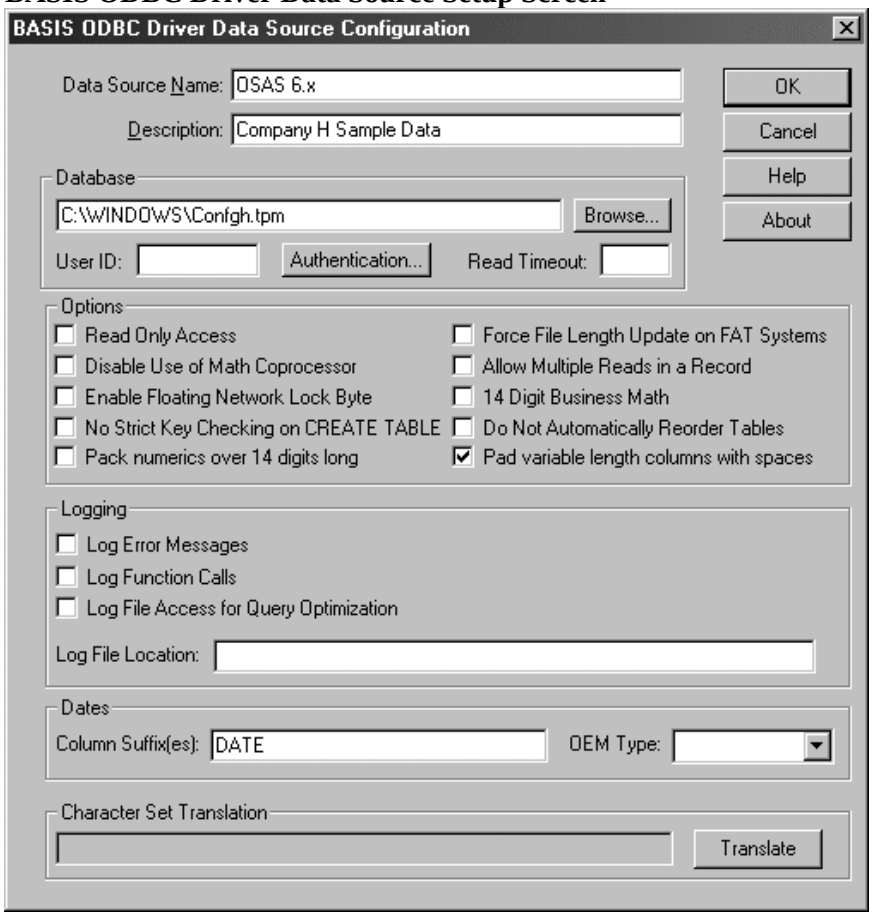
Option	**Description**
Read Only Access	Check this box if you are using the Read/Write version of the ODBC Drivers and you want this data source to allow read only access. Any changes made to the files are not allowed with read only access.
Disable Use of Math Coprocessor	Check this box, if you want to disable the use of the math coprocessor. On machines with math coprocessors, the ODBC Drivers may be able to use the coprocessor to enhance the speed and accuracy of the functions.
Enable Floating Network Lock Byte	Check this box to enable the older, slower file-locking scheme, which allows for standard access across the network.
No Strict Key Checking on CREATE TABLE	Check this box, if no primary key has been specified in the data files, creates a primary key using as many columns (fields) as can fit into the 120 character maximum key length. If this option is not select, then a primary key must be setup in each data file or errors will occur.
Pack numerics over 14 digits long	Check this box, if you have numeric values that are more then 14 digits to allow compression of these values into a pseudo-binary form to preserve disk space.

BASIS ODBC Driver Data Source Setup Screen



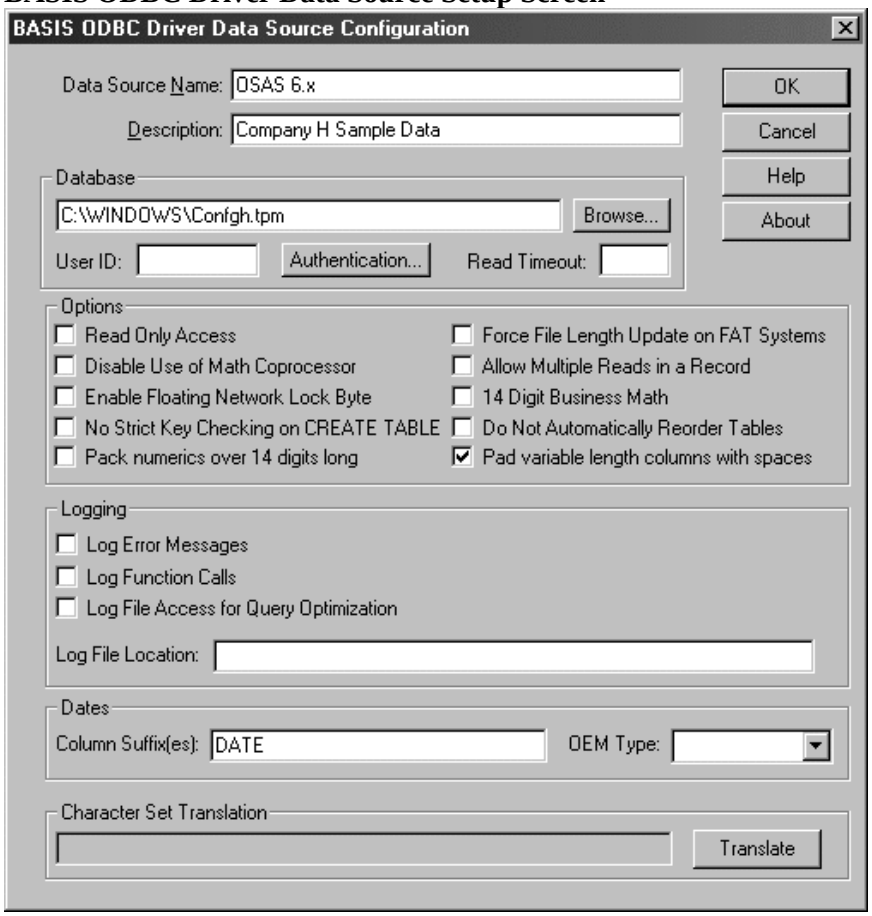
Option	**Description**
Force File Length Update on Fat Systems	Check this box to force MS-DOS to update the length of a dynamic file after any changes are made to the file.
Allow Multiple Reads in a Record	Check this box to allow multiple read processes to access the key of a keyed file.
14 Digit Business Math	Check this box to put the ODBC Drivers in a 14 digit Business Math mode. This forces keys and templates to use 14 digit Business Math precision.
Do Not Automatically Reorder Tables	The ODBC drivers may attempt to reorder the table if you are using a Select statement against multiple files, for optimization. Check this box, if you do not want the ODBC drivers to try to reorder the table.
Pad variable length columns with spaces	Check this option if you are using the Read/Write version of the ODBC Drivers, so that any updates you make to the OSAS files will be padded correctly.

BASIS ODBC Driver Data Source Setup Screen



Logging Field	**Description**
Log Error Messages	Check this option to write any error messages generated by the ODBC Drivers to the log file entered in the Log File Location field.
Log Function Calls	Check this option1to write each ODBC API function call to the log file entered in the Log File Location field.
Log File Access for Query Optimization	Check this option to write each file system read to the log file entered in the Log File Location field.
Log File Location	Enter the path and filename for the log file. This file is used by the Log Error Messages, Log Function Calls, and Log File Access for Query Optimization options.

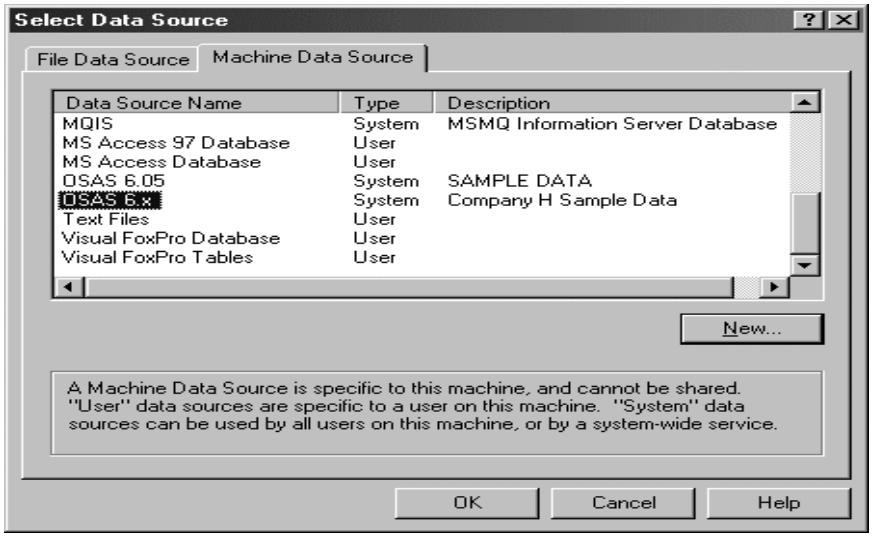
BASIS ODBC Driver Data Source Setup Screen



Dates Field	**Description**
Column Suffix(es)	Enter the suffix(es) of the columns that are to be converted to the OEM date type selected in the OEM Type field. More then one suffix can be entered. If more then one suffix is entered separate each with a comma.
OEM Types	By default, the numeric columns that end in the Date Column Suffix are treated as Julian Numbers and converted to SQL Dates. If you are using an OEM database that uses non-Julian numbers for the data format, select one of the OEM data types listed in the combo box to indicate your OEM date preference for columns ending in the Date Column Suffix.
Translation	Click this button to select the Microsoft Code Page Translator or other ODBC character translator.
Character Set Translation	The translator selected, if any, with the translation button is displayed.

Select the OK button to save the data source setup.

Select Data Source Screen

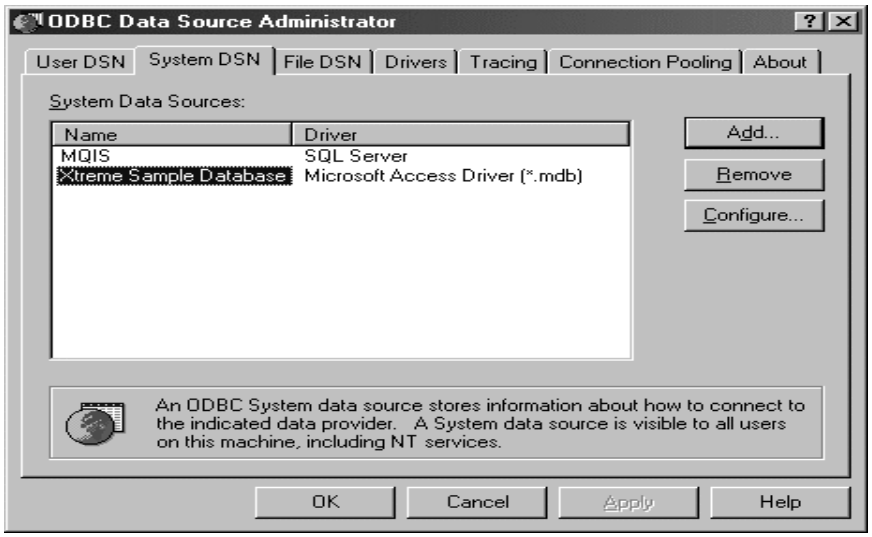


The Select Data Source screen is re-displayed.

Highlight the data source you created and select OK.

Using the ODBC Administrator to create the data source

ODBC Data Source Administrator



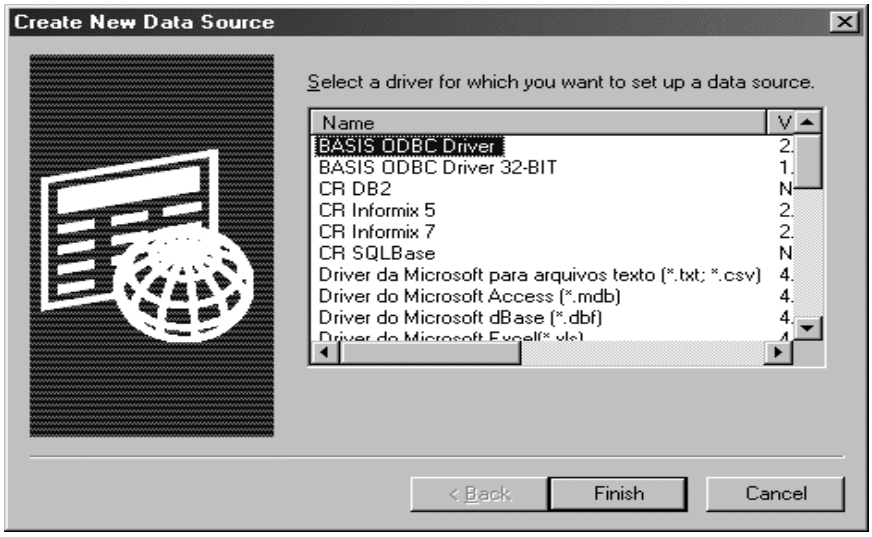
Create a Data Source with the 32-bit ODBC Administrator in the control panel.

Option	**Description**
User DSN	Creates a data source for this machine that only the user creating it can access.
System DSN	Creates a data source for this machine that anyone who uses this machine can access.
File DSN	Creates a data source that can be shared by users who have the same drivers installed.
Drivers	Displays the list of installed ODBC Drivers.
Tracing	Creates a log file of calls made to the ODBC Drivers. This can be used to aid support and debug your applications.
Connection Pooling	Allows applications to reuse open connection handles, which saves round-trips to the server.

Select User DSN or System DSN for use with Access.

Click the Add button to create the new data source.

