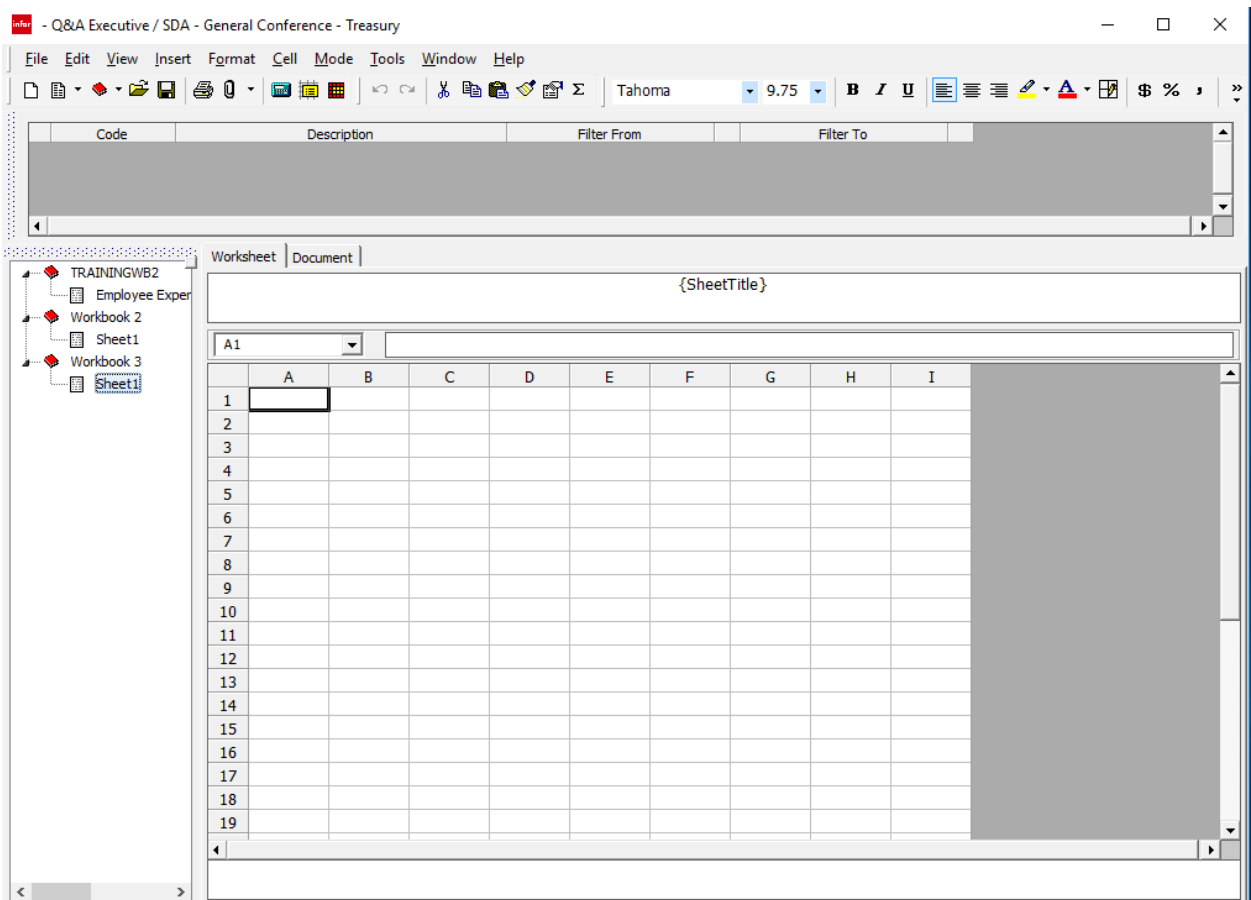**SunPlus**

Q&A Executive Training

Query: Referencing Worksheet Cells

In this lesson, we will learn how to write a query referencing another cell in the worksheet. This is a very powerful and useful tool.

We will be creating an Analysis of Employee Expenses report.

1. Open a new workbook in Q&A Executive

2. In cell B1, type 'Ace Union'
3. In cell B2, type 'Analysis of Employee Expenses'
4. In cell B3, type in '2014 to 2014 Comparisons'
5. In cell C5, type in '2014001'

6. In cell D5, type in '2013001'
7. In cell C6, type in '2014012'
8. In cell D6, type in '2013012'
9. Highlight cells B1 to B3
10. Click the B icon on the formatting toolbar
11. Highlight cells C5 through D6
12. Click the B icon on the formatting toolbar
13. Click on the right edge of column B to expand the column
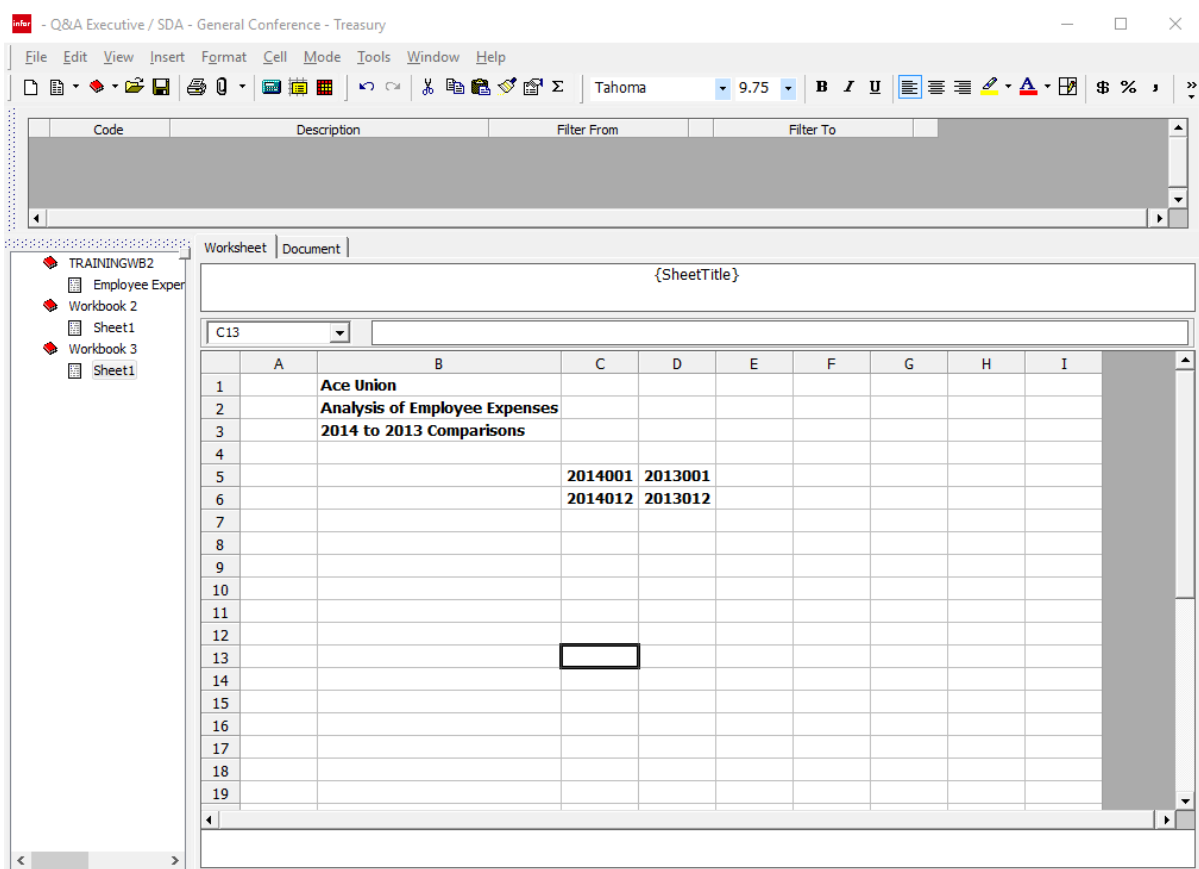
We will use this worksheet in several teaching events. It will help for us all to be working with the same worksheet design.

