



Full Year Budget Report with Actuals



Full Year Budget Report with Actuals

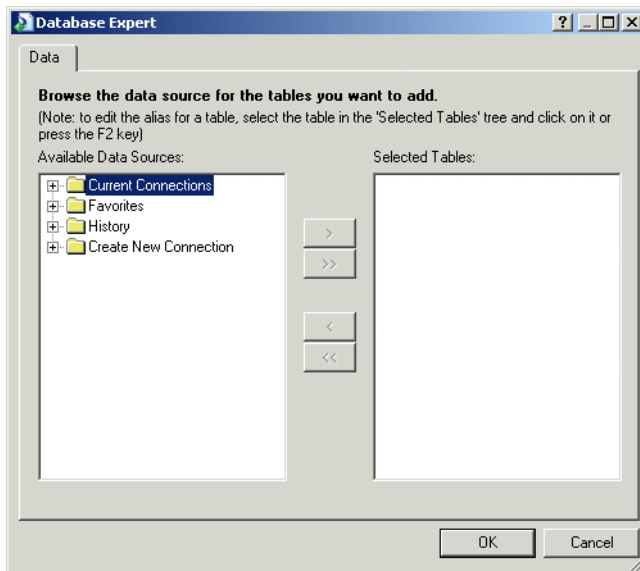
The Full Year Budget Report with Actuals displays actual or forecast amounts for all revenue and expense accounts. When you preview the report, actual amounts are shown for the months prior to the report date, and forecast amounts are shown for the months past the end date.

Introduction

The following tutorial assumes that you have completed the “Quick start for new users” tutorial in the *Crystal Reports XI User’s Guide*, which is located in the Docs folder of your product distribution.

Creating the report

On the Start Page in Crystal Reports, click Blank Report.
The Database Expert dialog box appears.



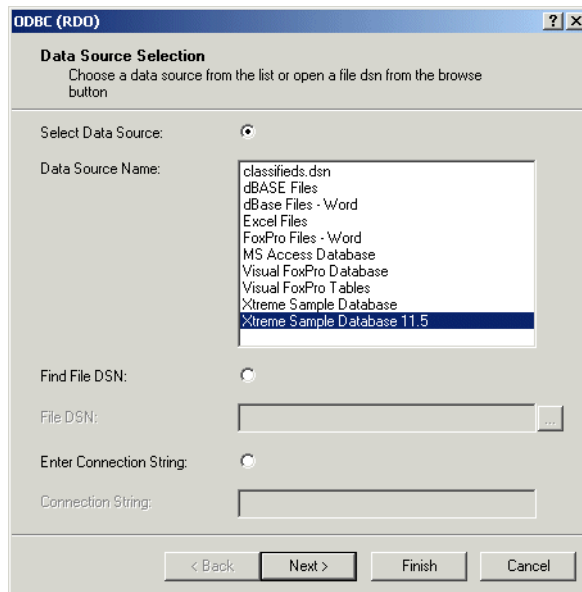
Selecting a database to use

When you create a report, the first thing that you must do is to select a database for the report to use.

► **To select a database**

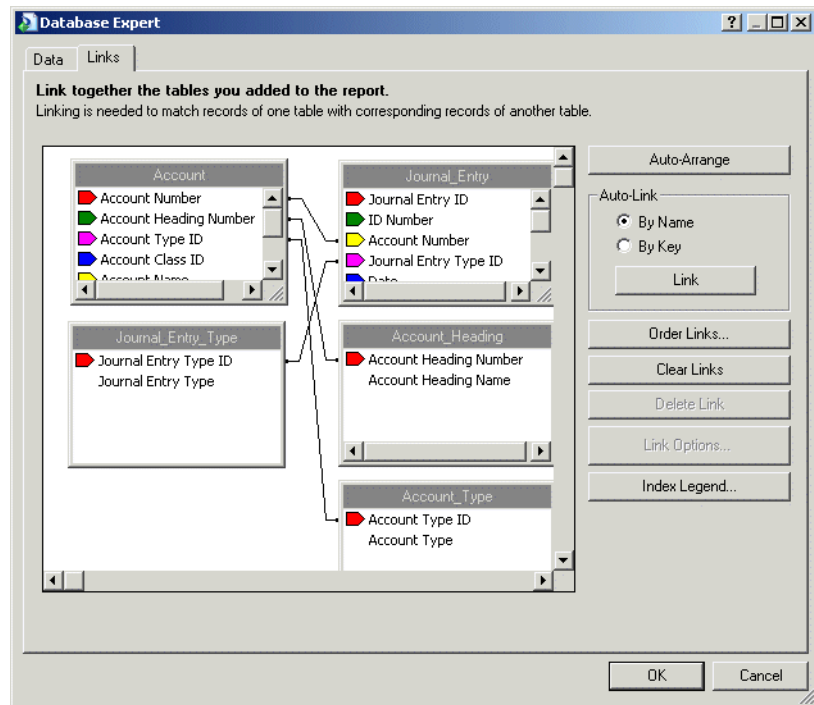
1. In the Database Expert dialog box, expand the **Create New Connection** folder.
2. Double-click **ODBC (RDO)**.