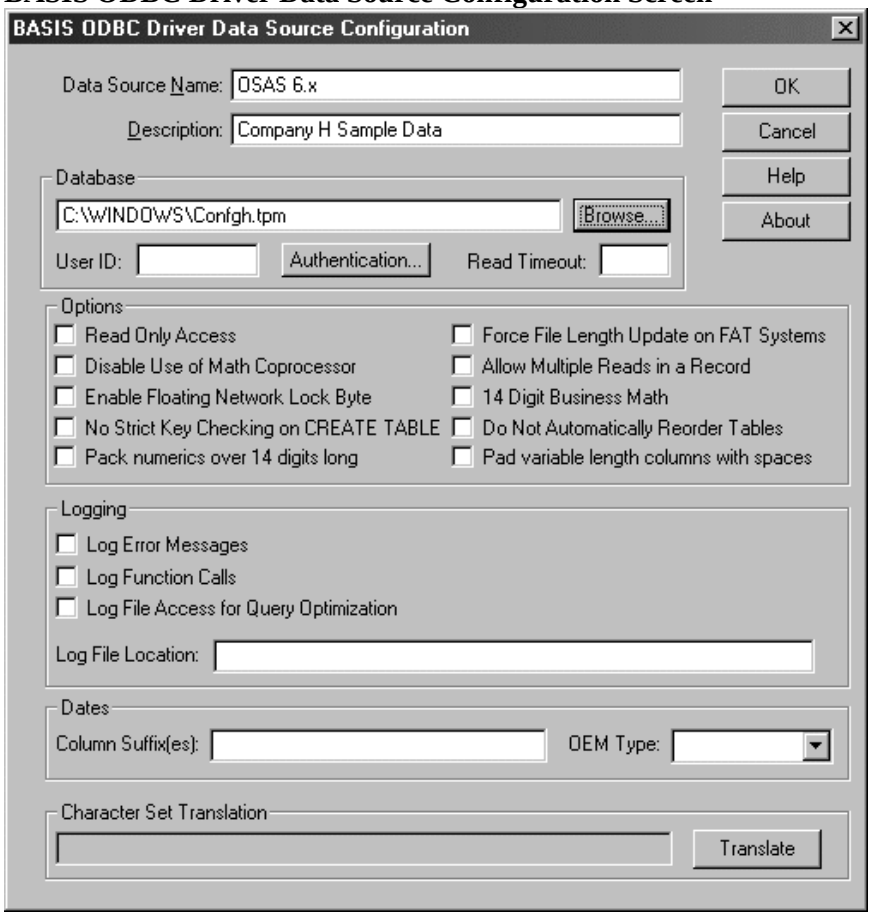
Create New Data Source



The Create New Data Source screen is displayed select the Basis ODBC Driver.

Select the Finish button.

BASIS ODBC Driver Data Source Configuration Screen



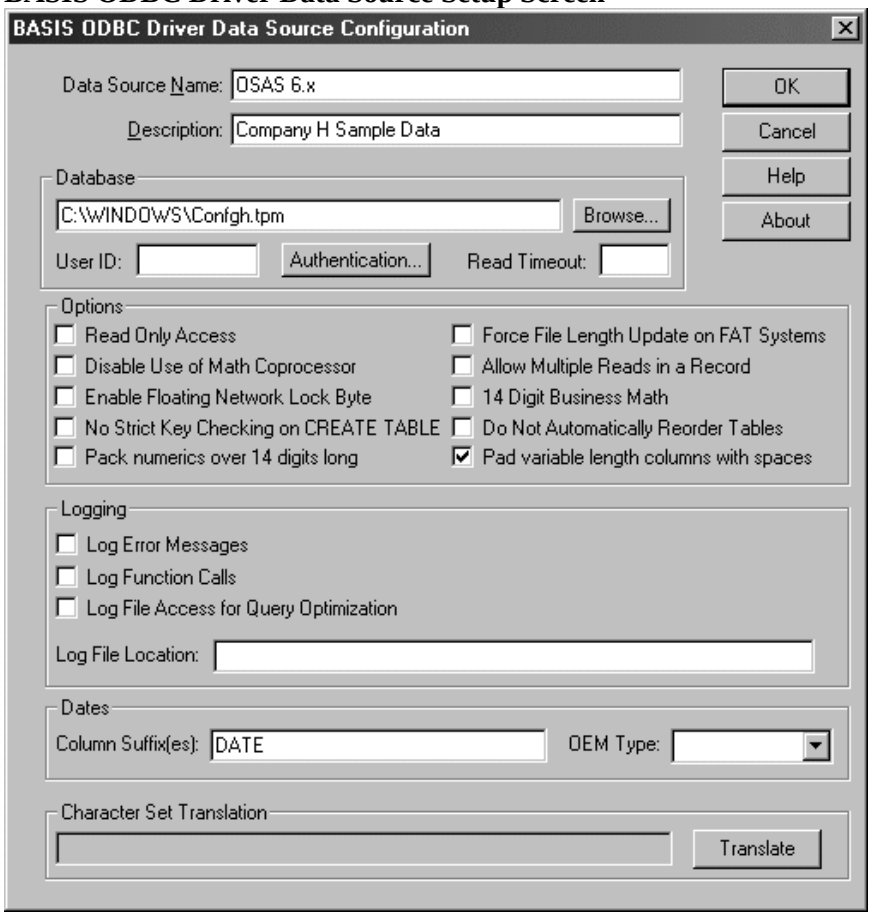
The BASIS ODBC Driver Data Source Configuration screen is displayed.

Enter information for the following fields:

Field	**Description**
Data Source Name	Enter a name for the data source.
Description	Enter a description for the data source.
Database	Enter the path and filename of the configuration file you created with the Edit CONFIG.TPM function. Use the Browse button to search for the file. The default location is the RWdata directory in OSAS.
User ID	If you are using a data server with OSAS, you must enter a valid network user ID to use with this data source file. If you do not enter a valid user ID, you will not be able to access your OSAS data stored on the data server. Root, Admin, Supervisor, and Administrator are not allowed.
Authentication	Click this button for secure data servers that require user authentication. You can enter a User ID, Password and Domain, to authenticate the user logging in, or an Authentication String.
Read Timeout	Enter a number between 0 and 255 to indicate the number of seconds to wait for a locked record to become available. The default is 10.

Option	Description
Read Only Access	Check this box if you are using the Read/Write version of the ODBC Drivers and you want this data source to allow read only access. Any changes made to the files are not allowed with read only access.
Disable Use of Math Coprocessor	Check this box, if you want to disable the use of the math coprocessor. On machines with math coprocessors, the ODBC Drivers may be able to use the coprocessor to enhance the speed and accuracy of the functions.
Enable Floating Network Lock Byte	Check this box to enable the older, slower file-locking scheme, which allows for standard access across the network.
No Strict Key Checking on CREATE TABLE	Check this box, if no primary key has been specified in the data files, creates a primary key using as many columns (fields) as can fit into the 120 character maximum key length. If this option is not select, then a primary key must be setup in each data file or errors will occur.
Pack numerics over 14 digits long	Check this box, if you have numeric values that are more then 14 digits to allow compression of these values into a pseudo-binary form to preserve disk space.
Force File Length Update on Fat Systems	Check this box to force MS-DOS to update the length of a dynamic file after any changes are made to the file.
Allow Multiple Reads in a Record	Check this box to allow multiple read processes to access the key of a keyed file.
14 Digit Business Math	Check this box to put the ODBC Drivers in a 14 digit Business Math mode. This forces keys and templates to use 14 digit Business Math precision.
Do Not Automatically Reorder Tables	The ODBC drivers may attempt to reorder the table if you are using a Select statement against multiple files, for optimization. Check this box, if you do not want the ODBC drivers to try to reorder the table.
Pad variable length columns with spaces	Check this option if you are using the Read/Write version of the ODBC Drivers, so that any updates you make to the OSAS files will be padded correctly.
Log Error Messages	Check this option to write any error messages generated by the ODBC Drivers to the log file entered in the Log File Location field.
Log Function Calls	Check this option1to write each ODBC API function call to the log file entered in the Log File Location field.
Log File Access for Query Optimization	Check this option to write each file system read to the log file entered in the Log File Location field.
Log File Location	Enter the path and filename for the log file. This file is used by the Log Error Messages, Log Function Calls, and Log File Access for Query Optimization options.

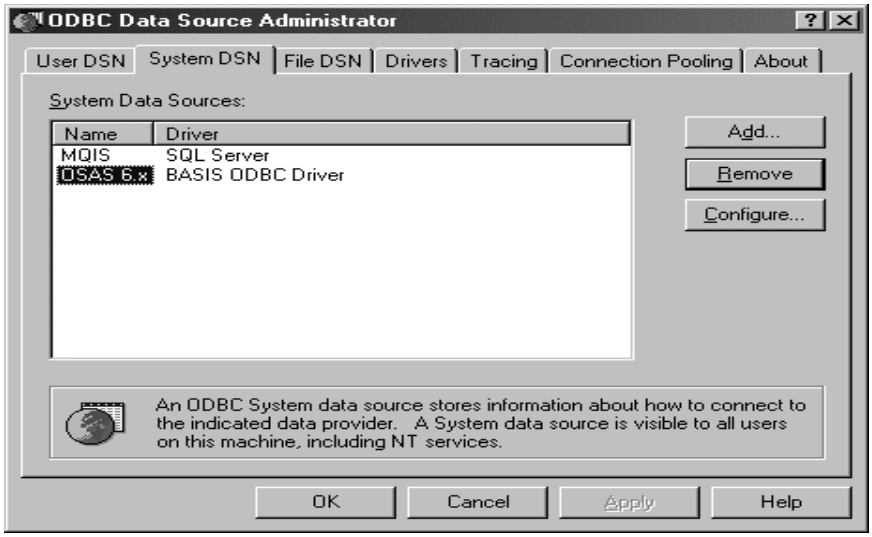
BASIS ODBC Driver Data Source Setup Screen



Dates Field	**Description**
Column Suffix(es)	Enter the suffix(es) of the columns that are to be converted to the OEM date type selected in the OEM Type field. More then one suffix can be entered. If more then one suffix is entered separate each with a comma.
OEM Types	By default, the numeric columns that end in the Date Column Suffix are treated as Julian Numbers and converted to SQL Dates. If you are using an OEM database that uses non-Julian numbers for the data format, select one of the OEM data types listed in the combo box to indicate your OEM date preference for columns ending in the Date Column Suffix.
Translation	Click this button to select the Microsoft Code Page Translator or other ODBC character translator.
Character Set Translation	The translator selected, if any, with the translation button is displayed.

Select the OK button to save the data source setup.

ODBC Data Source Administrator



The data source is listed in the ODBC Administrator Box. Click OK to exit.

Basis ODBC 1.1 Drivers

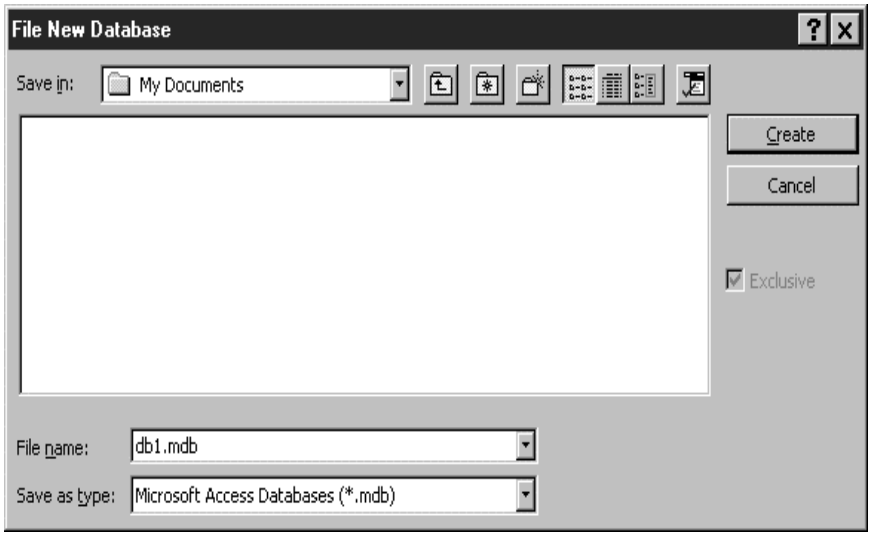
Using Access to create the data source

Create a New Database Screen

Start Microsoft Access. Select the database you want to use with ODBC. If the database you want to use is not listed, create a blank database.

This example uses a blank database.

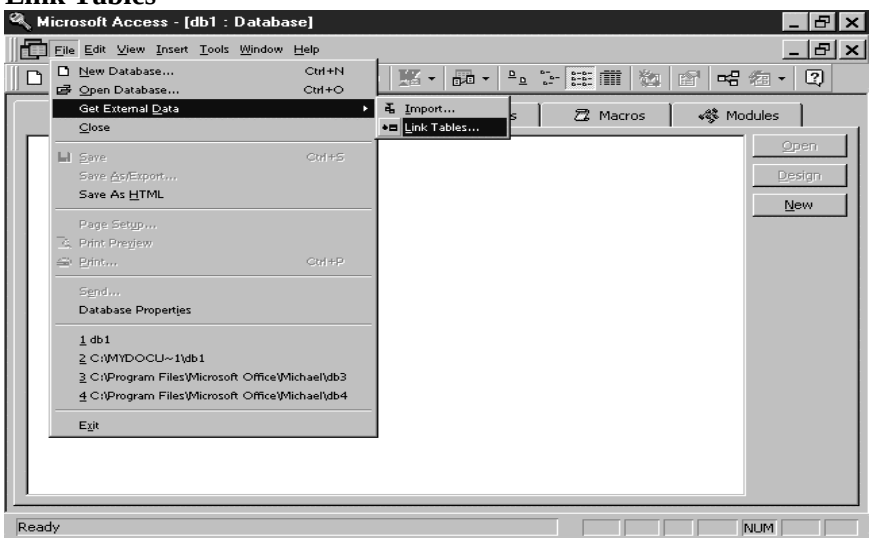
File New Database Screen



Choose the path and file name for the database.

Select the Create button.