Case Example 1

The Executive Board has requested a report showing the financial activity in certain employee expense accounts over which the Board has discretionary control for the years 2013 and 2014. These accounts record financial information for resources over which the Board has a lot of flexibility when it comes to saving money. Our report will compare this year's financial activity with last year's.

Keep in mind: this is a made-up example. There may not be an exact replica of this particular report in real life.

Trick for Listing Accounts

In order to create this report, we need to have the expense accounts listed in column A. Because I don't want to have to retype a lot of information, I am going to open another workbook.

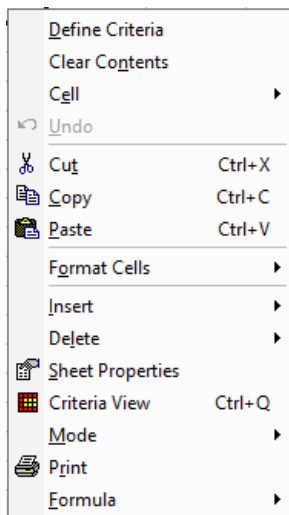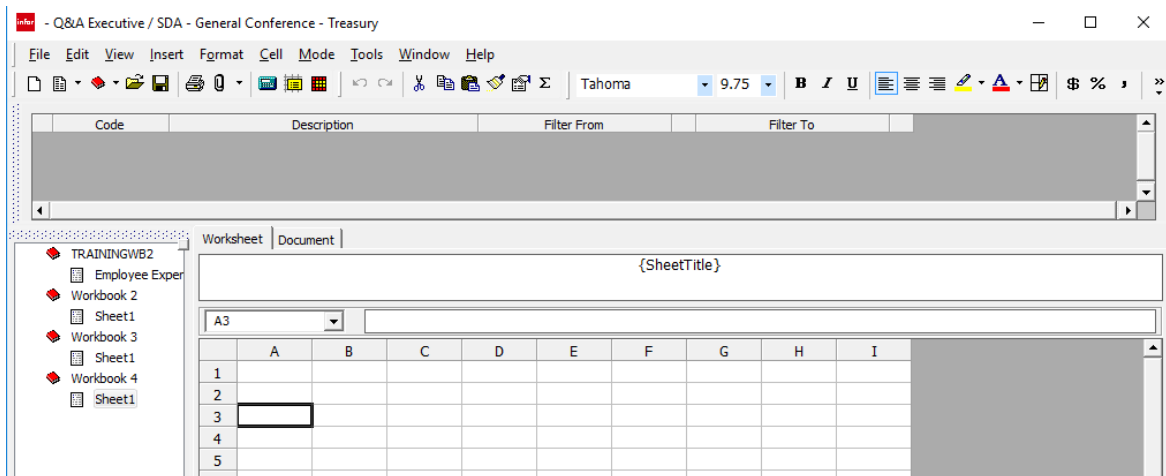To open a blank workbook, click the New Blank Workbook icon on the toolbar.
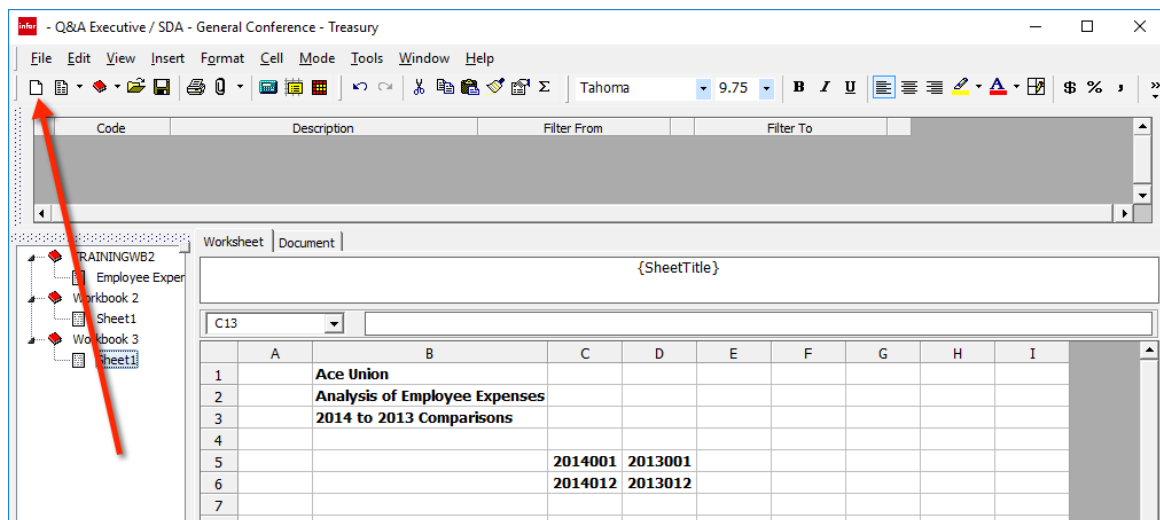
1. Click the New Blank Workbook icon

   This is a little trick. Our final report will be created in Sheet 1 in Workbook 3, but in Sheet 1 in Workbook 4 I will create a simple query to keep from having to retype account names and numbers.
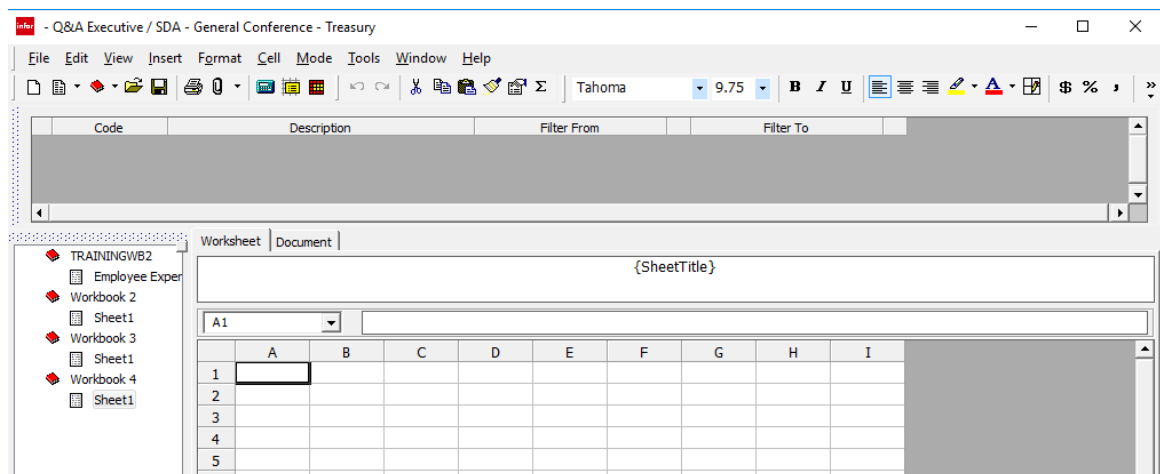
2. Right-click in cell A3 to design the query