The ODBC (RDO) dialog box appears and displays a list of data sources.



3. From the list, select **Xtreme Sample Database 11.5**, and click **Finish**.
The Database Expert displays a list of available tables from the Xtreme Sample Database.
4. Select the **Account**, **Account Heading**, **Account Type**, **Journal Entry**, and **Journal Entry Type** tables, and click > to add them to the Selected Tables list.
Tip: You can use CTRL+click to select multiple tables simultaneously.
5. Click **OK**.

The Links tab is displayed.



6. Verify that the links between the tables are consistent with what is displayed in the screenshot above. If necessary, create the appropriate links by dragging fields from one table to corresponding fields in another table.

Note: Ensure that the following links exist:

- Account.Account Type ID to Account Type.Account Type ID
- Account.Account Number to Journal Entry.Account Number
- Account.Account Heading Number to Account Heading.Account Heading Number
- Journal Entry.Journal Entry Type ID to Journal Entry Type.Journal Entry Type ID

7. Click **OK**.

Creating commands

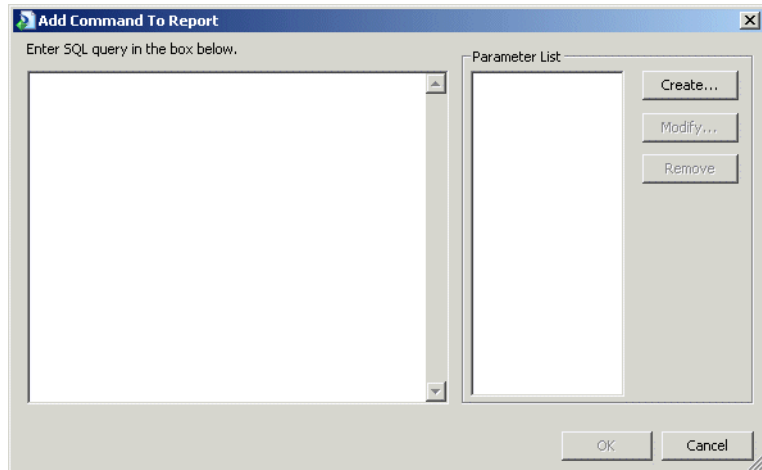
A command object is an SQL expression that is used to return data. The report makes use of one command object.



► **To create a command**

1. Click **Database Expert**.
2. In the Available Data Sources area, under the **Xtreme Sample Database 11.5** connection, select **Add Command**, and click **>**.

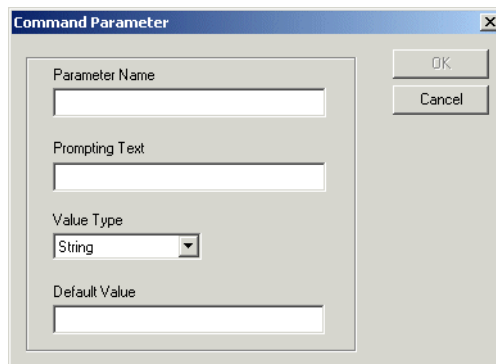
The Add Command to Report dialog box appears.



3. In the text area, type the following SQL query:

```
SELECT [Amount],[Account Number],[Month]
FROM [Monthly Account Budgets]
WHERE Year=Year ( {?End Date} )
```
4. Click **Create ...**.

The Command Parameter dialog box appears.



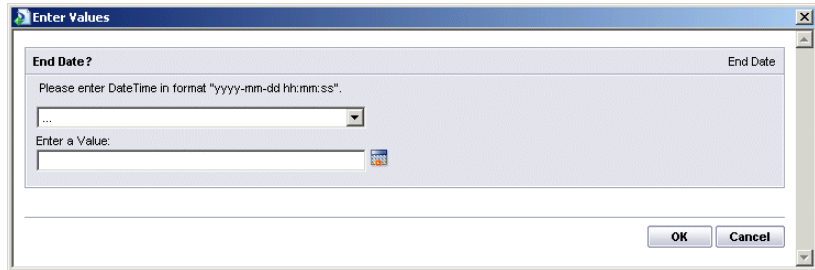
5. In the **Parameter Name** field, type End Date.
6. In the **Prompting Text** field, type End Date?.