Link Tables

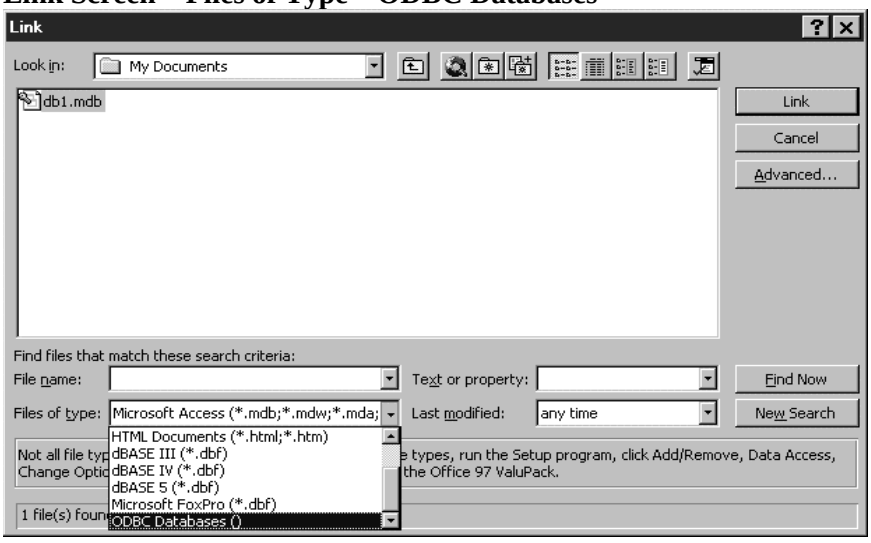


The database is displayed.

Select the Tables tab.

From the menu bar, select File, then choose Get External Data, and select Link Tables

Link Screen – Files of Type – ODBC Databases

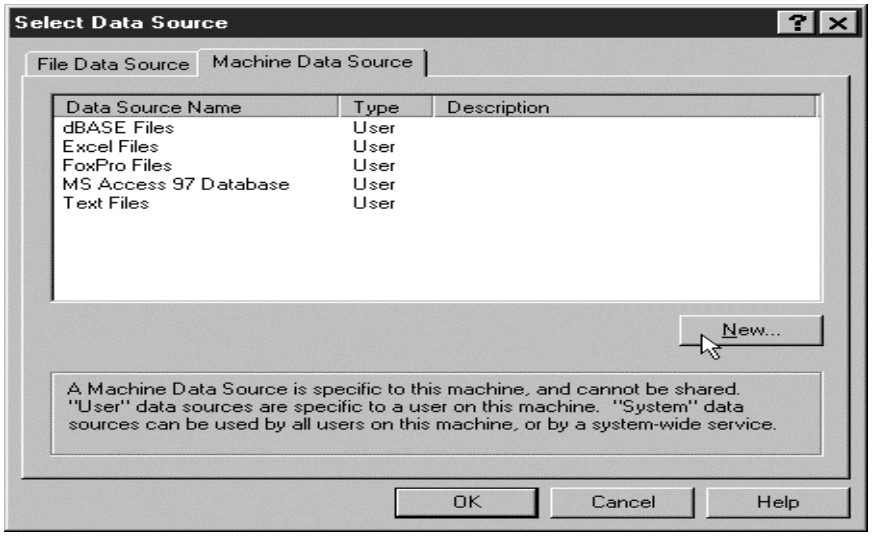


The Link screen is displayed.

In the Files of Type field, select ODBC Databases.

Use the combo button to select the ODBC Databases.

Select Data Source Screen



The Select Data Source screen is displayed.

Select the Machine Data Source tab[9].

Select the data source you want to use to link to the OSAS data.

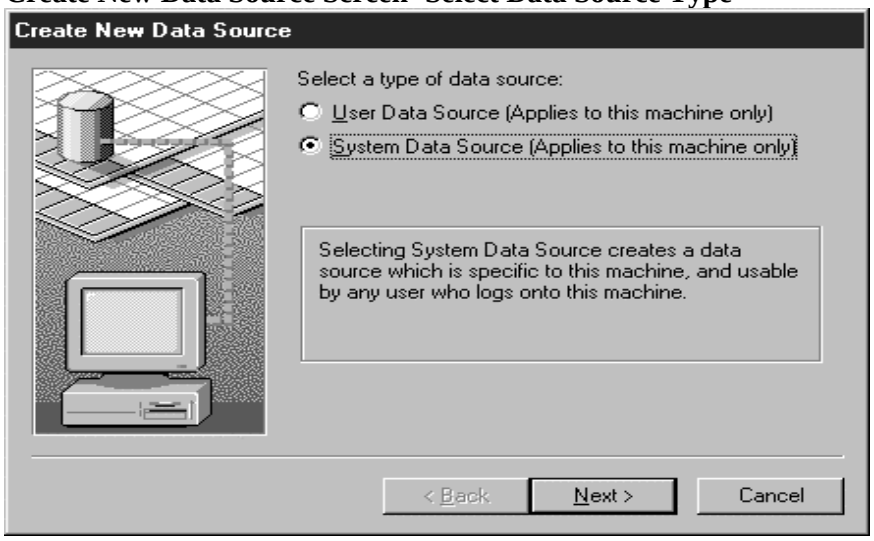
If the data source is not listed, click on the New button to create a data source.

Select New.

[9] You must always use a Machine Data Source to link to that OSAS data from Access.

The Create New Data Source screen is displayed.

Create New Data Source Screen- Select Data Source Type

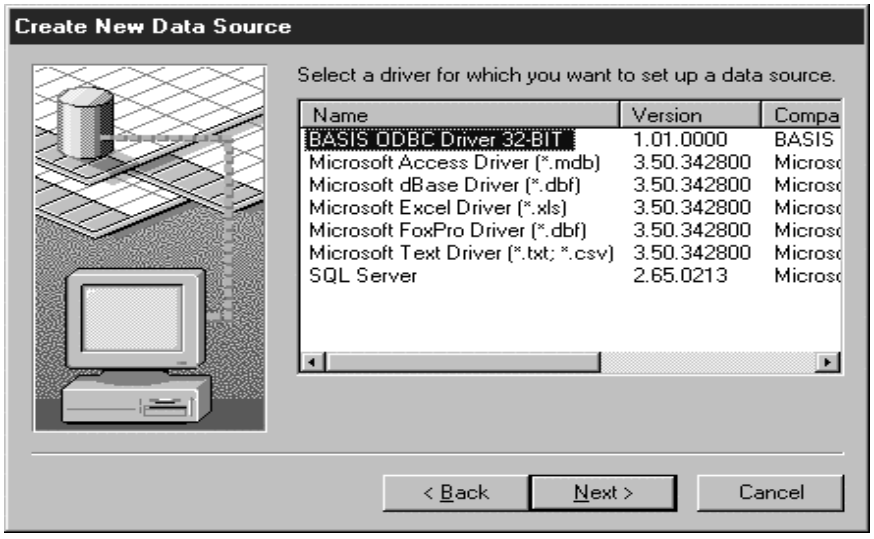


Select the type of data source you are creating.

Selection	Description
User Data Source	Creates a data source for this machine that only the user creating it can access
System Data Source	Creates a data source for this machine that anyone who uses this machine can access.

Select the Next button.

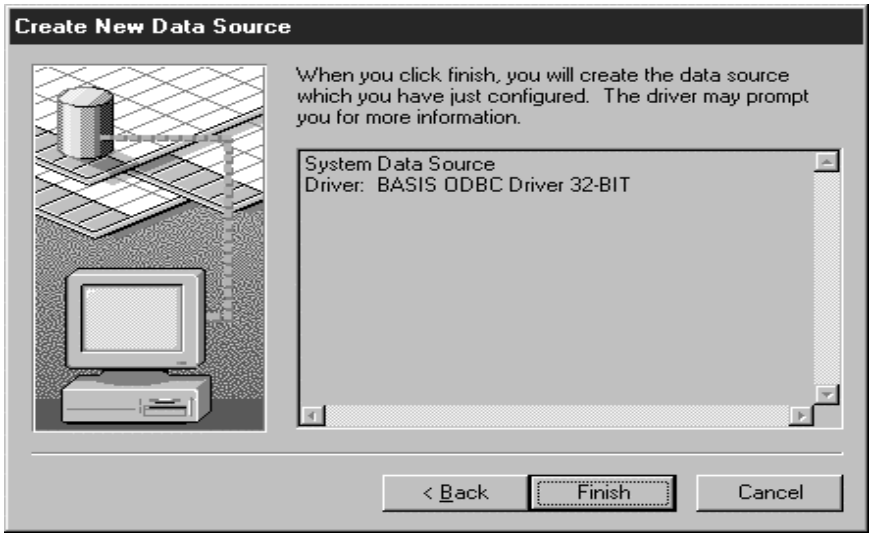
Create New Data Source Screen- Select Driver



Select the driver for the data source. For OSAS data select the BASIS ODBC Driver.

Select the Next button.

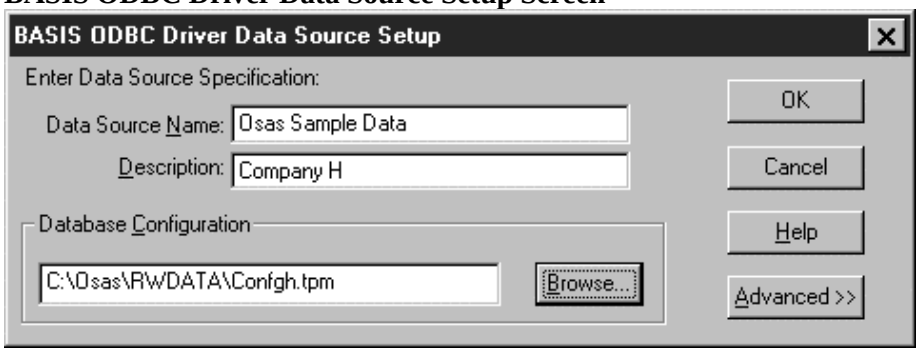
Create New Data Source Screen - Finish



The last screen summarizes the type of data source you are creating and the driver used for the data source. Verify everything to make sure it is correct.

Select Finish

BASIS ODBC Driver Data Source Setup Screen



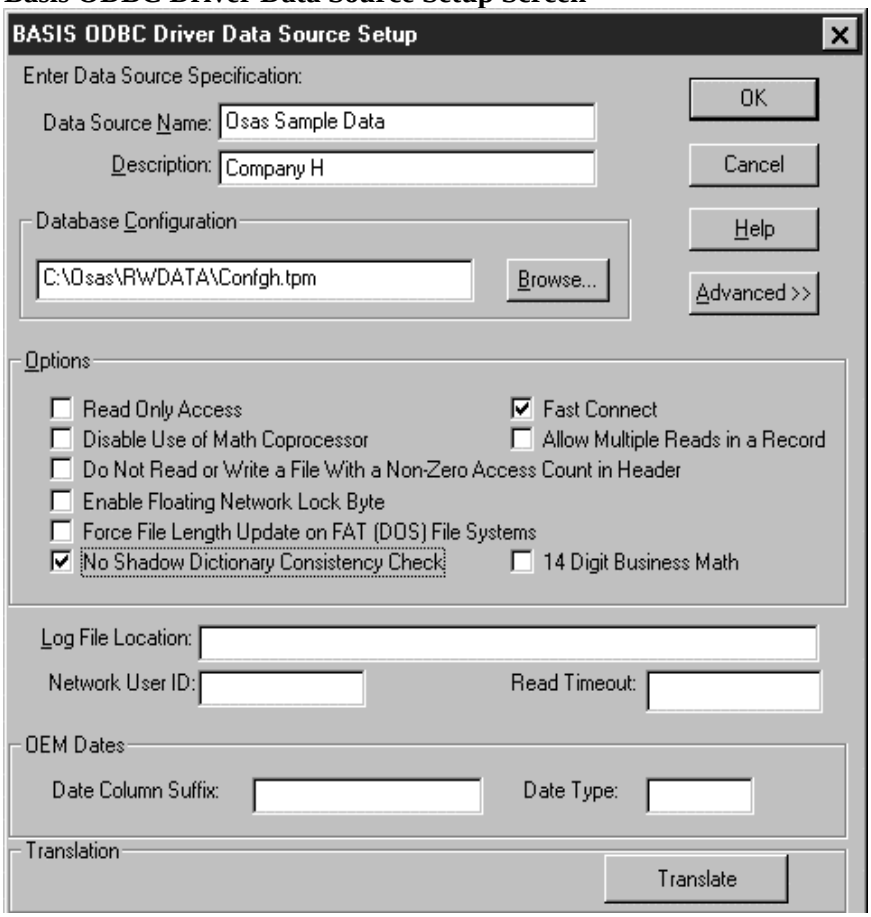
The BASIS ODBC Driver Data Source Configuration screen is displayed.

Enter information for the following fields:

Field	**Description**
Data Source Name	Enter a name for the data source.
Description	Enter a description for the data source.
Database	Enter the path and filename of the configuration file you created with the Edit CONFIG.TPM function. Use the Browse button to search for the file. The default location is the RWdata directory in OSAS.

Select the Advanced button.