3. Select Define Criteria

   The Cell interface will open

   Place the cursor in the Data Type cell, located at the top left side of the interface

   Data Types:
   - Cell
   - Field References
   - Summary Link   returns the balance of a filtered range
   - Reference Link   returns the value of a single record
   - Summary Report   provides a summarized listing
   - Detail Report   provides a detailed listing
   - Chart
   - Query Templates
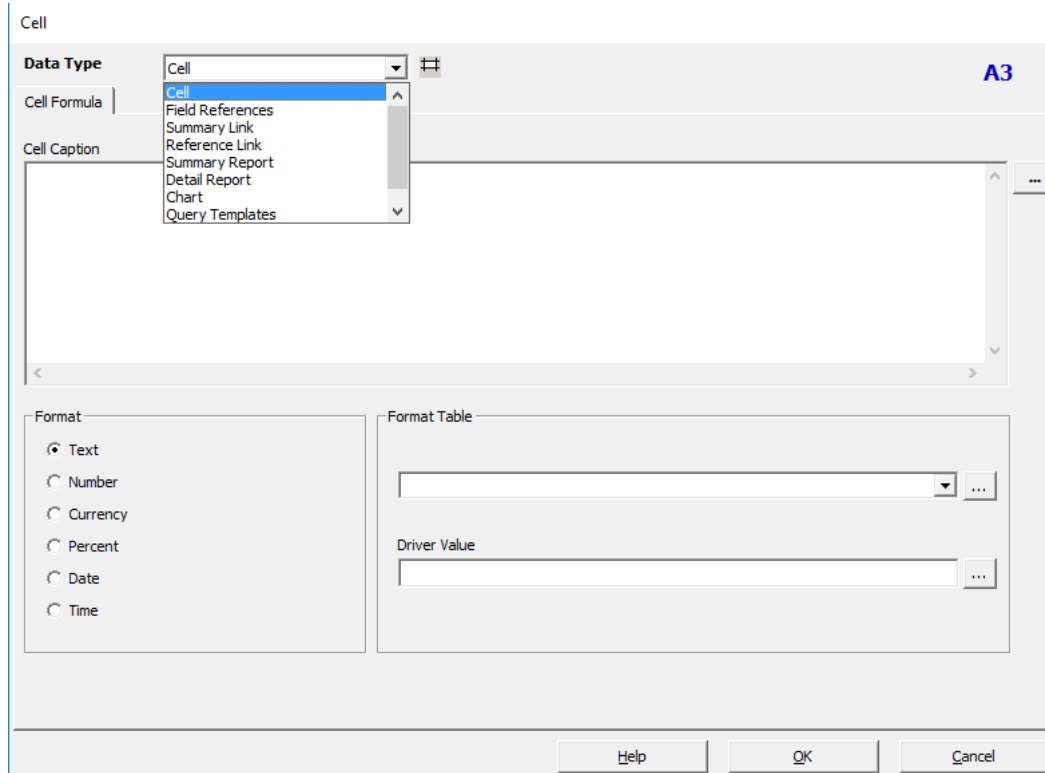
We are interested in a little report consisting of multiple values, we need the Summary Report Data Type. A Summary Report will return multiple values into multiple cells.

4. Select Summary Report Data Type

Summary Report							
Data Type	Summary Report ▾	🖳					A3 Infor

Definition | Options | Report Style

Filter

Filter From   SunSystems 6   ... SunSystems 6

Description	Filter From	Filter To	Value From	Value To	Link Code	
Product	SunSystems 6		SunSystems 6			
Business Unit	ATA		ATA			
Table						

≫

Selection List

Output

Item	Sort Number	

[Help]   [OK]   [Cancel]

Our query should produce a simple report that will extract account numbers and names. We will create this report in a separate worksheet, then Copy and Paste the query into our official report.

5. Accept the Product – SunSystems6 (because it is appropriate for our example report)
6. Accept the Business Unit – ATA (because it is the appropriate business unit for our example report)
7. Select the LA Ledger Table
8. Select Ledger A

9. Click on the Account Code filter row

   We need to identify the Account Codes we want to include in the report.

10. Click the Assist button for the Filter From field

    We will scroll through the lookup list of Account Codes to find the codes we want.

    Notice: I have typed the number 81 in the Filter From field of the lookup dialog.

Typing that number in the Filter From field will take you directly to the first item that begins with the number I typed in. That keeps me from having to scroll as far down the lookup list.
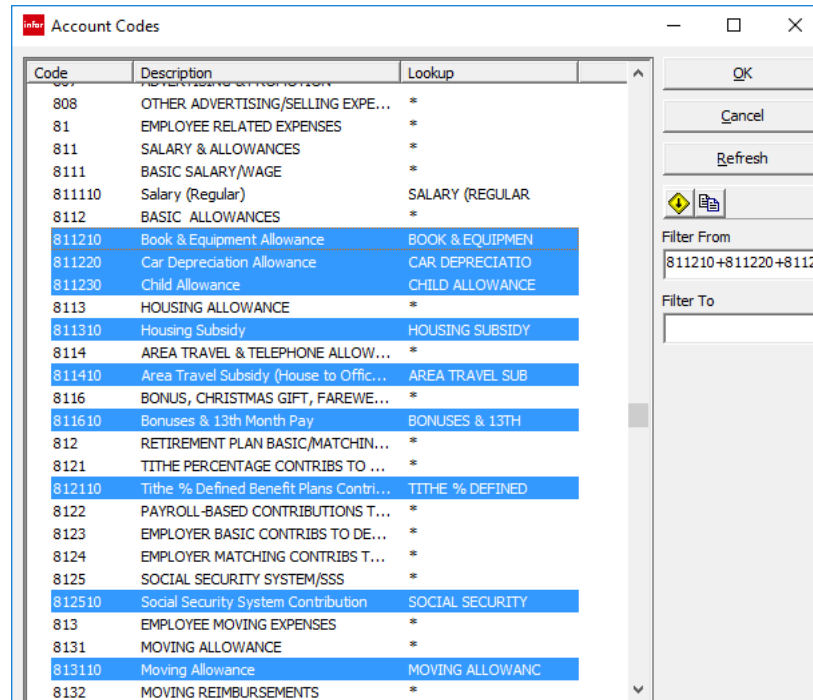
I typed in '81' because we want Employee Expense accounts. We are going to select some accounts at random, so you can experience the process of choosing non-contiguous items.

To select a list of non-contiguous accounts, hold down the Ctrl key as you click on the account titles.

11. Hold down the Ctrl key as you click on the following accounts:
    - Book & Equipment Allowance
    - Car Depreciation Allowance
    - Child Allowance
    - Housing Subsidy
    - Area Travel Subsidy
    - Bonuses & 13th Month Pay
    - Tithe % Defined Benefit Plans Contribution
    - Social Security System Contribution
    - Moving Allowance
    - Educational Subsidy
    - Ad & D Insurance
    - Survivor Benefits Insurance
    - Unemployment Insurance
    - Medical Policy Premium
    - Medical Subsidy

- Tax Assistance

Keep in mind that I am inventing a random report. There may be no real reports that would be based on the information I have selected here. I am saying that the accounts I have selected are the accounts over which the Board has a lot of flexibility within Denomination Policy.

12. Click OK

Take a minute to study how the Account Codes are presented in our filter.
<<811210,811230,811310,811410

If you wanted to simply type in a range of non-contiguous account codes, this is how you would set up the filter.