7. From the **Value Type** list, select **DateTime**.

The program automatically enters the current date and time in the Default Value field.

8. Click **OK**, and click **OK** again.

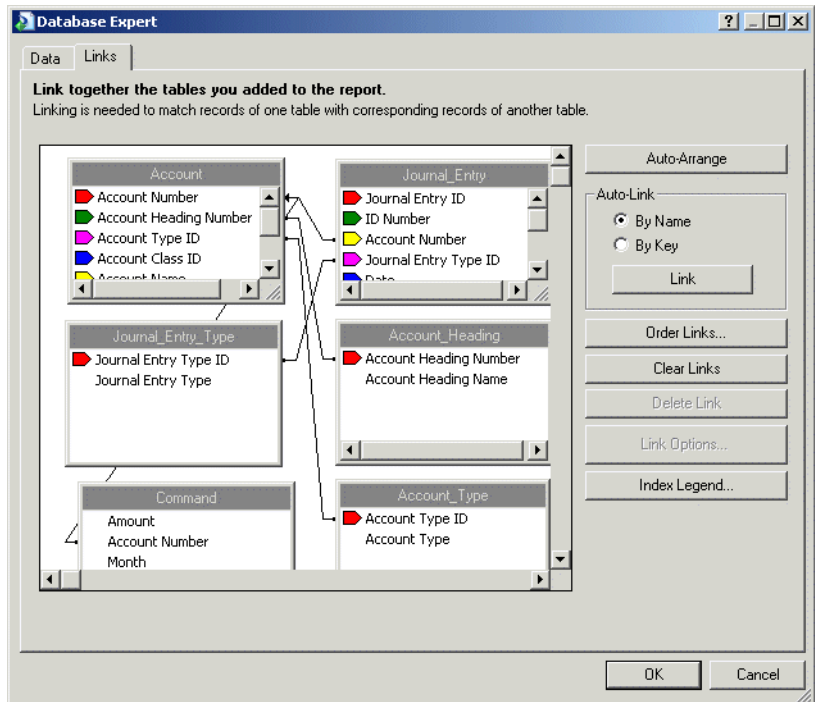
The Enter Values window appears.



9. Provide a value for the End Date, and click **OK**.

10. In the Database Expert dialog box, click **OK**.

The Links tab is displayed.



11. Verify that the links between the tables are consistent with what is displayed in the screenshot above. If necessary, create the appropriate links by dragging fields from one table to corresponding fields in another table.

Note: Ensure that the following links exist:

- Account.Account Type ID **to** Account Type.Account Type ID
- Account.Account Number **to** Journal Entry.Account Number
- Account.Account Heading Number **to** Account Heading.Account Heading Number
- Journal Entry.Journal Entry Type ID **to** Journal Entry Type.Journal Entry Type ID
- Command.Account Number **to** Account.Account Number

12. Click **OK**.

Setting up the report date

When you created the command object, a new parameter field named End Date was also created. (Check the Parameter Fields in the Field Explorer to ensure that the field was made.) To set up the report date, you need to create another parameter named Year.

► To set up the report date



1. Click **Field Explorer**.
2. In the Field Explorer, right-click **Parameter Fields**, and click **New**.

The Create New Parameter dialog box appears.

Value	Description
Click here to add item	

Option	Setting
Prompt Text	Enter My Parameter:
Prompt With Description Only	False
Default Value	
Allow custom values	True
Allow multiple values	False
Allow discrete values	True

3. In the **Name** field, type **Year**.
4. From the **Type** list, select **Date Time**, and click **OK**.

Setting up selection criteria

A selection criteria restricts the range of journal entries that are included in the report. For this report, you need to restrict the journal entries to those that fall between January 1st of the End Date year (for YTD calculations) and the End Date parameter. For example, if the End Date parameter has a value of November 14, 2005, then the journal entries are restricted to those between January 1, 2005 and November 14, 2005.

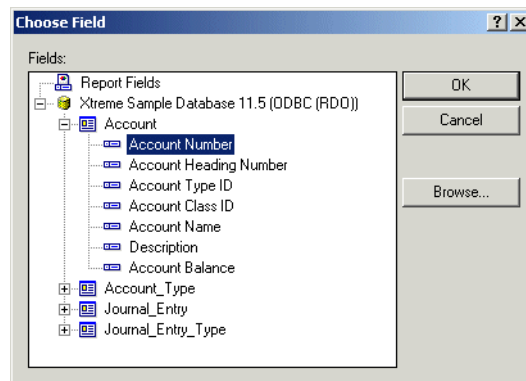
In addition to restricting journal entries based on dates, you need to restrict journal entries based on type. On January 1st of each year, the process of closing accounts is performed. These closing entries include the closure of all revenue and expense accounts and adjustments to Retained Earnings to reflect a net gain or net loss. Therefore, closing entries must not be included in the calculations; such entries must be restricted. You also need to restrict journal entries to display only Revenue and Expense accounts.