Basis ODBC Driver Data Source Setup Screen

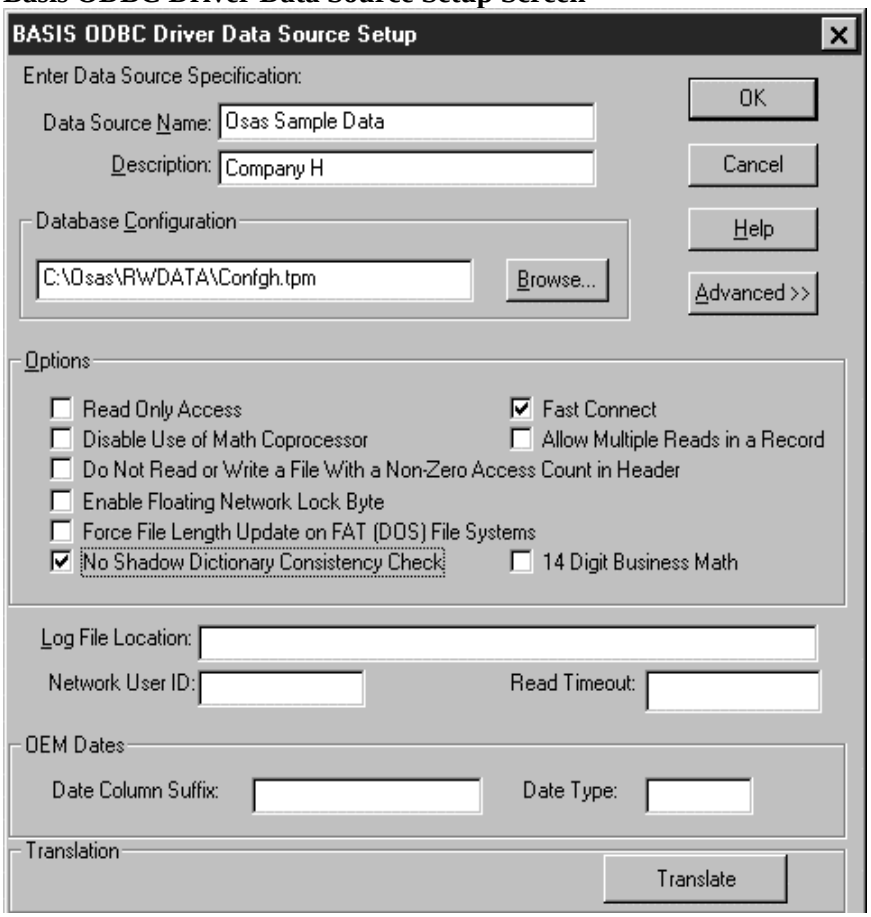


The Options section is displayed.

Enter information for the following options:

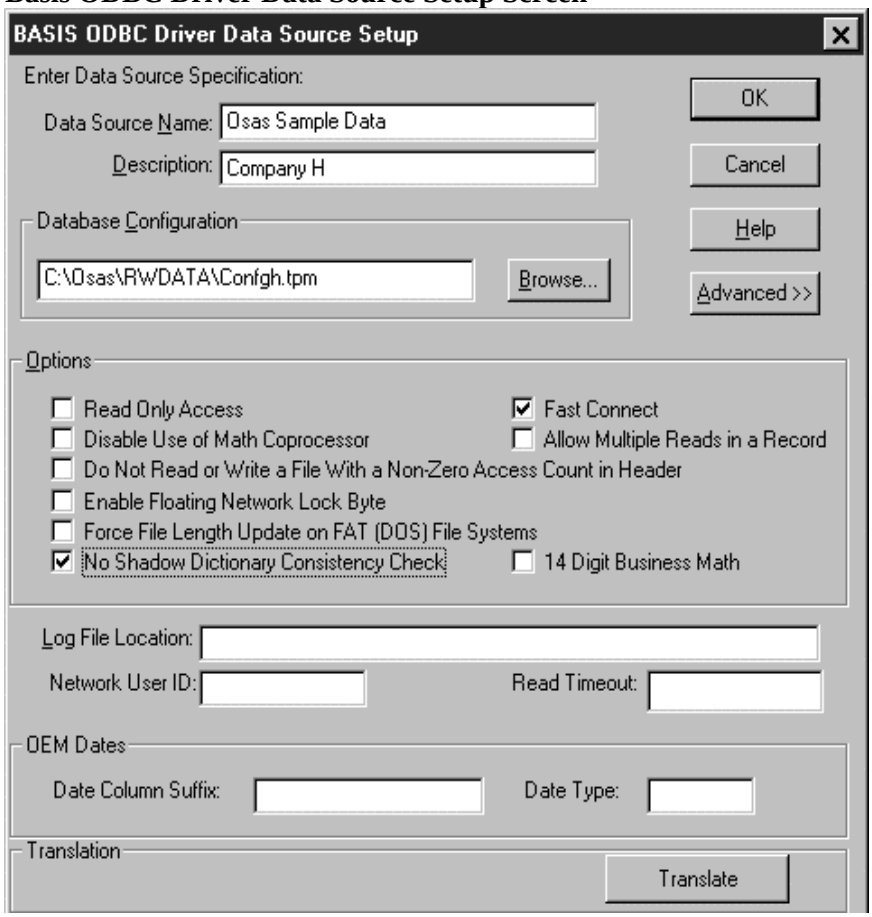
Option	**Description**
Read Only Access	Check this box if you are using the Read/Write version of the ODBC Drivers and you want this data source to allow read only access. Any changes made to the files are not allowed with read only access.
Disable Use of Math Coprocessor	Check this box, if you want to disable the use of the math coprocessor. On machines with math coprocessors, the ODBC Drivers may be able to use the coprocessor to enhance the speed and accuracy of the functions.
Do Not Read or Write a File With Non-Zero Access Count in Header	Check this box if you want to prevent the access of a file that has a non-zero access count stored in the header of the file. A non-zero count may indicate a damaged file.
Enable Floating Network Lock Byte	Check this box to enable the older, slower file-locking scheme, which allows for standard access across the network.
Force File Length Update on Fat (DOS) File Systems	Check this box to force MS-DOS to update the length of a dynamic file after any changes are made to the file.

Basis ODBC Driver Data Source Setup Screen



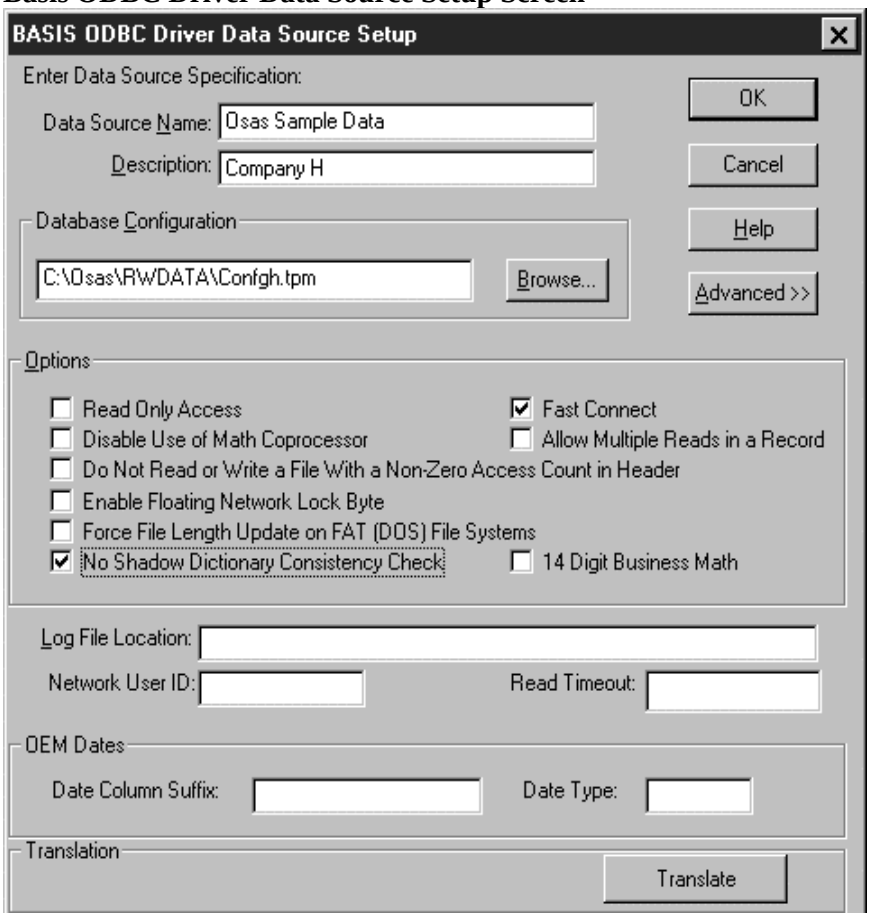
Option	**Description**
No Shadow Dictionary Consistency Check	Check this box to prevent a Shadow Consistency check at connection time. This option will allow you to make faster connections to your OSAS data.
Fast Connect	Check this box to allow for the fastest connection to the OSAS data. **This option is required if you are using the 1.1 version of the ODBC Drivers.**
Allow Multiple Reads in a Record	Check this box to allow multiple read processes to access the key of a keyed file.

Basis ODBC Driver Data Source Setup Screen



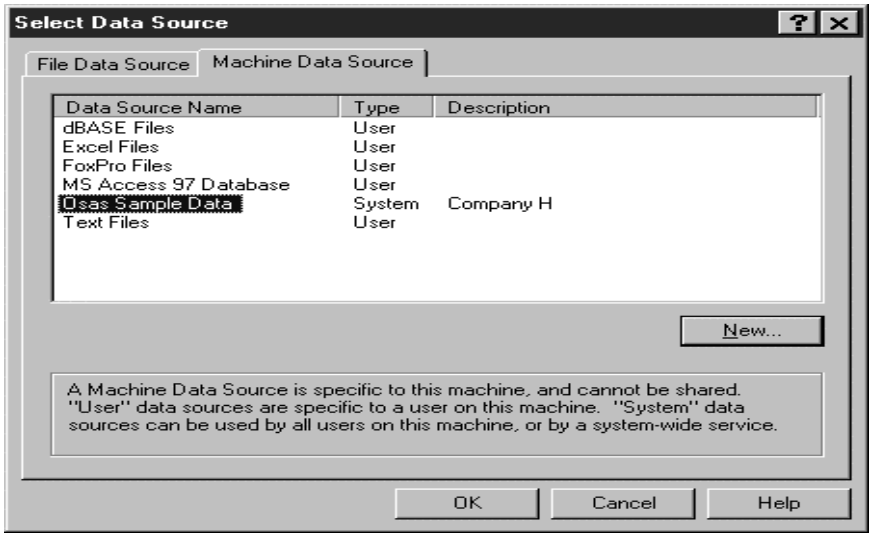
Field	**Description**
Log File Location	Enter the path and filename for the log file. This file is used by the Log Error Messages, Log Function Calls, and Log File Access for Query Optimization options.
Network User ID	If you are using a data server with OSAS, you must enter a valid network user ID to use with this data source file. If you do not enter a valid user ID, you will not be able to access your OSAS data stored on the data server. Root, Admin, Supervisor, and Administrator are not allowed.
Read Timeout	Enter a number between 0 and 255 to indicate the number of seconds to wait for a locked record to become available. The default is 10.

Basis ODBC Driver Data Source Setup Screen



Field	**Description**
Date Column Suffix	Enter the suffix(es) of the columns that are to be converted to the OEM date type selected in the OEM Type field. More then one suffix can be entered. If more then one suffix is entered separate each with a comma.
Date Types	By default, the numeric columns that end in the Date Column Suffix are treated as Julian Numbers and converted to SQL Dates. If you are using an OEM database that uses non-Julian numbers for the data format, select one of the OEM data types listed in the combo box to indicate your OEM date preference for columns ending in the Date Column Suffix.
Translate	Click this button to select the Microsoft Code Page Translator or other ODBC character translator.
Translation	The translator selected, if any, with the translate button is displayed.

Select Date Source

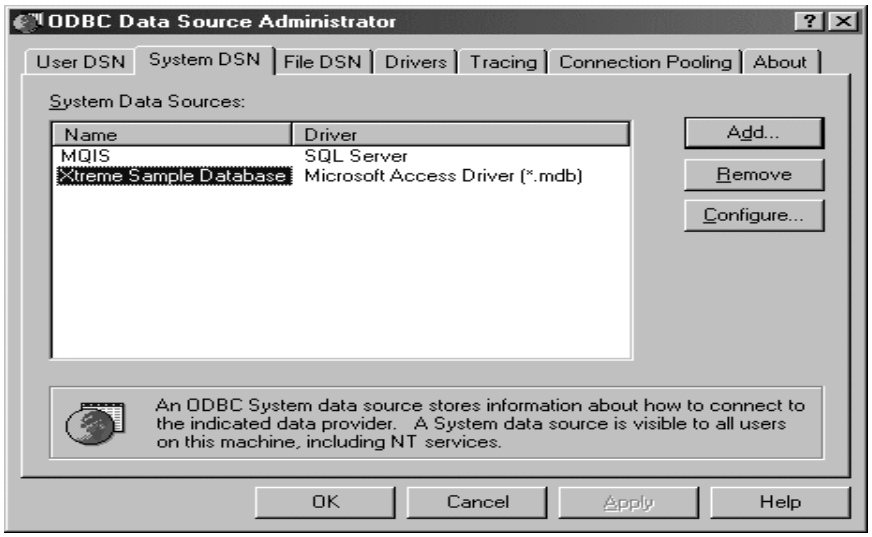


The Select Data Source screen is re-displayed.

Highlight the data source you created and click OK.

Using the ODBC Administrator to create the data source

ODBC Data Source Administrator



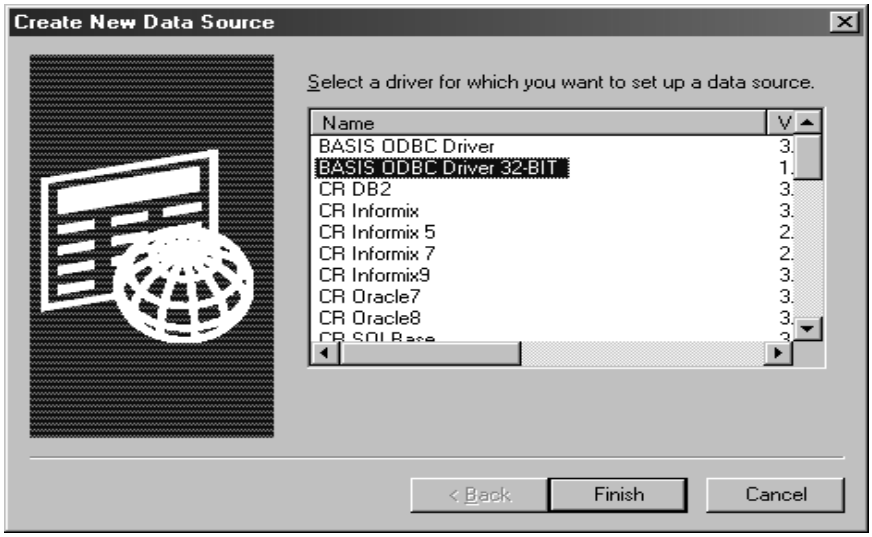
Create a Data Source with the 32-bit ODBC Administrator in the control panel.