13. Click in Accounting Period to assign a Period range to our query

    We are designing a report to cover two years. The Filter From value for the Accounting Period should be the first fiscal period of the first year – January, in this case. The Filter To value should be the last fiscal period of the second year – December, in this case.

14. Enter 2013001 in the Filter From field
15. Enter 2014012 in the Filter To field

We can now select the data items we want to output into our report. We want Account Code and Description.

16. Click the + to the left of the CA Chart of Accounts table in the Selection List
17. Click on Account Code in the expanded Chart of Accounts table
18. Click on Description in the expanded Chart of Accounts table

19. Click OK to save the query

20. Click the Extract icon to run the query

21. Click Extract Primary Worksheets button

We have our little report showing the Account Codes and Descriptions.

Remember, our goal is to create a little query that we won't have to retype. We will then use Ctrl+C to copy the query.
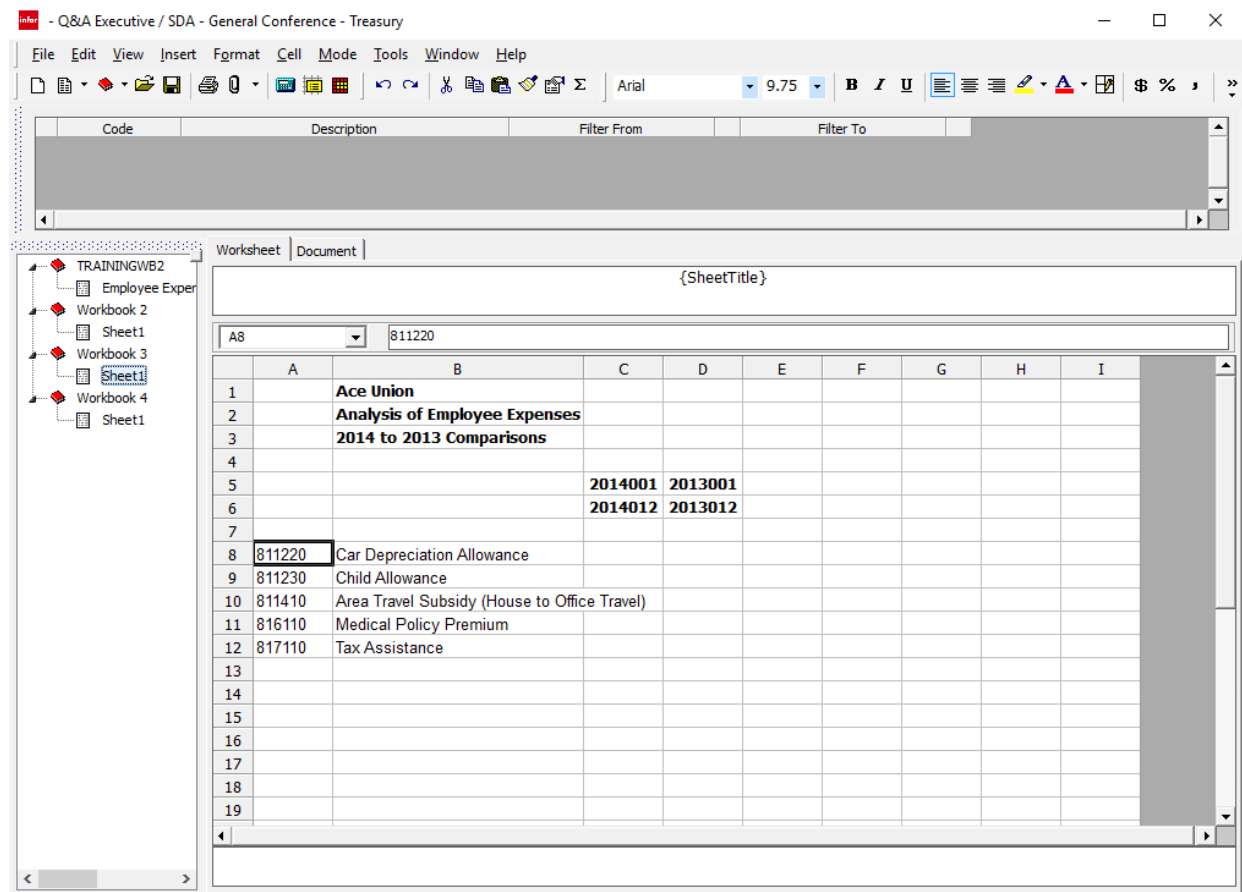
22. Right-click cells A5 through B9

23. Select Copy
24. Click on Workbook 3, Sheet 1
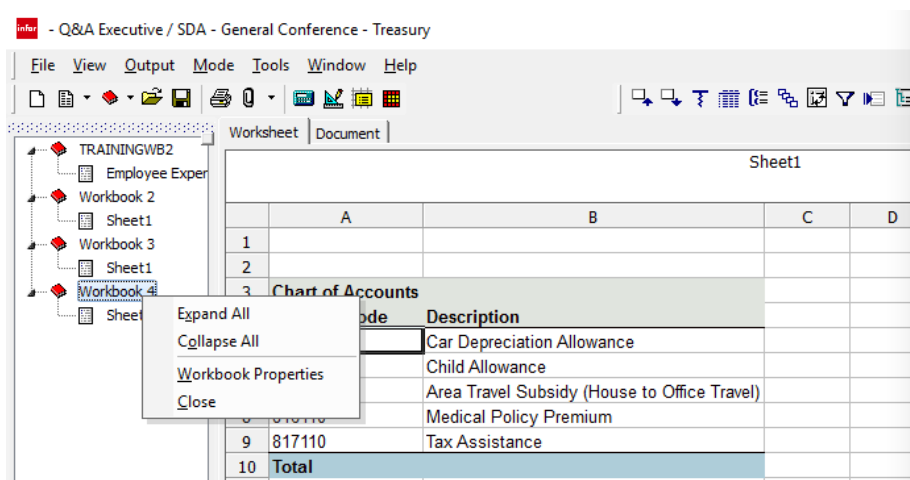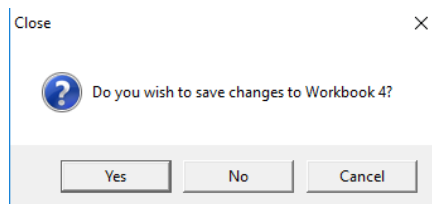25. Right-click in cell A8
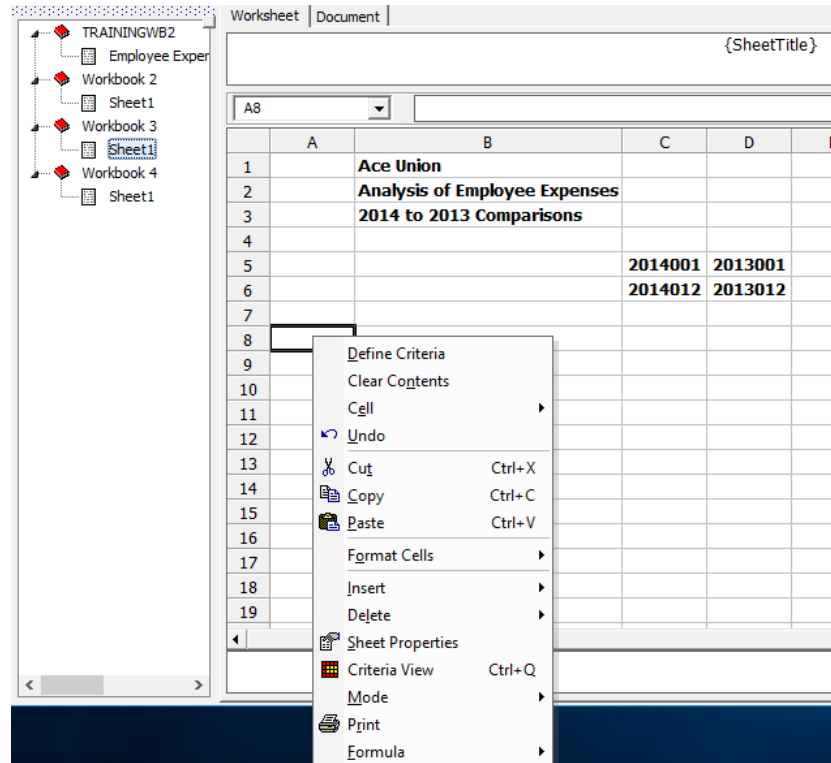
26. Select Paste

We are now finished with Workbook 4, so we can close it.