► To create selection criteria

1. Click **Select Expert**.

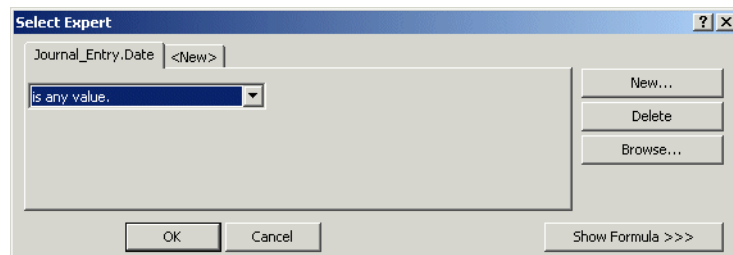
The Choose Field dialog box appears.



2. Expand the **Journal_Entry** table, and select **Date**.

3. Click **OK**.

The Select Expert dialog box appears.



4. Ensure that the **Journal_Entry.Date** tab is selected, and, from the list, choose **formula**..

5. To restrict the journal entries, type the following formula in the text area:

```
{Journal_Entry.Date} <= dateserial(year({?End  
Date}),12,31) and  
{Journal_Entry.Date} >= dateserial(year({?End Date}),1,1)
```

Note:

- **dateserial** is an SQL function that accepts three parameters (year, month, and day) and returns a valid date.
- **year** is an SQL function that accepts a date and returns only the year portion.

6. Now that the journal entry dates are restricted by the formula, you need to add criteria to restrict the closing entries. In the Select Expert dialog box, click the <New> tab.
7. In the Choose Field dialog box, expand the **Journal_Entry_Type** table, and select **Journal Entry Type**.
8. Click **OK**.
9. Ensure that the Journal_Entry_Type.Journal Entry Type tab is selected, and, from the list, choose **is not equal to**.
10. From the list that appears, select **closing entries**.
11. Click the <New> tab.
12. In the Choose Field dialog box, expand the **Account_Type** table, and select **Account Type**.
13. Click **OK**.
14. Ensure that the Account_Type.Account Entry Type tab is selected, and, from the list, choose **is one of**.
15. From the list that appears, select **Revenue** and **Expense**.
16. Click **Show Formula >>>**.

The dialog box displays your selection criteria.

The screenshot shows the 'Select Expert' dialog box. At the top, there are two tabs: 'Journal_Entry_Type, Journal Entry Type' and 'Account_Type, Account Type'. The 'Journal_Entry_Type' tab is active. Below the tabs, there is a dropdown menu showing 'is one of'. To the right of this dropdown is a list box containing 'Expense' and 'Revenue'. Below the list box are 'Add' and 'Remove' buttons. To the right of the list box are 'New...', 'Delete', and 'Browse...' buttons. Below these are 'OK' and 'Cancel' buttons. At the bottom right is a 'Hide Formula <<<' button. Below the 'OK' and 'Cancel' buttons are two radio buttons: 'Record Selection' (which is selected) and 'Group Selection'. To the right of these radio buttons is a 'Formula Editor...' button. Below the radio buttons is a text area containing the following formula:

```
{Journal_Entry.Date} <= dateserial(year({?End Date}),12,31) and  
{Journal_Entry.Date} >= dateserial(year({?End Date}),1,1) and  
{Journal_Entry_Type} <> "closing entries" and  
{Account_Type,Account Type} in ["Expense", "Revenue"]
```

17. Click **OK**.

Setting up groupings

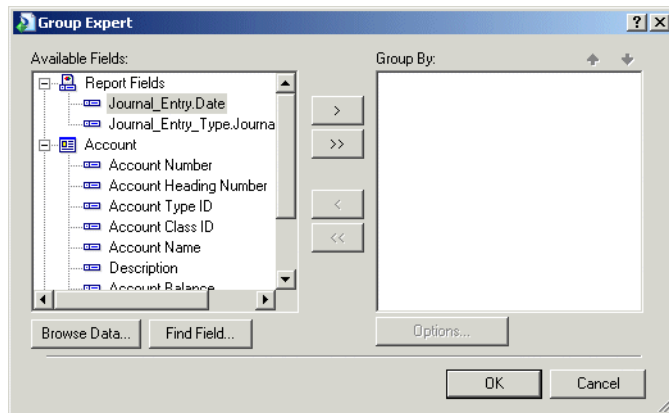
For this report, you must group records based on Account Type, Account Heading Name, Account Number, and Journal Entry ID.