Option	**Description**
User DSN	Creates a data source for this machine that only the user creating it can access.
System DSN	Creates a data source for this machine that anyone who uses this machine can access.
File DSN	Creates a data source that can be shared by users who have the same drivers installed.
Drivers	Displays the list of installed ODBC Drivers.
Tracing	Creates a log file of calls made to the ODBC Drivers. This can be used to aid support and debug your applications.
Connection Pooling	Allows applications to reuse open connection handles, which saves round-trips to the server.

Select User DSN or System DSN for use with Access.

Click the Add button to create the new data source.

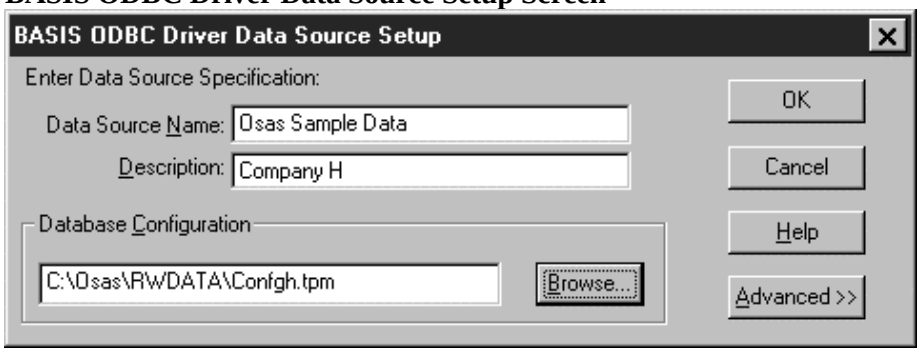
Create New Data Source



The Create New Data Source screen is displayed select the Basis ODBC Driver 32-Bit.

Select the Finish button.

BASIS ODBC Driver Data Source Setup Screen



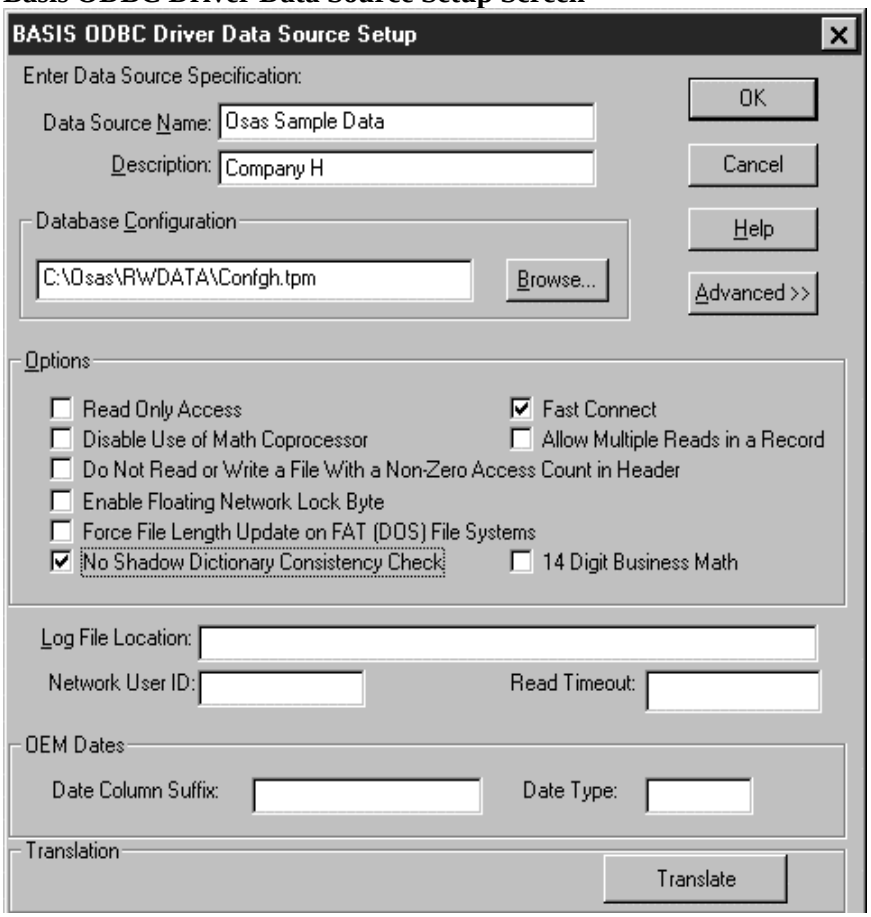
The BASIS ODBC Driver Data Source Configuration screen is displayed.

Enter information for the following fields:

Field	**Description**
Data Source Name	Enter a name for the data source.
Description	Enter a description for the data source.
Database	Enter the path and filename of the configuration file you created with the Edit CONFIG.TPM function. Use the Browse button to search for the file. The default location is the RWdata directory in OSAS.

Select the Advanced button.

Basis ODBC Driver Data Source Setup Screen



The Options section is displayed.

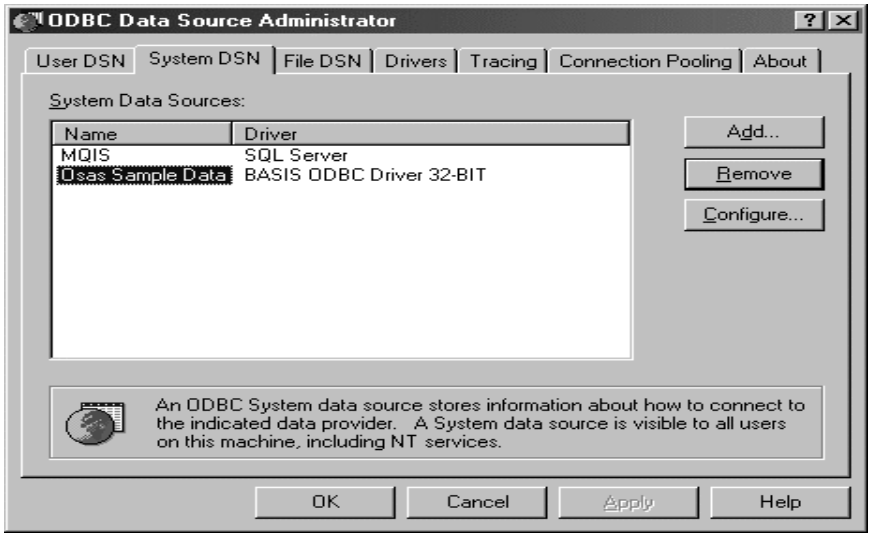
Enter information for the following options:

Option	**Description**
Read Only Access	Check this box if you are using the Read/Write version of the ODBC Drivers and you want this data source to allow read only access. Any changes made to the files are not allowed with read only access.
Disable Use of Math Coprocessor	Check this box, if you want to disable the use of the math coprocessor. On machines with math coprocessors, the ODBC Drivers may be able to use the coprocessor to enhance the speed and accuracy of the functions.
Do Not Read or Write a File With Non-Zero Access Count in Header	Check this box if you want to prevent the access of a file that has a non-zero access count stored in the header of the file. A non-zero count may indicate a damaged file.
Enable Floating Network Lock Byte	Check this box to enable the older, slower file-locking scheme, which allows for standard access across the network.
Force File Length Update on Fat (DOS) File Systems	Check this box to force MS-DOS to update the length of a dynamic file after any changes are made to the file.

Option	Description
No Shadow Dictionary Consistency Check	Check this box to prevent a Shadow Consistency check at connection time. This option will allow you to make faster connections to your OSAS data.
Fast Connect	Check this box to allow for the fastest connection to the OSAS data. **This option is required if you are using the 1.1 version of the ODBC Drivers.**
Allow Multiple Reads in a Record	Check this box to allow multiple read processes to access the key of a keyed file.
Log File Location	Enter the path and filename for the log file. This file is used by the Log Error Messages, Log Function Calls, and Log File Access for Query Optimization options.
Network User ID	If you are using a data server with OSAS, you must enter a valid network user ID to use with this data source file. If you do not enter a valid user ID, you will not be able to access your OSAS data stored on the data server. Root, Admin, Supervisor, and Administrator are not allowed.
Read Timeout	Enter a number between 0 and 255 to indicate the number of seconds to wait for a locked record to become available. The default is 10.
Date Column Suffix	Enter the suffix(es) of the columns that are to be converted to the OEM date type selected in the OEM Type field. More then one suffix can be entered. If more then one suffix is entered separate each with a comma.
Date Types	By default, the numeric columns that end in the Date Column Suffix are treated as Julian Numbers and converted to SQL Dates. If you are using an OEM database that uses non-Julian numbers for the data format, select one of the OEM data types listed in the combo box to indicate your OEM date preference for columns ending in the Date Column Suffix.
Translate	Click this button to select the Microsoft Code Page Translator or other ODBC character translator.
Translation	The translator selected, if any, with the translate button is displayed.

Select the OK button to save the data source setup.

ODBC Data Source Administrator



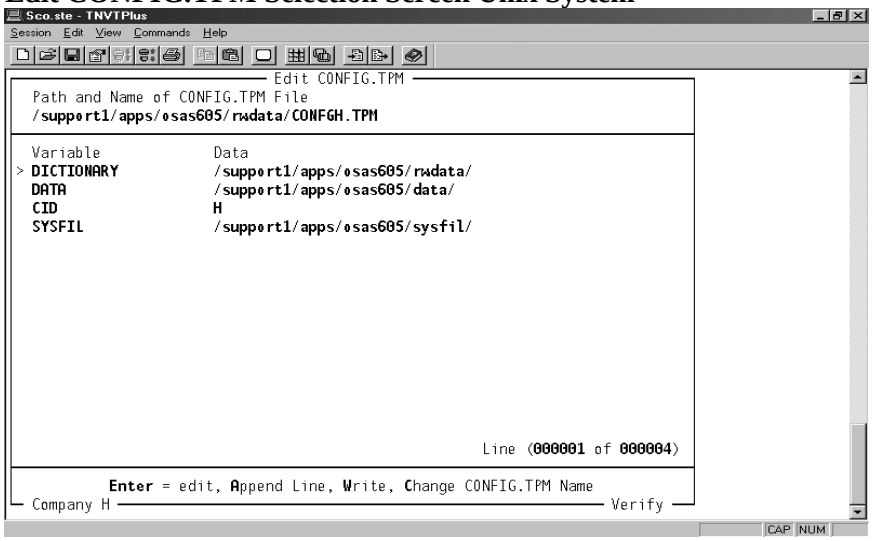
The data source is listed in the ODBC Administrator Box. Click OK to exit.

Appendix C - Creating Unix/LINUX CONFIG.TPM File

If your OSAS data is stored on a UNIX or LINUX system and you are not using a data server, you should not use the Edit CONFIG.TPM function in OSAS to create a configuration file.

UNIX and LINUX do not use drive letters or colons for paths but the BASIS ODBC Driver needs a drive letter and colon for the DICTIONARY, DATA and SYSFIL paths.

Edit CONFIG.TPM Selection Screen Unix System



The configuration file, displayed above, can cause errors when trying to link to the OSAS files.

To prevent this problem you must first use NFS software on the Windows machines where the BASIS ODBC Drivers are installed. NFS software allows you to map the UNIX or LINUX volume as a regular Windows/Dos drive.

Once the drives are mapped use any text edit to create the configuration file[10].

The file should have a minimum of four lines.

Line 1 should contain the DICTIONARY variable and the path using the NFS mapped drive to point the directory containing the data dictionaries.

Line 2 should contain the DATA variable and the path using the NFS mapped drive to point to the directory containing the OSAS data you want to access with this configuration file.

Line 3 should contain the CID variable and the company ID, for the data files you want to access.[11]

Line 4 should contain the SYSFIL variable and the path using the NFS mapped drive to point to the sysfil directory in OSAS. The sysfil directory contains some Resource Manager data files.

The following example uses N as the NFS mapped drive. The configuration file should look like this:

DICTIONARY=N:/OSAS/RWDATA/
DATA=N:/OSAS/DATA/
CID=H
SYSFIL=:/OSAS/SYSFIL

Save the file and store it anywhere on the Windows machine

Note: If you use DATA2 or DATA3 or have any other variables, such as last year PA or GL files, add those to the configuration file also.

[10] The configuration file does not have to have the name CONFIG.TPM. The file is an 8.3 Dos file and is only required to have the TPM extension, but can have any name you want.

[11] If you have multiple companies, you must create a configuration file for each company.

Appendix D – Security Issues with ODBC

There are some security issues with ODBC because there are no options in OSAS to prevent someone from having access to certain files. All the data dictionaries are installed in the same files and you cannot limit the access to those data dictionaries by application. So, if you have someone locked out of an application in OSAS, like Payroll or General Ledger, they will be able to access those data files in a third party product, such as Excel or Access using the ODBC Drivers and with the Read/Writer drivers they could even change the data files.

To prevent unauthorized people from accessing certain data files you have to create a second set of data dictionaries, and store the second set in a secure directory network that has limited access on the network or store the second set of data dictionaries to your local drive.

In the original set of data dictionaries, only include the files you want everyone to access. In the second set of data dictionary files, only include the files you want secured.

To create a secure set of data dictionary files perform the following steps:

This example uses the Payroll files but the steps will be the same for any application you want secured.

1. At the operating system level copy the ***.OSI** files from the SYSFIL[12] directory to the RWdata directory.
2. Erase the DD_*.OSI files that were copied to the RWdata directory.
3. Rename the remaining copied *.OSI files to a different extension other then OSI.