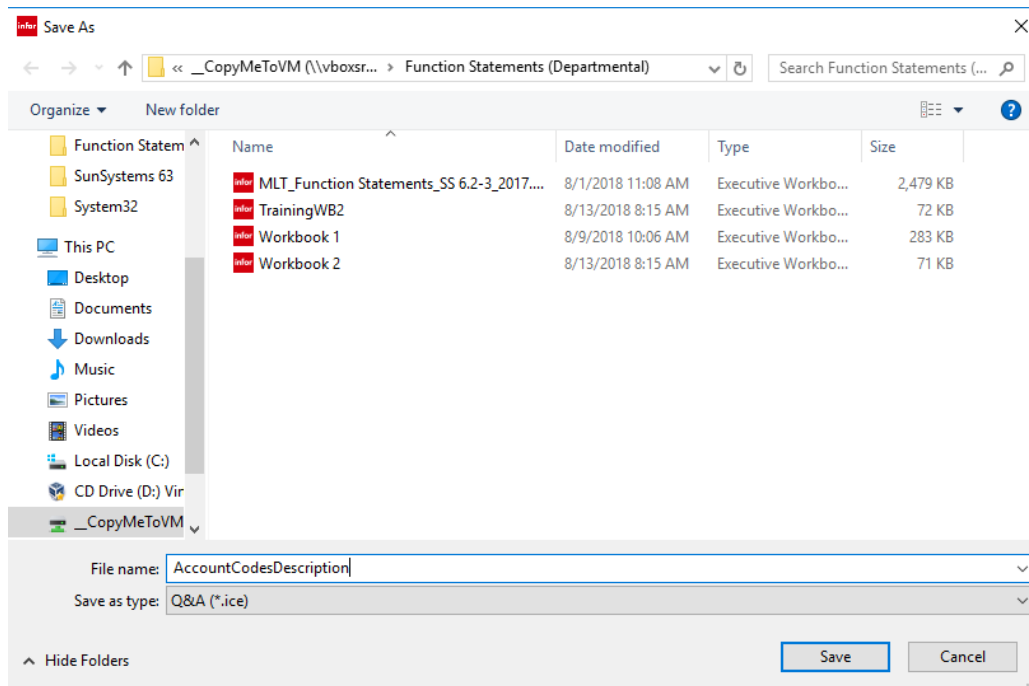27. Right-click on Workbook 4 in the Drill Tree Pane

28. Select Close

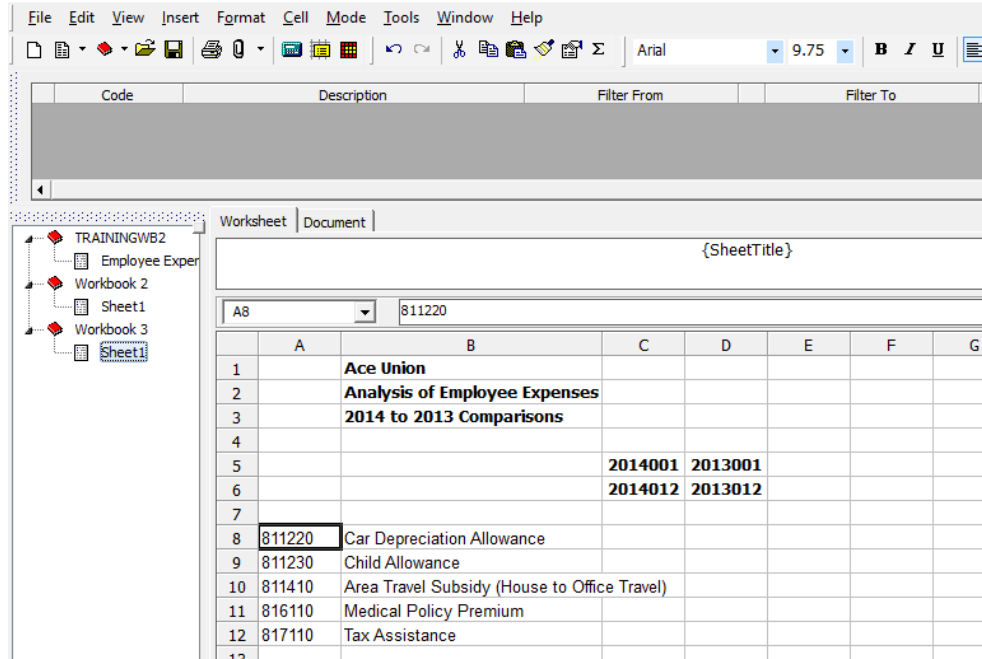A confirmation message will be displayed.

29. Click Yes

A Save As dialog will be displayed.

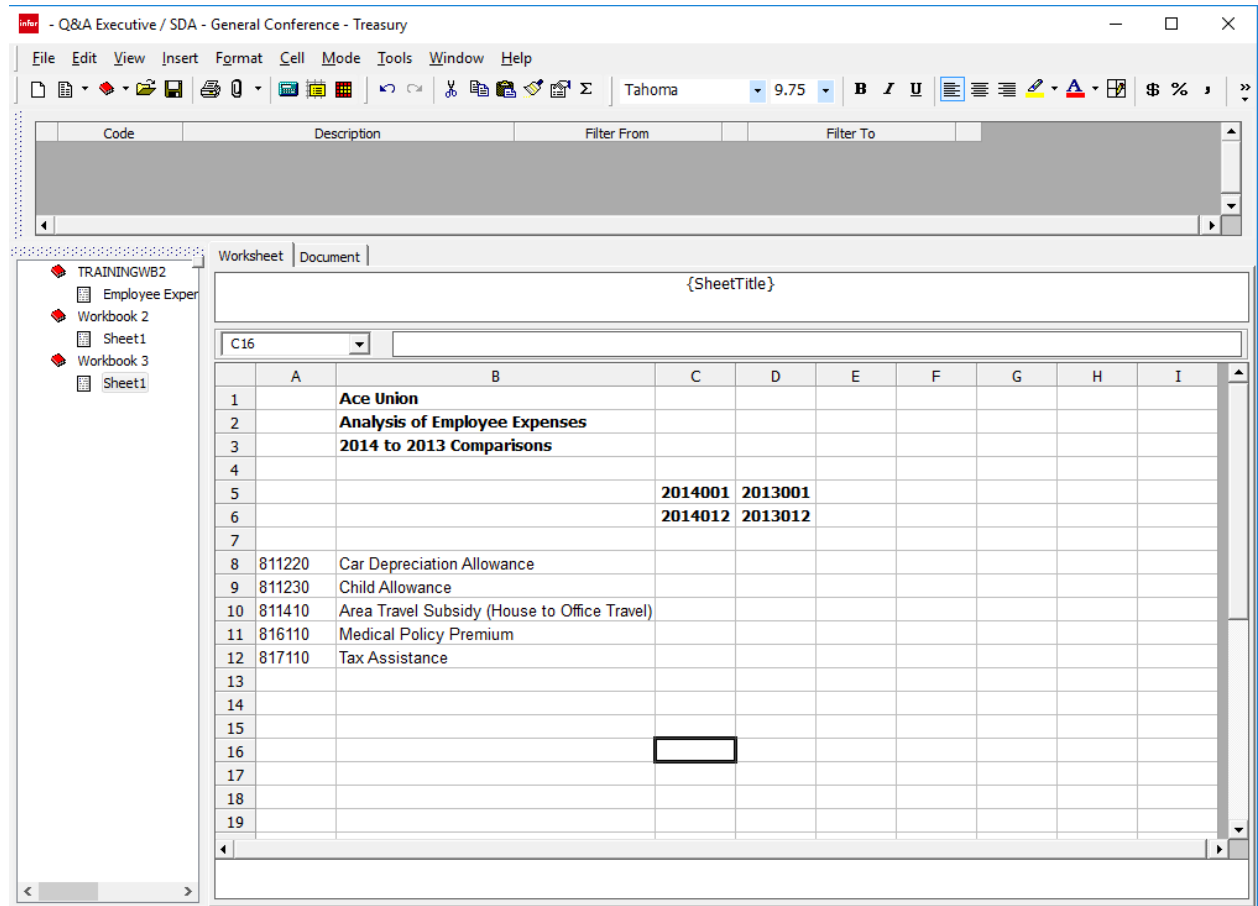30. Give your workbook a title and click Save