► To create report groupings



1. Click **Group Expert**.

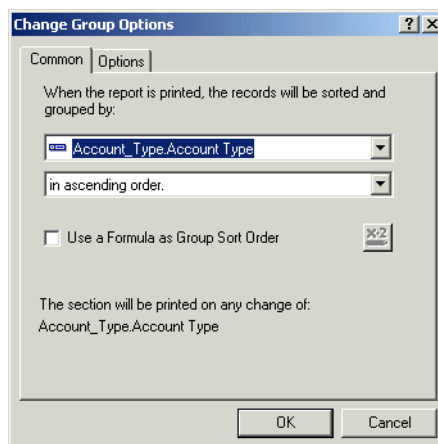
The Group Expert dialog box appears.



2. In the Available Fields area, expand the **Account_Type** table, select the **Account Type** field, and click >.

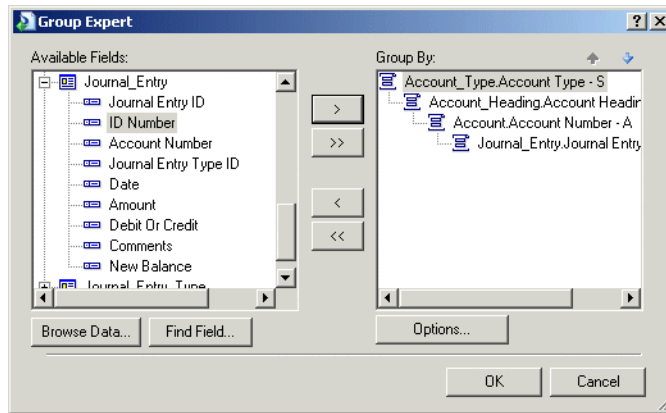
3. Click **Options....**

The Change Group Options dialog box appears.



4. From the second list, select in **specified order**.
5. From the Named Group: list, select the following values in order:
 - Revenue
 - Expense
6. Click **OK**.
7. Expand the **Account_Heading** table, select the **Account Heading Name** field, and click > to create a second group.
8. Expand the **Account** table, select the **Account Number** field, and click > to create a third group.
9. Expand the **Journal_Entry** table, select the **Journal Entry ID** field, and click > to create a fourth group.

The dialog box displays your groupings.



10. Click **OK**.

Creating formula fields

The Full Year Budget Report with Actuals uses several formula fields. You must create the necessary fields and add them to the report.

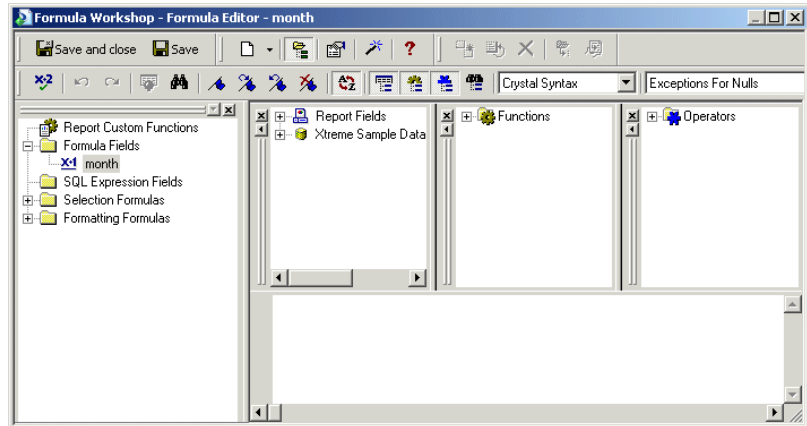
► To create formula fields



1. Click **Field Explorer**.
2. In the Field Explorer, right-click **Formula Fields**, and click **New**.

3. In the Formula Name dialog box, type `jan_account_balance`, and click **OK**.

The Formula Workshop appears.



4. Type the following formula:

```
whileprintingrecords;  
currencyvar jan_account_balance;  
currencyvar jan_type_total;  
jan_type_total := jan_type_total + jan_account_balance;  
if {Account_Type.Account Type} = 'Revenue' then  
  jan_account_balance * -1  
else  
  jan_account_balance
```

This formula field updates the monthly type total amounts and reverses the sign for all Revenue account balances.