NOTE: The extension used in the rename does not matter because the files have to be renamed to have a .1 extension when you move them to the secure directory[13].

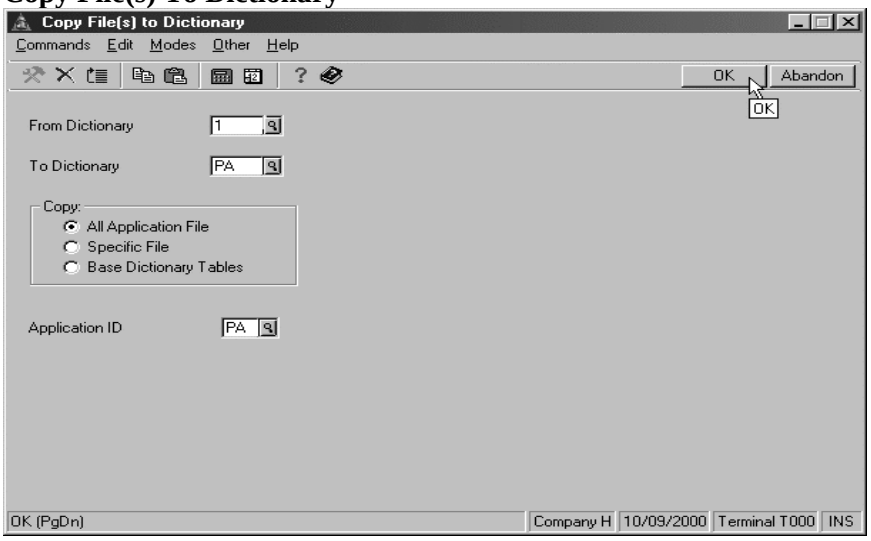
DO NOT rename the files to .1 while they are in the RWdata directory or you risk overwriting the original .1 data dictionary files

Example: *Rename the copied *.OSI files to *.PA if you are creating Payroll data dictionary files.*

[12] In 5.2 the *.OSI files are in the progRM directory.

[13] The ODBC Drivers will only work with data dictionary files that have a .1 extension.

Copy File(s) To Dictionary



4. In OSAS, Select Copy File(s) to Dictionary from the Dictionary Tools menu. This will allow you to copy the data dictionary files from the main dictionary to the new dictionary.
5. Enter the following:

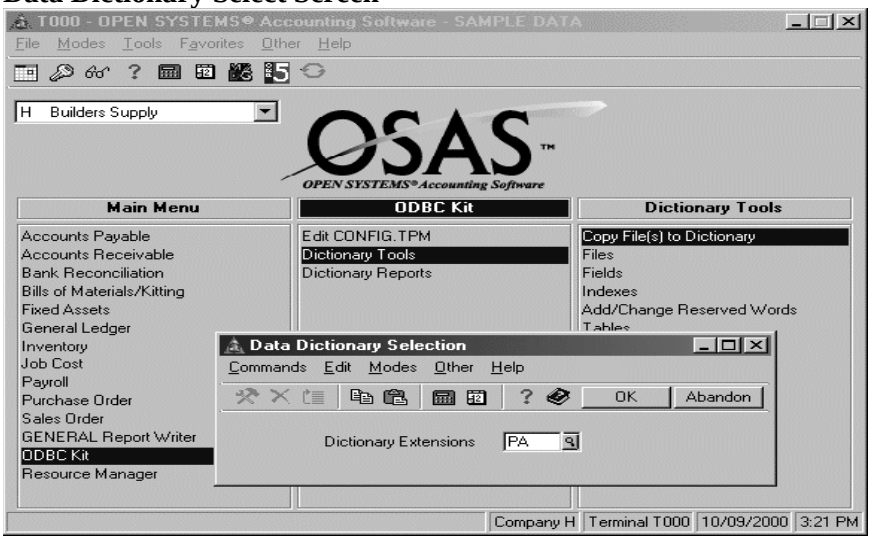
Field	**Description**
From Dictionary	Enter the extension of the source data dictionary files. This is usually 1 to copy the .1 data dictionary files. The **Inquiry** command, **F2** or **Esc W,** is available to select the source files.
To Dictionary	Enter the extension of the destination data dictionary files. This will be the extension you used to rename the copied *.OSI files. The **Inquiry** command, **F2** or **Esc W**, is available to select the destination files. *PA in this example.*
Copy:	Select **1**, for All Application File, to copy the data dictionary files for a specific application.
Application ID	Enter the id for the application whose data dictionary files you want to copy. The **Inquiry** command, **F2** or **Esc W**, is available to select the application to copy. *PA in this example*

This will copy all the selected application files, fields and indexes from the ***.1** data dictionary files to the *.PA (or to the extension you used for the copied files).

If you are using the 2.3 or 3.0 version of the ODBC drivers (OSAS 6.05 or higher) skip to step 8.

If you are using the 1.1 version of the ODBC drivers (OSAS 5.2 or 6.02) proceed to step 6.

Data Dictionary Select Screen



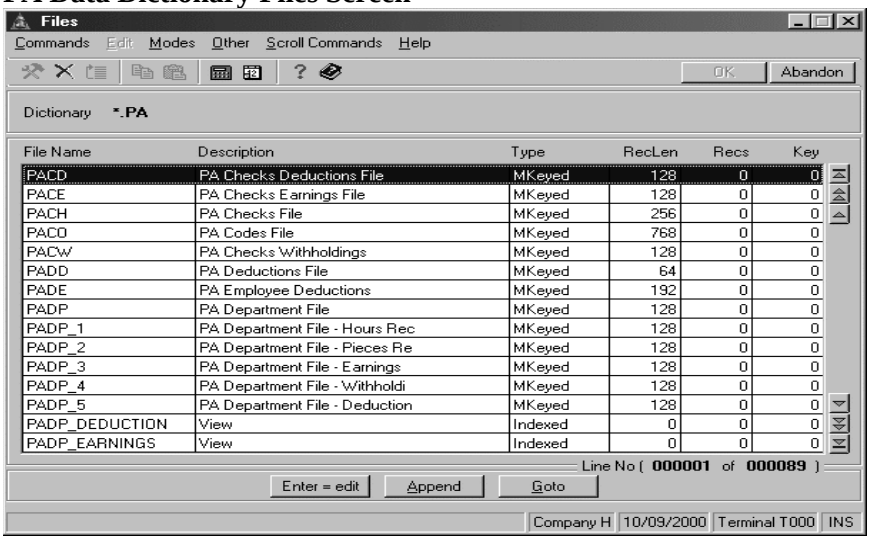
6. Once the files have been copied, use the **F9** from any ODBC menu to switch the copied data dictionary files.

   You can use the **Inquiry** command, **F2** or **Esc W**, to select the data dictionary files you want to access.

   You can check in Files or Fields to verify that you have switched to the correct set of data dictionary files.

Field	**Description**
Dictionary	Displays the current set of data dictionary files in use on the current terminal.

PA Data Dictionary Files Screen



7. Once you have switched to the new data dictionary files run the Build Shadow Dictionary functions from the Dictionary Tools menu.

   This will build files for the current set of data dictionary files in use on the current terminal.

   You may be prompted: *Shadow dictionary already exist. Do you want to re-create it?*

   Select **Y**, for **Yes**.

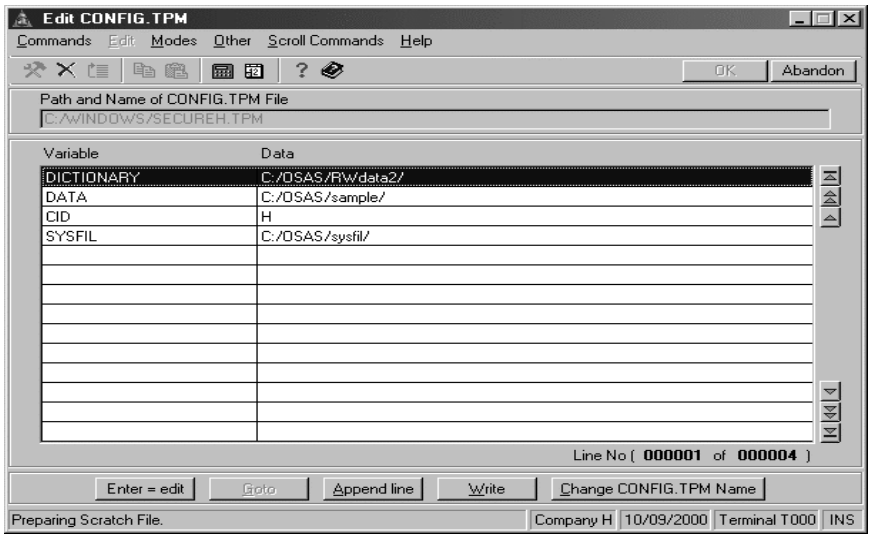
8. At the operating system level move the 13-copied data dictionary files[14] (*.PA in this example) from the RWdata directory to the secured subdirectory or your local drive.

   Note: If you use a directory on the network, **DO NOT** use any directories listed in the Directories function in Resource Manager or any directories listed in Application Information in Resource Manager. Anyone will be able to access this new set of data dictionary files through OSAS, if they are moved to either of those locations.

   You can create a different subdirectory under your OSAS directory for the second set of data dictionary files, such as RWdata2. This will not be listed in the Directories function or Application Information so no one will have access to the data dictionary files through OSAS.

9. In the secured subdirectory, rename the 13 new data dictionary files to have a **.1** extension[15]

Edit CONFIG.TPM Screen



10. Select Edit CONFIG.TPM from the ODBC Kit menu to create a new configuration file.

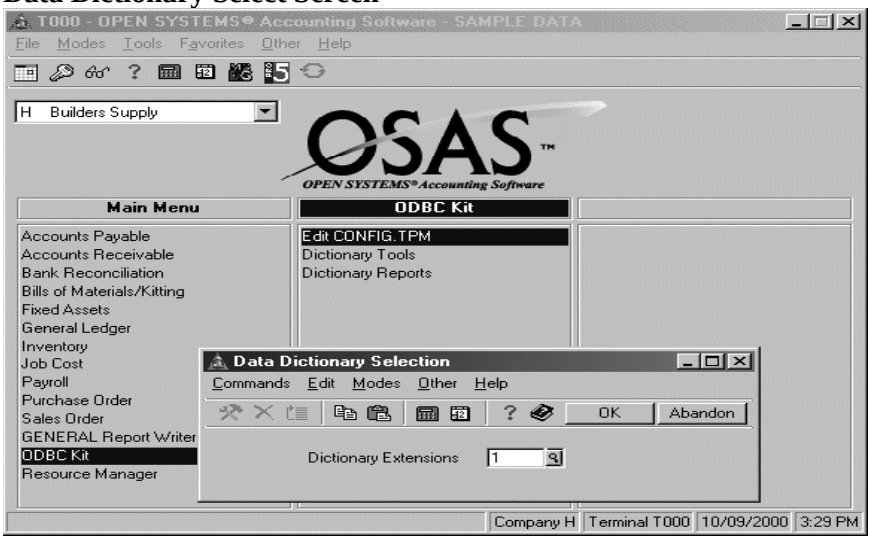
    Edit the Dictionary variable to point to the drive and directory where you copied the new data dictionaries.

11. Copy the configuration file to the secure directory or your local hard drive.

[14] If you are using the 1.1 ODBC drivers move the DD_*.DAT files as well.

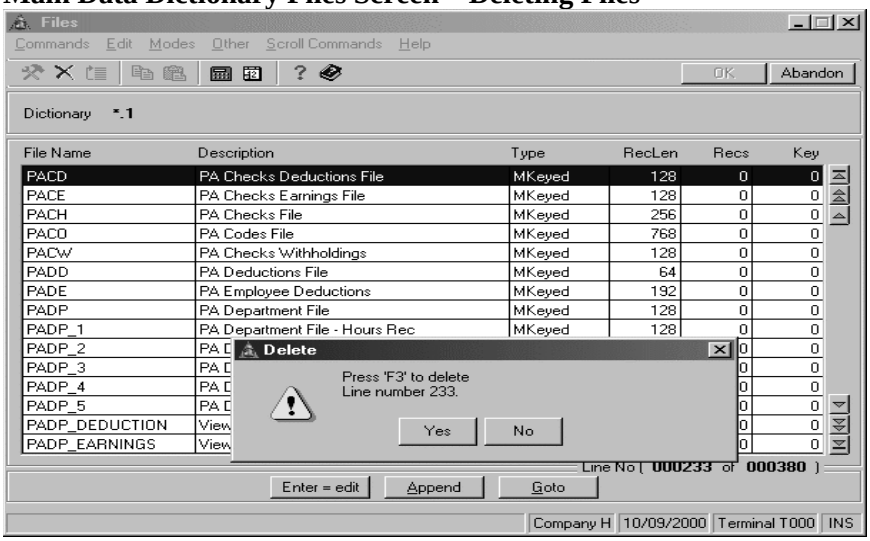
[15] The ODBC Drivers will only work with files that have a **.1** extension. **DO NOT** rename the DD_*.DAT files.

Data Dictionary Select Screen



12. Use the **F9** and switch back to the **.1** Data Dictionaries.

Main Data Dictionary Files Screen – Deleting Files



13. Select Files from the Dictionary Tools menu and delete the data dictionary files that you do not want to give everyone access, using the **Delete** command, **F3** or **Esc D**.

In this example, delete the Payroll data dictionary files.

If you are using the 2.3 or 3.0 ODBC drivers, you are done[16].

If you are using the 1.1 ODBC drivers, proceed to step 14.

[16] To edit these data dictionary files you will have to copy or move them back to the **RWdata**, **ProgRm** or **ProgOD** directories.

Since these data dictionaries have the same file name and extension as the main data dictionaries, rename them before you copy them to insure you do not overwrite your main data dictionaries.

Use the **F9** to switch between the data dictionaries.