Notice: Workbook 4 has disappeared from the Drill Tree Pane.

We can now go to the main report we are creating and continue to work directly on that report.

31. Double-click on the right edge of column B to expand the width so the longest Account title will be fully displayed

We now have a list of Account Codes and their Titles for the relevant accounts. We need to now design a query to pull in the figure for the appropriate year.

32. Click in cell C8

Let's think about the type of data we need to pull into cell C8. We want the figure for the expenses in the related account for that particular year. We need a Summary Link.

33. Select a Summary Link Data Type

Notice: In the upper right corner of the Summary Link dialog, the cell number (C8) is displayed. This is a handy reference, in case you ever wonder whether you are working in the appropriate cell.

We need to be able to see what is going on in cell C8, so we will drag the Summary Link dialog down and to the right so that we can see cell C8.
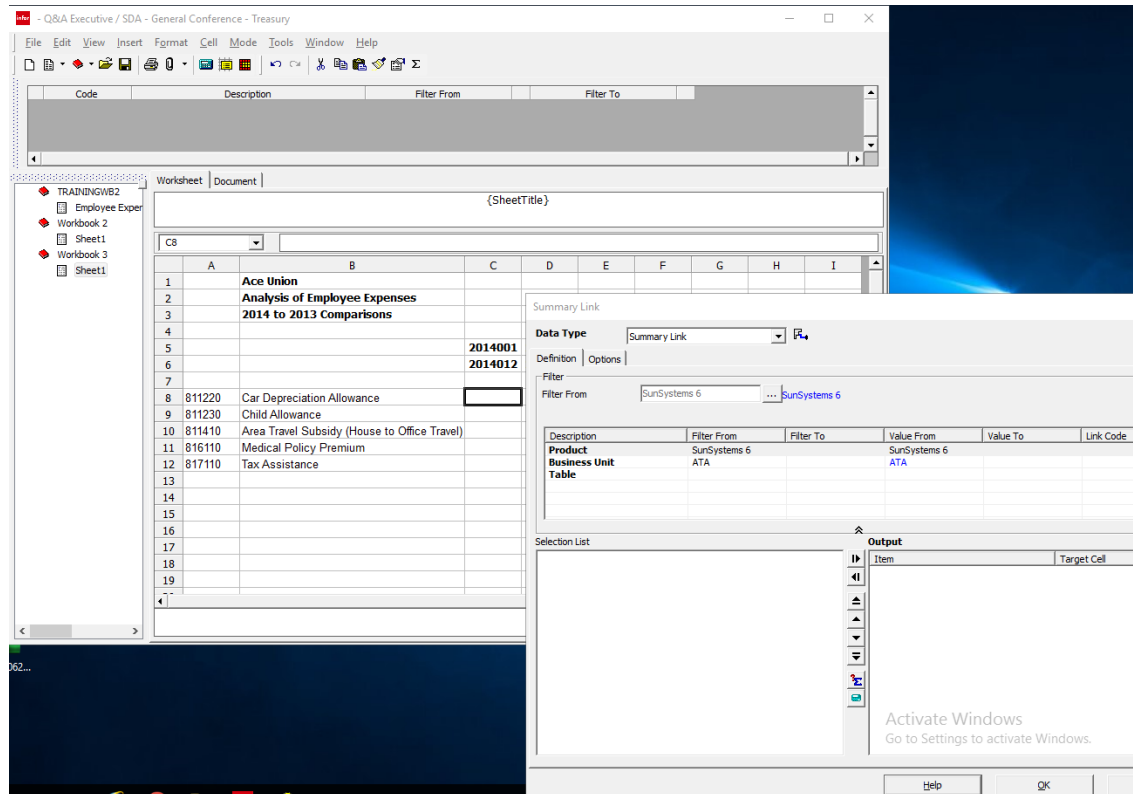
We need to design the query that will bring in the data we need for our report. We want the figure for expenses, so we need to work with the Ledger.

34. Select the LA Ledger Table as the Table filter
35. Click in Account Code filter row
36. Click in the Filter From field
37. Click in cell A8 (the cell where the results of the query will be displayed)
38. Place your cursor in the Filter From field
39. Click in cell A8

Notice how the cell reference is displayed in the Filter From and Filter To fields. We are creating a permanent link into the Ledger with this reference. Anytime the query is run, the up-to-date value of the query will be pulled in.

40. Click on Accounting Period in the filter pane
41. Place cursor in the Filter From field
42. Click on cell C5

By using a reference instead of a hard-coded value, the report operator can change the value in the selected cell and extract the report without having to open and modify the query itself. The query will pick up the value in the cell and use that in the calculation.

43. Place the censor in the Filter To field

44. Click in cell C6

We now have the Accounting Period range for 2014.

Now we need the data items to include.

In our report, we want Base Amount to be the value.

45. Click on Base Amount in the Selection List and move it to the Output Pane

Summary Link

			C8
Data Type	Summary Link		

Definition | Options

Filter

Filter From | =C$5 | ... | 2014001 | | | Link Code
Filter To | =C$6 | | 2014012

Description	Filter From	Filter To	Value From	Value To	Link Code
Product	SunSystems 6		SunSystems 6		
Business Unit	ATA		ATA		
Table	LA		Ledger		
Ledger	A		A		
Account Code	=$A8		811220		
Accounting Period	=C$5	=C$6	2014001	2014012	

Selection List

- **Ledger**
- **Account Code**
- CA Chart of Accounts
- **Accounting Period**
- Base Amount
- Debit/Credit
- Transaction Amount
- RT
- Base 2/Reporting Amount
- RT2
- Memo Amount
- Base Currency Code
- Transaction Currency Code
- CN Transaction Currency Code
- 2nd Base/Reporting Currency Code

Output

Item	Target Cell
Σ LA\Base Amount	

Help | OK | Cancel

Notice: There are $ (dollar signs) in the Filter From and Filter To fields for both Account Codes and Accounting Periods. Q&A has supplied those automatically. They mean exactly the same thing they mean when you are working in Microsoft Excel. As it does in Excel, the dollar sign ($) differentiates between absolute references and relative references.