5. Click **Check** to verify that the syntax of the formula is correct.
6. Click **Save and close**.

7. Repeat steps 2 through 6 to create the following formula fields:

- **jan_account_type_total:** This formula field displays the account total for a given account type for the month.

```
whileprintingrecords;
currencyvar jan_net_profit;
currencyvar jan_type_total;
if {Account_Type.Account Type} = 'Revenue' then
(
  jan_net_profit := jan_net_profit + jan_type_total * -
    1;
  jan_type_total * -1;
)
else
(
  jan_net_profit := jan_net_profit - jan_type_total;
  jan_type_total;
)
)
```
- **jan_balance:** This formula field updates the monthly balance amount based on the journal entries and reverses the sign of all the credits.

```
whileprintingrecords;
currencyvar jan_account_balance;
currencyvar jan_budget;
if month({?End Date}) >= 1 then
(
  if ({Journal_Entry.Date} <= dateserial(year({?End
    Date}),1,31))
  and ({Journal_Entry.Date} >= DateSerial(year({?End
    Date}), 1, 1)) then
  (
    if {Journal_Entry.Debit Or Credit} = 'Credit' then
      jan_account_balance := jan_account_balance +
        ({Journal_Entry.Amount} * -1)
    else
      jan_account_balance := jan_account_balance +
        ({Journal_Entry.Amount})
    )
  )
  else
  (
    if {Account_Type.Account Type} = 'Revenue'
    and {Account.Account Name} <> 'Sales Returns' then
      jan_account_balance := jan_budget * -1
    else
      jan_account_balance := jan_budget
    );
  jan_account_balance;
)
```

- **jan_budget:** This formula field sets the monthly budget amount.

```
whileprintingrecords;
currencyvar jan_budget;
if {Command.Month} = 1 then
jan_budget := {Command.Amount};
```

- **jan_net_income:** This formula field creates a variable that is used to store monthly net profit amounts.

```
whileprintingrecords;
currencyvar jan_net_profit;
jan_net_profit;
```

8. You must create formula fields for each month that you want to display in the report. For this tutorial, you need to display 12 months, which means that you must repeat steps 2 through 7 for each of the remaining months in the year.

Note: Rename the formula fields to correspond with the appropriate months. For example, use `feb_account_balance` and `feb_net_income` for the formula fields for February.

9. After you create the month-specific formula fields, you must create the remaining fields that are necessary for the report:

- **actual_dates:** This formula field returns a heading that states the time period for actual (not forecast) data.

```
"Actual Data : January - " + monthname(month({?End
Date}))
```

- **annual_balance_total:** This formula field generates a sum of all the monthly account balances.

```
{@jan_account_balance}+{@feb_account_balance} +
{@mar_account_balance}+{@apr_account_balance} +
{@may_account_balance}+{@jun_account_balance} +
{@jul_account_balance}+{@aug_account_balance}
+{@sep_account_balance}+
{@oct_account_balance}+{@nov_account_balance} +
{@dec_account_balance}
```

- **annual_net_income:** This formula field generates a sum of all the monthly net income amounts.

```
{@jan_net_income}+{@feb_net_income} +
{@mar_net_income}+{@apr_net_income} +
{@may_net_income}+{@jun_net_income} +
{@jul_net_income}+{@aug_net_income} +
{@sep_net_income}+{@oct_net_income} +
{@nov_net_income}+{@dec_net_income}
```

- **annual_type_total:** This formula field generates a sum of all the monthly account type totals.

```
{@jan_account_type_total} +
{@feb_type_total} +
{@mar_type_total} +
{@apr_type_total} +
{@may_type_total} +
{@jun_type_total} +
{@jul_type_total} +
{@aug_type_total} +
{@sep_type_total} +
{@oct_type_total} +
{@nov_type_total} +
{@dec_type_total}
```

- **forecast_dates:** This formula field returns a heading that states the time period for forecast (not actual) data.

```
if month({?End Date}) = 12 then
"forecast Data : None"
else
"forecast Data : " +
monthname(month(dateadd('m',1,{?End Date}))) +
" - December"
```

- **init:** This formula field sets all the monthly account balance and budget variables to '0'.

```
whileprintingrecords;
currencyvar jan_account_balance :=0;
currencyvar feb_account_balance :=0;
currencyvar mar_account_balance :=0;
currencyvar apr_account_balance :=0;
currencyvar may_account_balance :=0;
currencyvar jun_account_balance :=0;
currencyvar jul_account_balance :=0;
currencyvar aug_account_balance :=0;
currencyvar sep_account_balance :=0;
currencyvar oct_account_balance :=0;
currencyvar nov_account_balance :=0;
currencyvar dec_account_balance :=0;
currencyvar jan_budget :=0;
currencyvar feb_budget :=0;
currencyvar mar_budget :=0;
currencyvar apr_budget :=0;
currencyvar may_budget :=0;
currencyvar jun_budget :=0;
currencyvar jul_budget :=0;
currencyvar aug_budget :=0;
currencyvar sep_budget :=0;
currencyvar oct_budget :=0;
currencyvar nov_budget :=0;
currencyvar dec_budget :=0;
```