Build Shadow Dictionary Screen

14. Select the Build Shadow Dictionary function from the Dictionary Tools menu, to re-create the shadow dictionary files for the edited set of main dictionary files[17].

[17] To edit these data dictionary files you will have to copy or move them back to the **RWdata**, **ProgRm** or **ProgOD** directories.

Since these data dictionaries have the same file name and extension as the main data dictionaries, rename them before you copy them to insure you do not overwrite your main data dictionaries.

Use the **F9** to switch between the data dictionaries. If you make any changes you will have to re run the Build Shadow Dictionary function and copy the new **DD_*.DAT** files and the second set of data dictionaries back to the secured directory. Rename them back to ***.1**. Use the **F9** to switch back to the original***.1** dictionaries and run the Build Shadow Dictionary function again.

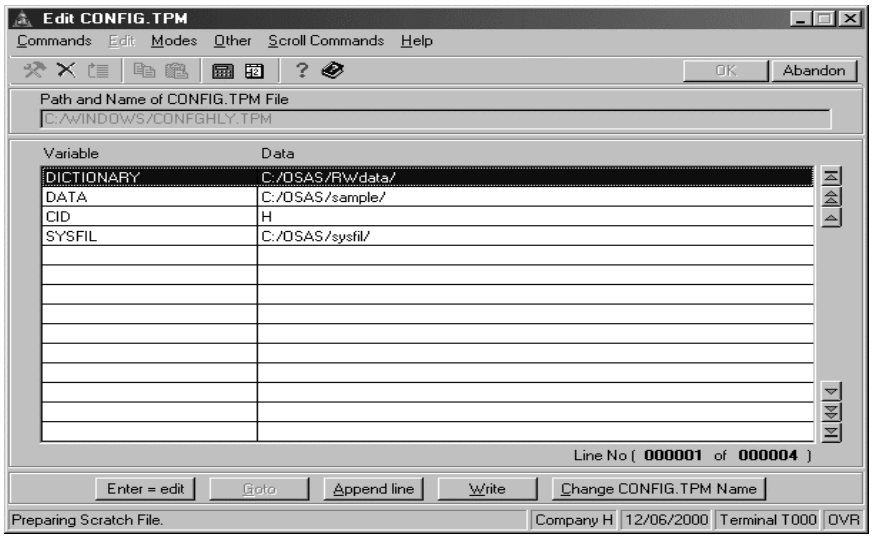
Appendix E -Accessing Previous Year General Ledger and Payroll Data

Use the following steps to access last year Payroll or previous year General Ledger data with ODBC. These steps will work with the 3.0, 2.3 or the 1.1 Basis ODBC Drivers.

You will need to create a separate configuration file for last year Payroll and current year Payroll and a separate configuration file for each GL Year you want to access.

Create a configuration file with the Edit CONFIG.TPM function in ODBC Kit.

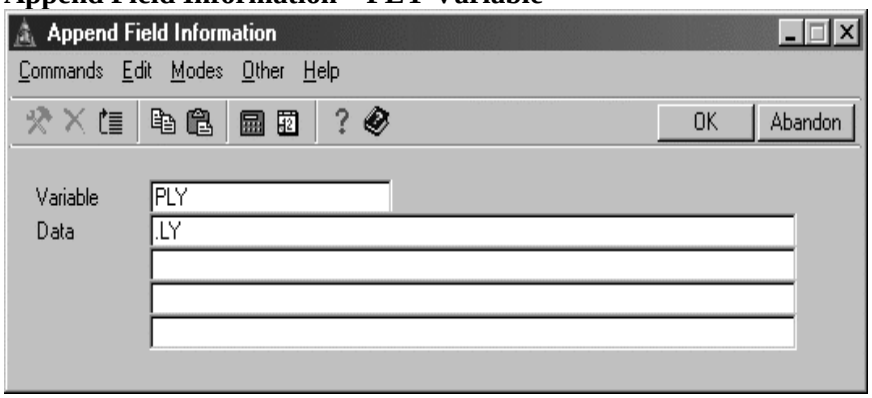
Edit CONFIG.TPM



Payroll Variable for Last Year Files

Use the Append function to add Variables for last year Payroll.

Append Field Information – PLY Variable



Field	Description
Variable	Enter the name of the variable you want to add. The variable name can be anything you want. This variable will be added to the ODBC Path field in Files, which will allow you to access the data you want. ***If you are using 6.1x the variable for last year payroll has already been added to the data dictionary file. Add that variable to the configuration file to access last years payroll with ODBC. The variable used is PLY, but you can use any variable name you want. If you use a different variable name, you will have to change each file to match the new variable name.*** ***If you are using 6.05 or lower, you must add the variable name used to each file with the Files function on the Dictionary Tools menu. You can use the same PLY variable name or create a different one.***
Data	Enter the extension of the data file in OSAS that you want to access with the ODBC drivers. For Last Year Payroll files enter "**.LY**" (without the quotes)

This variable will access Payroll files that have a LY extension

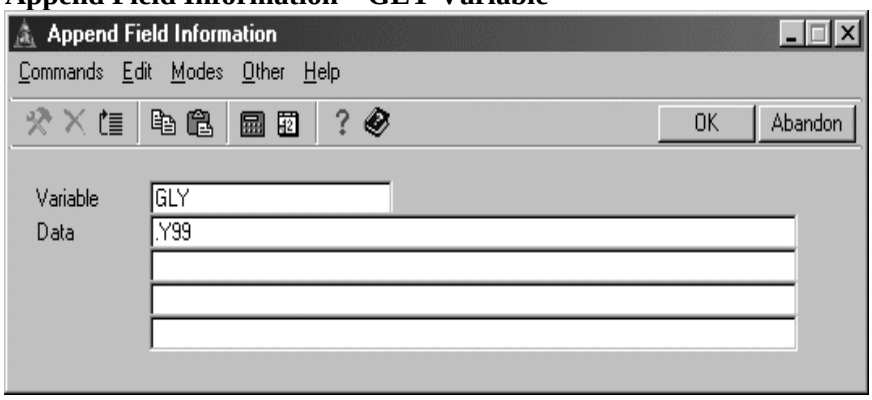
Use the **Proceed** command, **PgDn** or **Esc P**, to save the variable.

General Ledger Variable for Previous Year Files

You can add the General Ledger Variable for pervious years to the same configuration file as the Payroll Variable or you can create a new configuration file for the GL variable.

Use the Append function to add Variables for the General Ledger year you want to access.

Append Field Information – GLY Variable



Field	Description
Variable	Enter the name of the variable you want to add. The variable name can be anything you want. This variable will be added to the ODBC Path field in Files, which will allow you to access the data you want. ***If you are using 6.1x, the variable for pervious year general ledger files has already been added to the data dictionary file. Add that variable to the configuration file to access last years payroll with ODBC. The variable used is GLY, but you can use any variable name you want. If you use a different variable name, you will have to change each file to match the new variable name.*** ***If you are using 6.05 or lower, you must add the variable name used to each file with the Files function on the Dictionary Tools menu. You can use the same GLY variable name or create a different one.***
Data	Enter the extension of the data file in OSAS that you want to access with the ODBC drivers. For Previous Year GL files enter ".**Yxx**" (without the quotes), where xx represents the GL Year you want to access. ***This example uses Y99.***

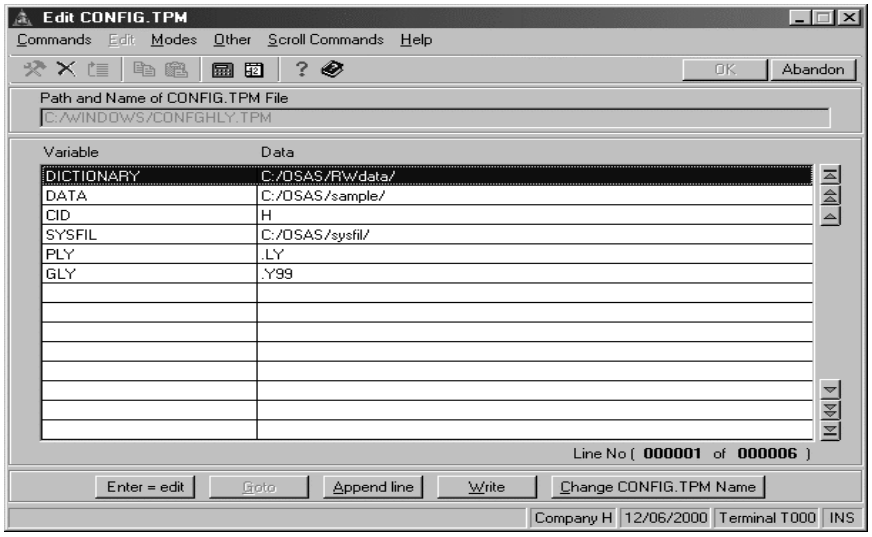
This variable will access General Ledger files that have a Y99 extension[18].

Use the **Proceed** command, **PgDn** or **Esc P**, to save the variable.

[18] Each GL Year will require a separate configuration file.

The TPM file should look something like the following.

TPM File

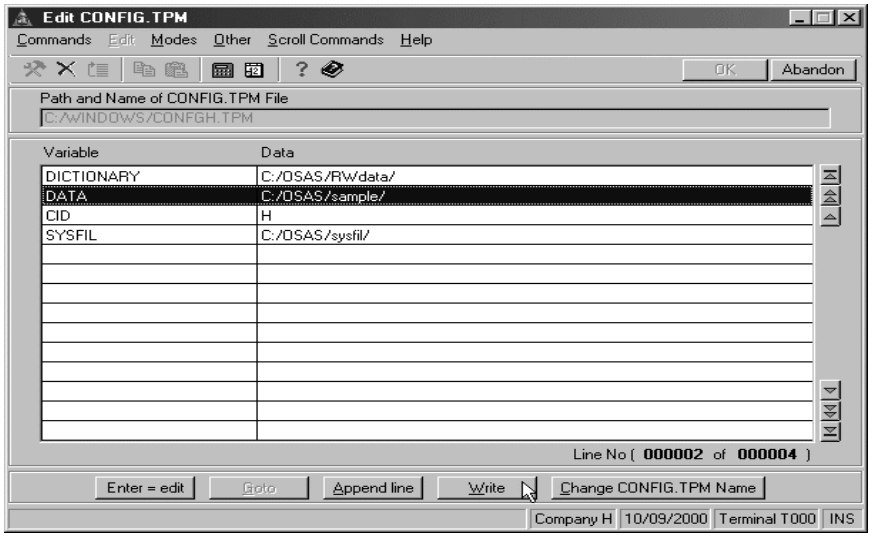


Select Write to save the changes to the configuration file.

Next, create a configuration file to access this years data.

Create a configuration file with the Edit CONFIG.TPM function in ODBC Kit.

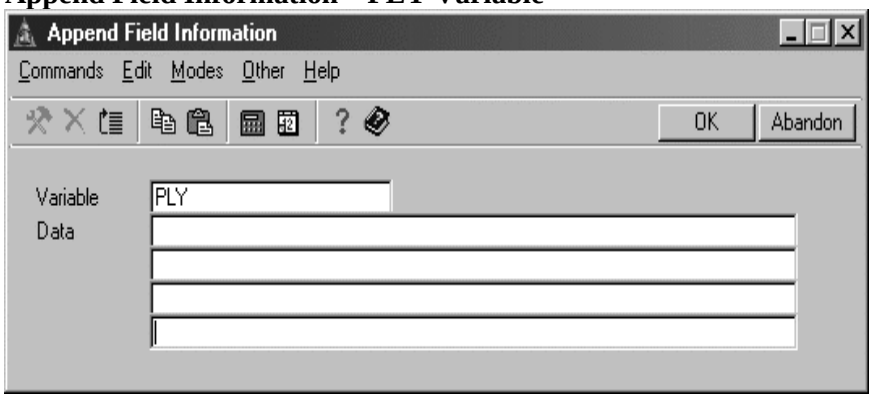
Edit CONFIG.TPM



Payroll Variable for Current Year Files

Use the Append function to add Variables for current year Payroll.

Append Field Information – PLY Variable



Field	Description
Variable	Enter the same name you used for the last year Payroll variable. ***If you are using 6.1x the variable for last year payroll has already been added to the data dictionary file. Add that variable to the configuration file to access last years payroll with ODBC. The variable used is PLY, but you can use any variable name you want. If you use a different variable name, you will have to change each file to match the new variable name.*** ***If you are using 6.05 or lower, you must add the variable name used to each file with the Files function on the Dictionary Tools menu. You can use the same PLY variable name or create a different one.***
Data[19]	Leave this field blank. OSAS stores the current year Payroll files without an extension.

This variable will access Payroll files that do not have an extension, which is how OSAS stores the current year files.

Use the **Proceed** command, **PgDn** or **Esc P**, to save the variable.

[19] The configuration file for last year data contained a .LY in the data field. This means ODBC will look for a file with a LY extension, after the variable is added end of the file in Dictionary Tools. The last year configuration file will only access the last year files. If the files are not available, you will get Fserr=13 in Excel (same as and error 12, missing or duplicate file) or you will get an error message in Access "Query must have at least one destination field".

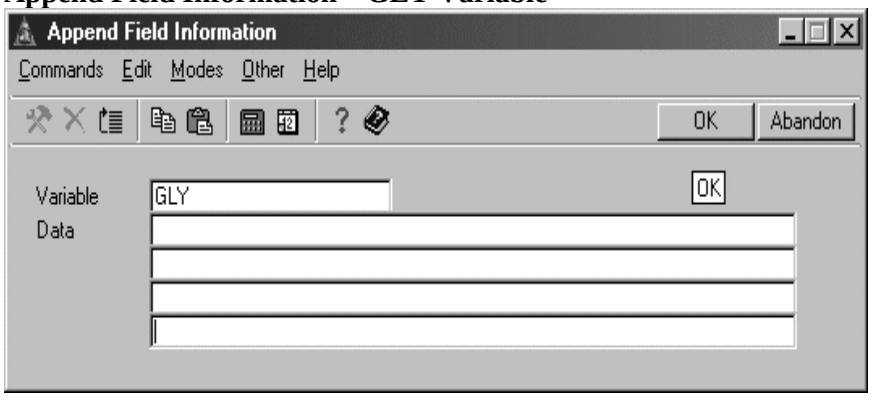
You MUST create another configuration file to access current year data, using the same variable name but leaving the data field blank. ODBC will look for a file without an extension. If the files are not available you will get Fserr=13 in Excel, or and error message in Access "Query must have at least one destination field"

General Ledger Variable for Current Year Files

You can add the General Ledger Variable for current year to the same configuration file as the Payroll Variable or you can create a new configuration file for the GL variable.