If the formula is C8 it is an absolute reference. The $ influences the character that comes directly after it. In an absolute reference, the system will return to a single cell to determine the value that needs to be pulled in.

So $C tells the system to return to column C for every piece of data to be calculated. The $8 tells the system to return to cell 8 for every piece of data to be calculated.

Sometimes you see a variation of the absolute reference. The Accounting Period formula is a good example of this. The Filter From value for Accounting Period is C$5. This is a combination of relative reference (the C) and absolute reference ($5). In this formula, the system will always return to column C row 5, but it will keep the row the same every time and change the column values.

In the Account Codes filter, we see an absolute reference of $C8. Here the system will always return to column C, but it will start with row 8, then work its way down the worksheet for the subsequent values.
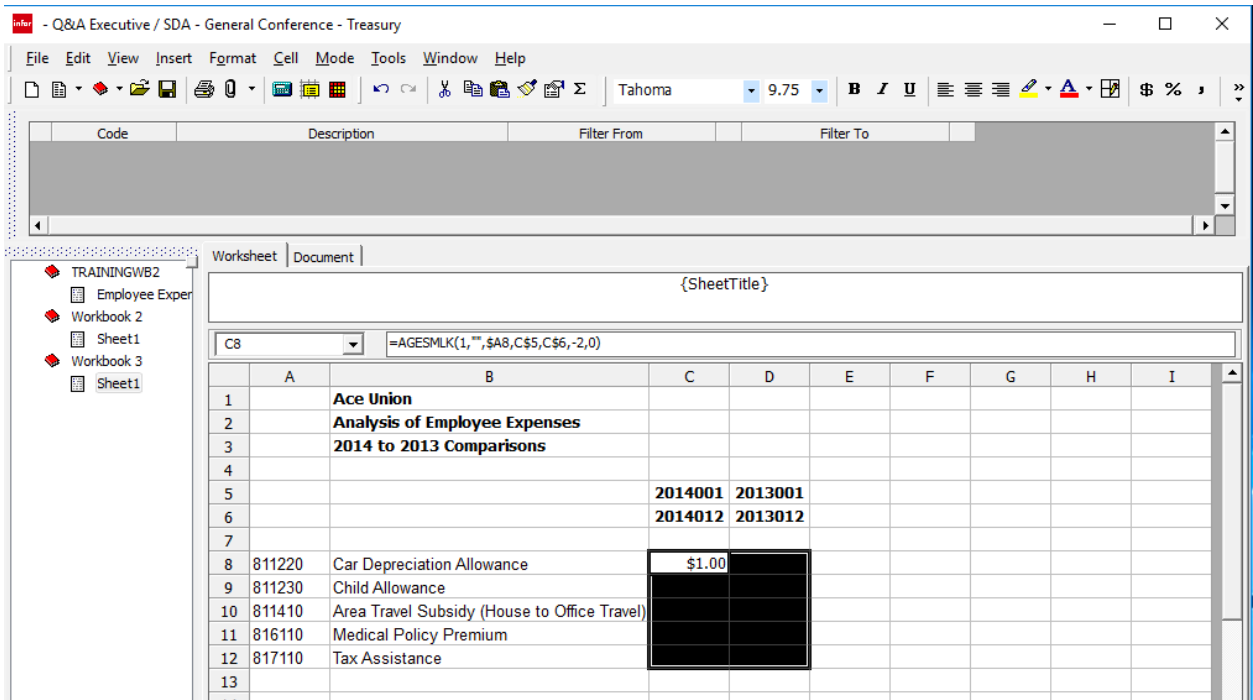
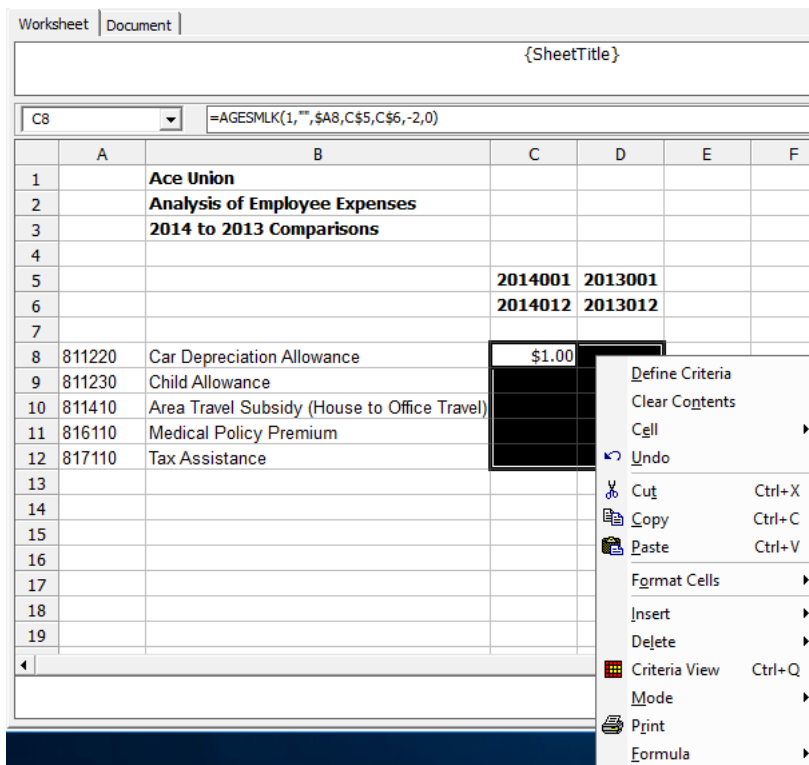46. Click OK to save the query