- **init_account_type:** This formula field sets all the monthly type total variables to '0'.

```
whileprintingrecords;  
currencyvar jan_type_total:=0;  
currencyvar feb_type_total:=0;  
currencyvar mar_type_total:=0;  
currencyvar apr_type_total:=0;  
currencyvar may_type_total:=0;  
currencyvar jun_type_total:=0;  
currencyvar jul_type_total:=0;  
currencyvar aug_type_total:=0;  
currencyvar sep_type_total:=0;  
currencyvar oct_type_total:=0;  
currencyvar nov_type_total:=0;  
currencyvar dec_type_total:=0;
```
- **type_total_heading:** This formula field sets the Account Type field in the Account Type table to Net Sales if it is a Revenue account or to Total Operating Expenses if it is an Expense account.

```
if {Account_Type.Account Type} = 'Revenue' then  
"Net Sales"  
else  
"Total Operating Expenses"
```

Adding fields to the report

After you create the formula fields, you can begin to add fields to the report.

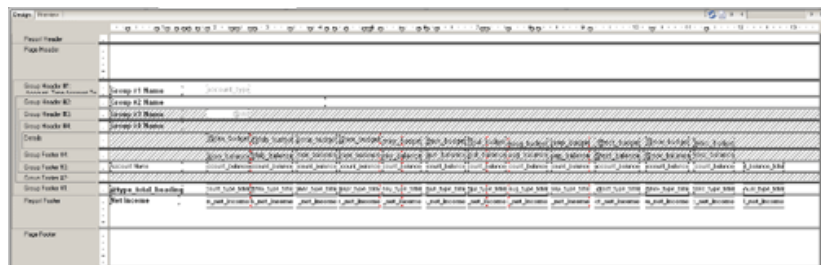
Note: Before you add the fields, adjust the page setup of the report to use legal size paper with a landscape orientation. This arrangement is required to accommodate the fields in the report.

► To add fields to the report

1. From the Field Explorer, drag the `jan_budget` field to the left end of the **Details** section.
2. Right-click the heading that was automatically created in the **Page Header** section, and click **Delete**.
3. Drag the `jan_balance` field to the **Group Footer #4** section, and align it with the `jan_budget` field.
4. Drag the `jan_account_balance` field to the **Group Footer #3** section, and align it with the `jan_balance` field.
5. Drag the `jan_account_type_total` field to the **Group Footer #1** section, and align it with the `jan_account_balance` field.
6. Add a single top border to the `jan_account_type_total` field.

8. From the **Account** table, drag the **Account Name** field to the **Group Footer #3** section, and flush it against the left edge of the report.
9. Drag the **type_total_heading** field to the **Group Footer #1** section, and flush it against the left edge of the report.
10. Create a new text box in the **Report Footer** section, and flush it against the left edge of the report. In the text box, type **Net Income**, and make the text bold.
11. Drag the **actual_dates** field to the top left-hand side of the **Page Header** section.
12. Drag the **forecast_dates** field to the **Page Header** section, and place it directly underneath the **actual_dates** field.
13. Right-click **Group Header #3**, and click **Suppress (No Drill-Down)**.
14. Right-click **Group Header #4**, and click **Suppress (No Drill-Down)**.
15. Right-click **Details**, and click **Suppress (No Drill-Down)**.
16. Right-click **Group Footer #2**, and click **Suppress (No Drill-Down)**.
17. Right-click **Group Footer #4**, and click **Hide (Drill-Down OK)**.

The report should now look similar to the following screenshot:



18. In the **Page Header** section, create a new text box above each month column. In each text box, type the name of the month that corresponds to its month column. Format the box to display bold text, and add a single bottom border.
19. In the **Page Header** section, create a text box in the last column.
20. In the text box, type **Annual Actual + Forecast**, format the text box to display bold text, and add a single bottom border.

The report should now look similar to the following screenshot:

[illegible]

Reviewing your work



To see how the report looks with the fields in place, click **Print Preview** to activate the Preview tab.

The report appears in preview mode.

[illegible]

After you finish reviewing the report, click the Design tab to correct any mistakes.

Completing the report

Now that the report has been built to display the correct data, you can add the report title, the report date, and the company logo.

1. Expand the **Page Header** section to be approximately 2 inches in height.


2. Create a text box at the center of the **Page Header** section, and type Xtreme Mountain Bikes.
3. Create another text box directly underneath the Xtreme Mountain Bikes text box, and type Dynamic Full Year Actual - Forecast.
4. Create another text box directly underneath the Dynamic Full Year Actual - Forecast text box, and type For the months ending.
5. Drag the End Date parameter field to anywhere in the **Page Header** section.
6. Right-click the End Date field, and click **Format Field**.
7. In the Format Editor, select **03/01/1999** as the Date and Time format, and click **OK**.
8. Drag the End Date field into the text box that contains **For the months ending**.
9. Apply bold formatting to the three text boxes.