Use the Append function to add Variables for the General Ledger year you want to access.

Append Field Information – GLY Variable



Field	Description
Variable	Enter the same name you used for the previous year General Ledger variable. ***If you are using 6.1x, the variable for previous year general ledger files has already been added to the data dictionary file. Add that variable to the configuration file to access last years payroll with ODBC. The variable used is GLY, but you can use any variable name you want. If you use a different variable name, you will have to change each file to match the new variable name.*** ***If you are using 6.05 or lower, you must add the variable name used to each file with the Files function on the Dictionary Tools menu. You can use the same GLY variable name or create a different one.***
Data[20]	Leave this field blank. OSAS stores the current year GL files without an extension.

This variable will access General Ledger files that do not have an extension, which is how OSAS stores the current year files.

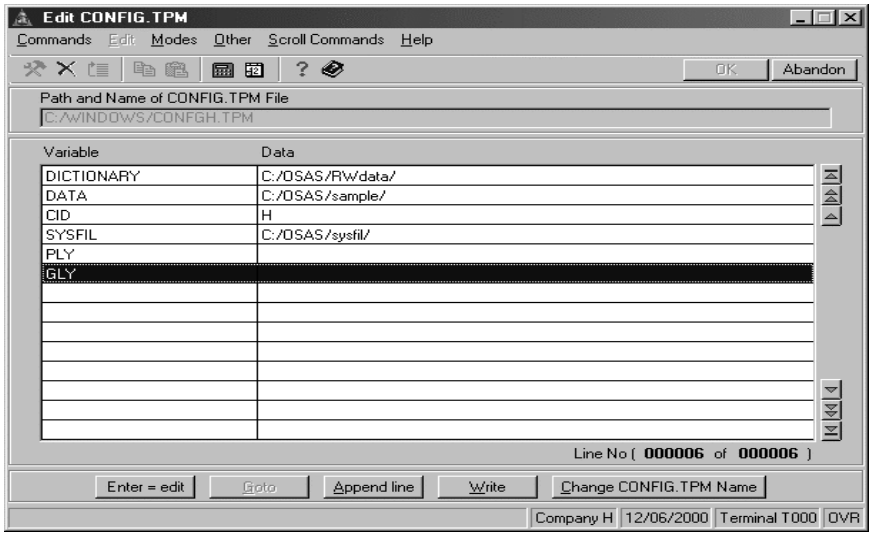
Use the **Proceed** command, **PgDn** or **Esc P**, to save the variable.

[20] The configuration file for previous year data contained a .Yxx (xx represents the GL year) in the data field. This means ODBC will look for a file with a Yxx extension, after the variable is added end of the file in Dictionary Tools. The previous year configuration file will only access the files for the year entered in the data field. If the files are not available, you will get Fserr=13 in Excel (same as and error 12, missing or duplicate file) or you will get an error message in Access "Query must have at least one destination field".

You MUST create another configuration file to access current year data, using the same variable name but leaving the data field blank. ODBC will look for a file without an extension. If the files are not available you will get Fserr=13 in Excel, or and error message in Access "Query must have at least one destination field"

The TPM file should look something like the following.

TPM File



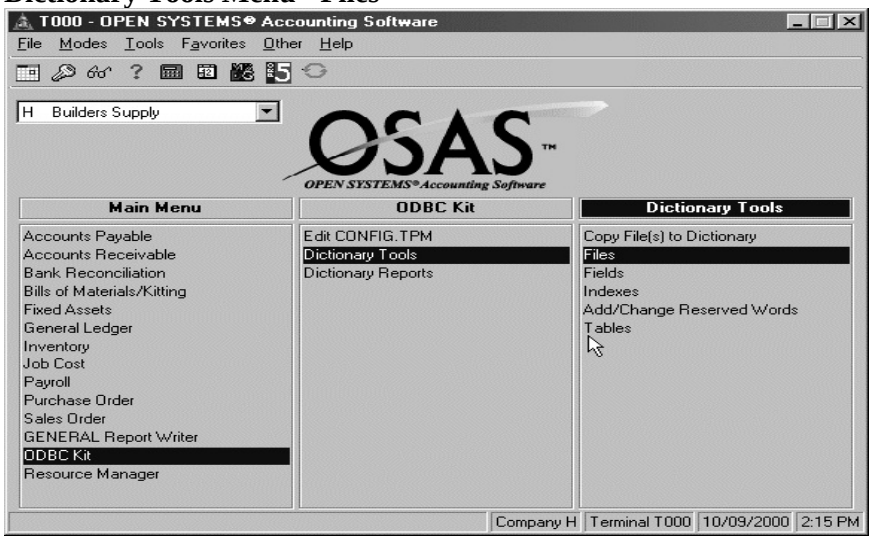
Select Write to save the changes.

Adding the Variables to Dictionary Files

If you are using 6.1x the PLY and GLY variables have already been added to the data dictionary files. If you are using 6.05 or earlier you will have to add the variables to each data dictionary file.

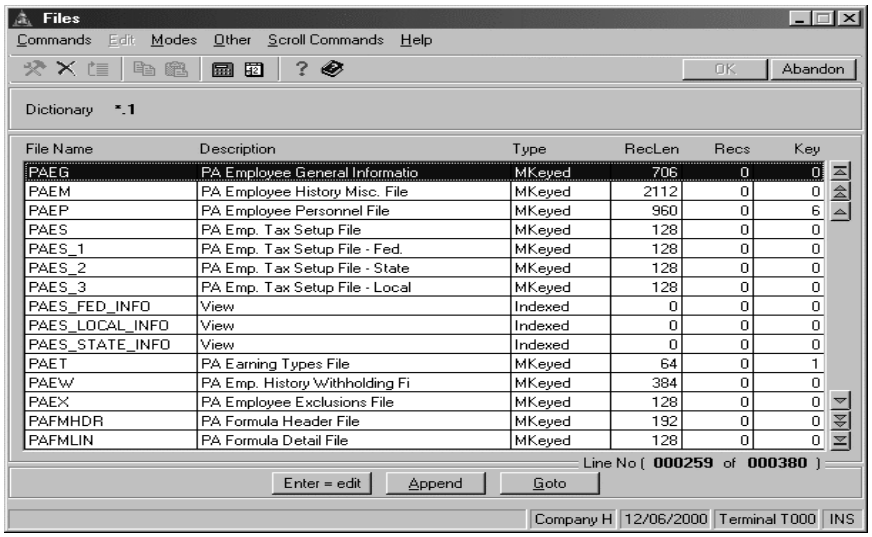
Select Files from the Dictionary Tools menu in the ODBC Kit.

Dictionary Tools Menu - Files

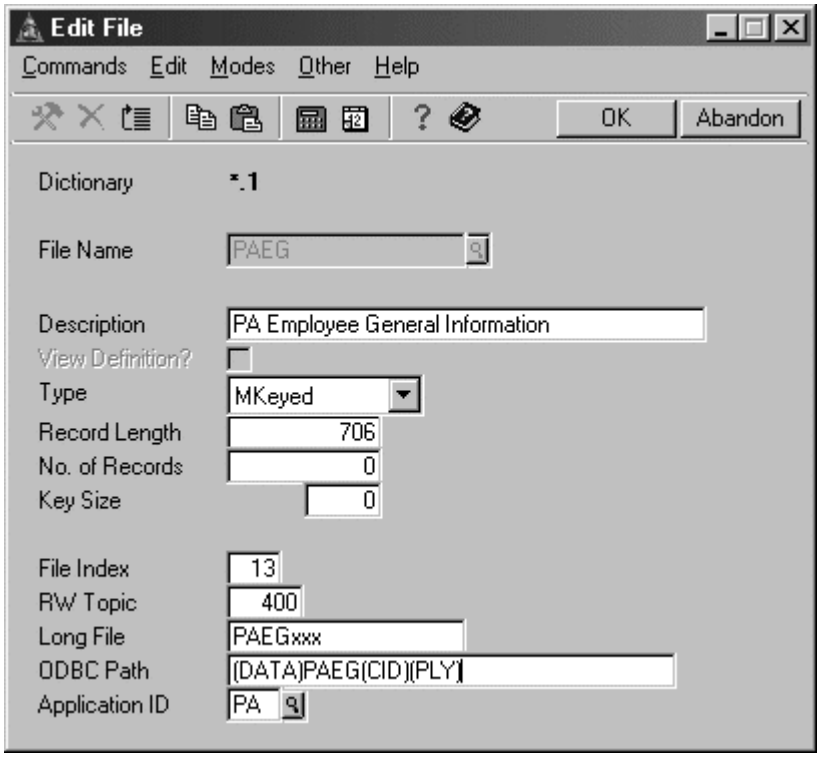


Select the file you want to add the variable to and press Enter to edit the file.

Files



Edit Files

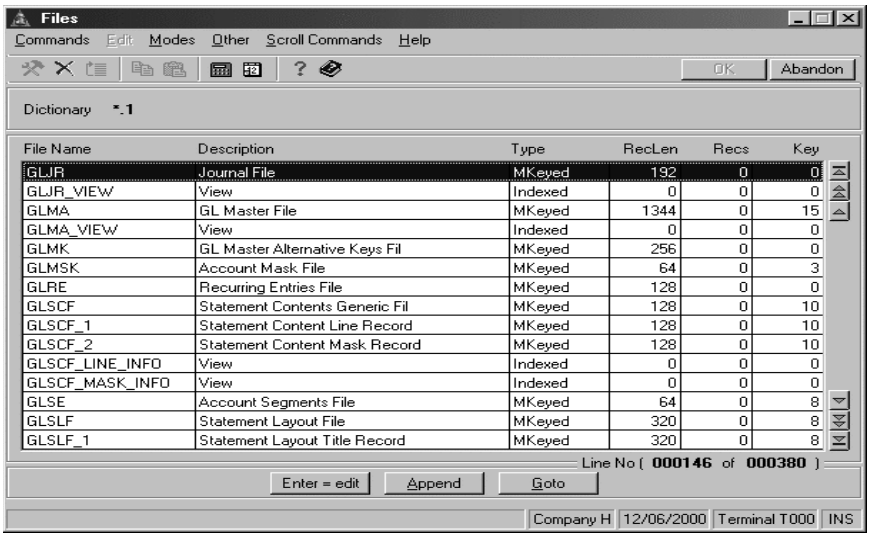


Add the Payroll variable within parentheses to the ODBC Path field.

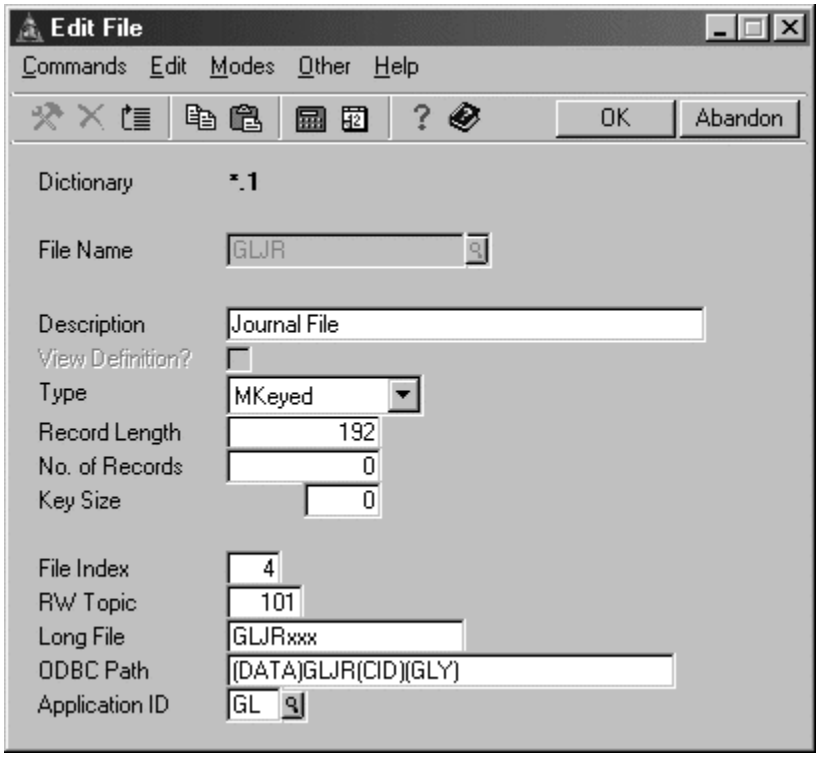
You will have to add this variable to each Payroll file that you want to access last year or this year data.

Repeat the same steps for the General Ledger files.

Files



Edit Files



Add the General Ledger variable to all the GL files you want to access pervious year information.

You will have to add this variable to each General Ledger file that you want to access previous year or this year data.

If you are using 6.05 or higher, you are now ready to access last year or current year data with ODBC

If you are using 5.22[21]- 6.02, you will have to run the Build Shadow Dictionary function to recreate the shadow dictionary to access last year or current year data with ODBC.

You will need to create a separate data source file, for each configuration file, using the Basis ODBC Driver.

One data source will access last year Payroll and previous year General Ledger files. The other data source will access current year Payroll and General Ledger files.

If you have more GL years you want to access, then you will create a data source for each GL year configuration file.

[21] For 5.22 you MUST have the latest 5.21A installed.

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