47. Right-click on cell C8
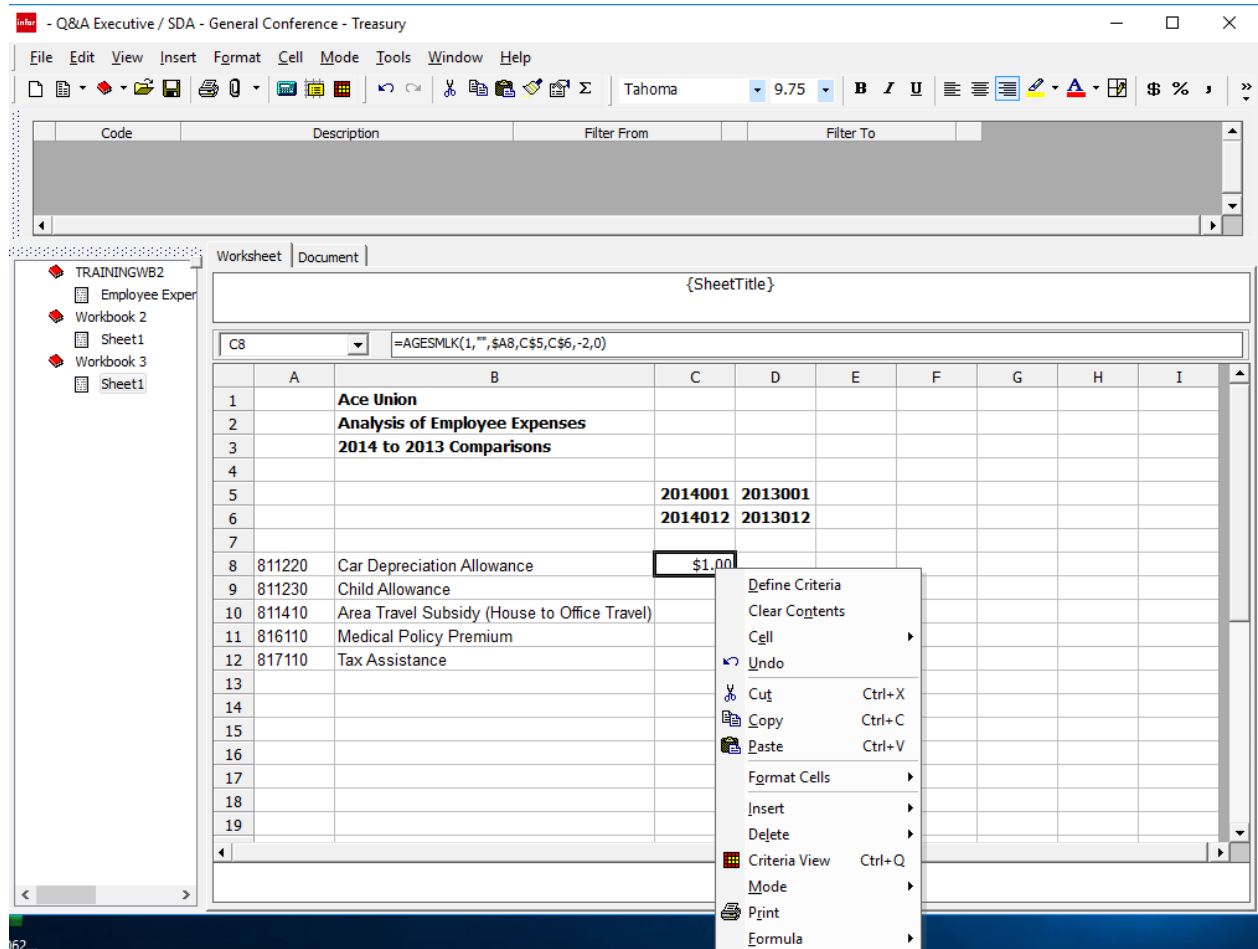
We can save some time by copying the query in one cell and pasting it into another cell whose query would be similar.
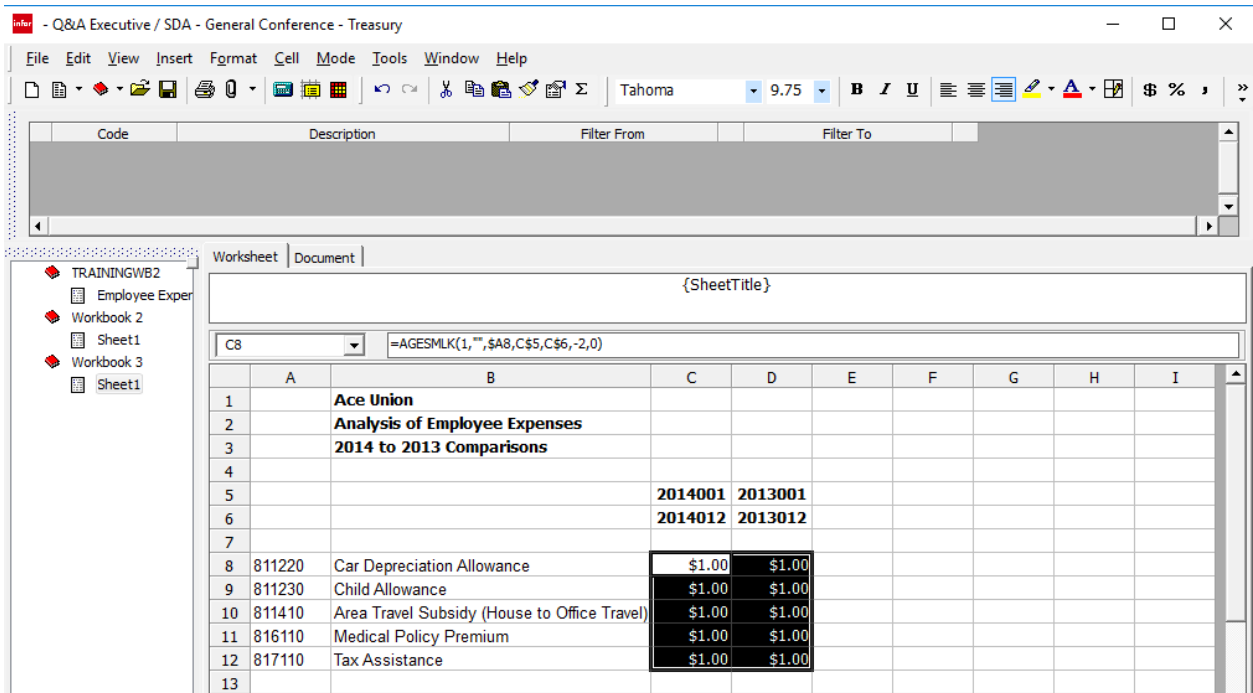
48. Select Copy
49. Highlight cells C8 through D12
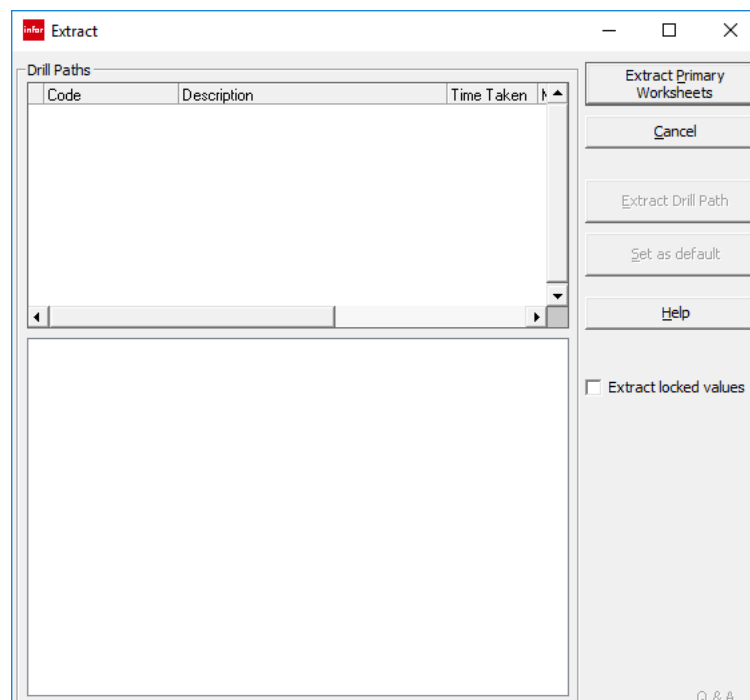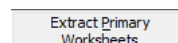
50. Right-click

51. Select Paste

Using Copy and Paste, we do not have to retype the query into each of the new cells. This can save time and aggravation, especially if you are working on a large, complex report.

52. Click the Extract icon

53. Click the Extract Primary Worksheets button

54. Double click on the right edge of column C to expand the width of the column
55. Double click on the right edge of column D to expand the width of the column

As you study the figures in this report, keep in mind that it is a made-up, not particularly realistic report, built upon a sparsely populated demonstration business unit. Please do not expect this data to make sense.

In the next lesson, we will study Breakouts.