► **To add a company logo to the report**

1. Click **Insert Picture**.
2. Choose a bitmap (.bmp) logo file, and click **Open**.
3. Position the object frame in the upper right-hand corner of the **Report Header (RH)** section of the report.
4. Click the Preview tab.

The report should now look similar to the following screenshot:



<div>  </div> <div> Xtreme Mountain Bikes Dynamic Full Year Actual - Forecast For the Months Ending 03/31/2005 </div>												
Actual Data - January - March Forecast Data - April - December												
	January	February	March	April	May	June	July	August	September	October	November	December Annual Actual - Forecast
Revenue												
Sales Revenue	\$710.00	\$820.79	\$970.29	\$1,077.27	\$15.79	\$950.14	\$990.14	\$990.14	\$990.14	\$990.14	\$990.14	\$9,877.54
Sales Taxes	\$2,828.74	\$2,981.74	\$3,712.30	\$3,676.44	\$152.86	\$2,795.00	\$3,760.81	\$3,760.81	\$3,760.81	\$3,760.81	\$3,760.81	\$38,023.88
Sales License	\$11.26	\$42.10	\$204.12	\$626.76	\$352.26	\$365.43	\$365.43	\$365.43	\$365.43	\$365.43	\$365.43	\$3,651.09
Sales Commissions	\$1,000.00	\$100.00	\$100.00	\$100.00	\$100.00	\$697.50	\$990.00	\$990.00	\$990.00	\$990.00	\$990.00	\$9,900.00
Sales Office - Computer	\$502,312.75	\$250,024.79	\$88,710.17	\$55,022.76	\$12,214.35	\$142,114.36	\$142,114.36	\$142,114.36	\$142,114.36	\$142,114.36	\$142,114.36	\$1,441,710.08
Sales Office - Rental	\$1,714.51	\$15,081.07	\$1,147.51	\$17,554.46	\$17,541.46	\$15,043.50	\$14,243.61	\$14,243.61	\$14,243.61	\$14,243.61	\$14,243.61	\$150,450.00
Sales Office - Fuel	\$1,507.89	\$4,381.00	\$5,054.00	\$6,057.85	\$3,035.83	\$3,035.83	\$3,035.83	\$3,035.83	\$3,035.83	\$3,035.83	\$3,035.83	\$30,358.26
Sales Office - Mountain	\$42,086.24	\$19,381.18	\$19,720.16	\$19,771.74	\$147.26	\$19,253.82	\$19,253.82	\$19,253.82	\$19,253.82	\$19,253.82	\$19,253.82	\$191,237.39
Sales Office - Phone	\$114,206.00	\$51,421.76	\$11,000.00	\$35,044.23	\$35,044.23	\$35,044.23	\$35,044.23	\$35,044.23	\$35,044.23	\$35,044.23	\$35,044.23	\$350,442.31
Net Sales	\$2,88,227.03	\$2,914,978.27	\$3,717,719.09	\$3,667,719.09	\$2,214,912.57	\$1,919,414.36	\$1,917,439.26	\$1,917,439.26	\$1,917,439.26	\$1,917,439.26	\$1,917,439.26	\$22,811,777.22
Expenses												
Cost of Goods Sold												
Shower Cost	\$160.00	\$251.79	\$304.00	\$603.27	\$30.00	\$163.50	\$163.50	\$163.50	\$163.50	\$163.50	\$163.50	\$1,603.50
Hardware Cost	\$1,000.21	\$1,087.28	\$1,488.21	\$4,145.45	\$111.11	\$1,728.79	\$1,728.79	\$1,728.79	\$1,728.79	\$1,728.79	\$1,728.79	\$17,288.89
Lumber Cost	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$1,000.00
Lumber Cost	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$4,000.00
Shower (Computer) Cost	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$1,000,000.00
Shower (Phone) Cost	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$11,000.00
Shower (Fuel) Cost	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$11,000.00
Shower (Mountain) Cost	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$11,000.00
Shower (Phone) Cost	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$11,000.00
Shower (Fuel) Cost	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$11,000.00
Shower (Mountain) Cost	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$11,000.00

Saving the report



► **To save the report**

1. Click **Save**.

Because this is the first time that you are saving the report, the Save As dialog box appears and displays the location where the file will be saved.

2. In the **File name** field, type `Dynamic Full Year Actual And Forecast.rpt`, and click **Save**.

The report is saved to the location that you chose.