Working With PivotTables

Background

A PivotTable is an interactive table that summarizes data to present it in a meaningful way. You can rotate a PivotTable's rows and columns to see different summaries of the source data, or drill down to show details. By displaying different views of data, PivotTable reports allow you to easily compare data, see patterns and relationships, and analyze trends.

Without OfficeWriter, SQL Server Reporting Services cannot export a report to Excel format while maintaining a PivotTable. Report users have to to manually set up PivotTables every time they they export a PivotTable report from Reporting Services to Excel.

With OfficeWriter, you design your PivotTable only once at report design-time. Each time you run the report, OfficeWriter will export the report to Excel and plug the data into the PivotTable. In this section we will explore using PivotTables in a report created with OfficeWriter Designer.

Setup

The following example uses the AdventureWorks sample database that ships with SQL Server Reporting Services 2005. It is assumed that you already know how to set up a report in Excel using OfficeWriter Designer. If you do not know how to do this, see Quick Start.

This query returns company purchase data from the AdventureWorks database, sorted by Vendor ID and Employee ID. This is the data that will be used in this report.

```
SELECT PurchaseOrderHeader.EmployeeID,
      PurchaseOrderHeader.TotalDue,
      PurchaseOrderHeader.VendorID,
      Vendor.Name
FROM AdventureWorks.Purchasing.PurchaseOrderHeader
JOIN AdventureWorks.Purchasing.Vendor
ON Vendor.VendorID = PurchaseOrderHeader.VendorID
ORDER BY PurchaseOrderHeader.VendorID, EmployeeID
```

Below is a screenshot of an Excel template with data markers that will be populated with the data from the above query.

	A	B	C	D
1	Employee ID	Total Due	Vendor ID	Vendor Name
2	%%=[DataSet1].[EmployeeID]	%%=[DataSet1].[TotalDue]	%%=[DataSet1].[VendorID]	%%=[DataSet1].[Name]
3				

After running the report, the imported data looks like this:

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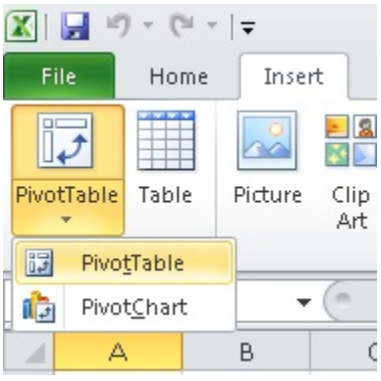
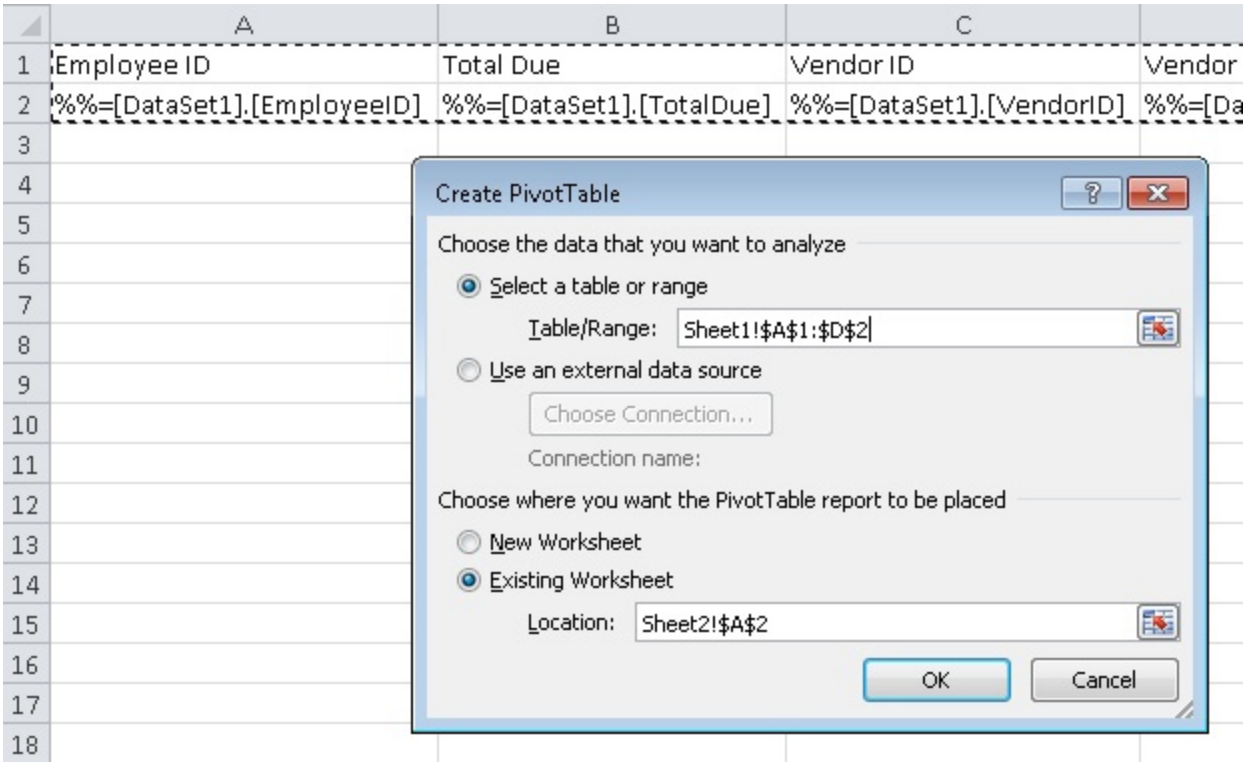
	A	B	C	D
1	Employee ID	Total Due	Vendor ID	Vendor Name
2	164	158.0608	1	International
3	164	158.0608	1	International
4	164	158.0608	1	International
5	164	158.0608	1	International
6	198	158.0608	1	International
7	198	158.0608	1	International
8	198	158.0608	1	International
9	223	158.0608	1	International
10	223	158.0608	1	International
11	223	158.0608	1	International
12	223	158.0608	1	International
13	223	158.0608	1	International
14	231	158.0608	1	International
15	231	158.0608	1	International
16	231	158.0608	1	International
17	231	158.0608	1	International
18	233	158.0608	1	International
19	233	158.0608	1	International
20	233	158.0608	1	International
21	233	158.0608	1	International
22	238	158.0608	1	International
23	238	158.0608	1	International
24	238	158.0608	1	International
25	238	158.0608	1	International
26	241	158.0608	1	International
27	241	158.0608	1	International
28	241	158.0608	1	International
29	241	158.0608	1	International
30	241	158.0608	1	International
31	244	158.0608	1	International
32	244	158.0608	1	International

Creating a PivotTable

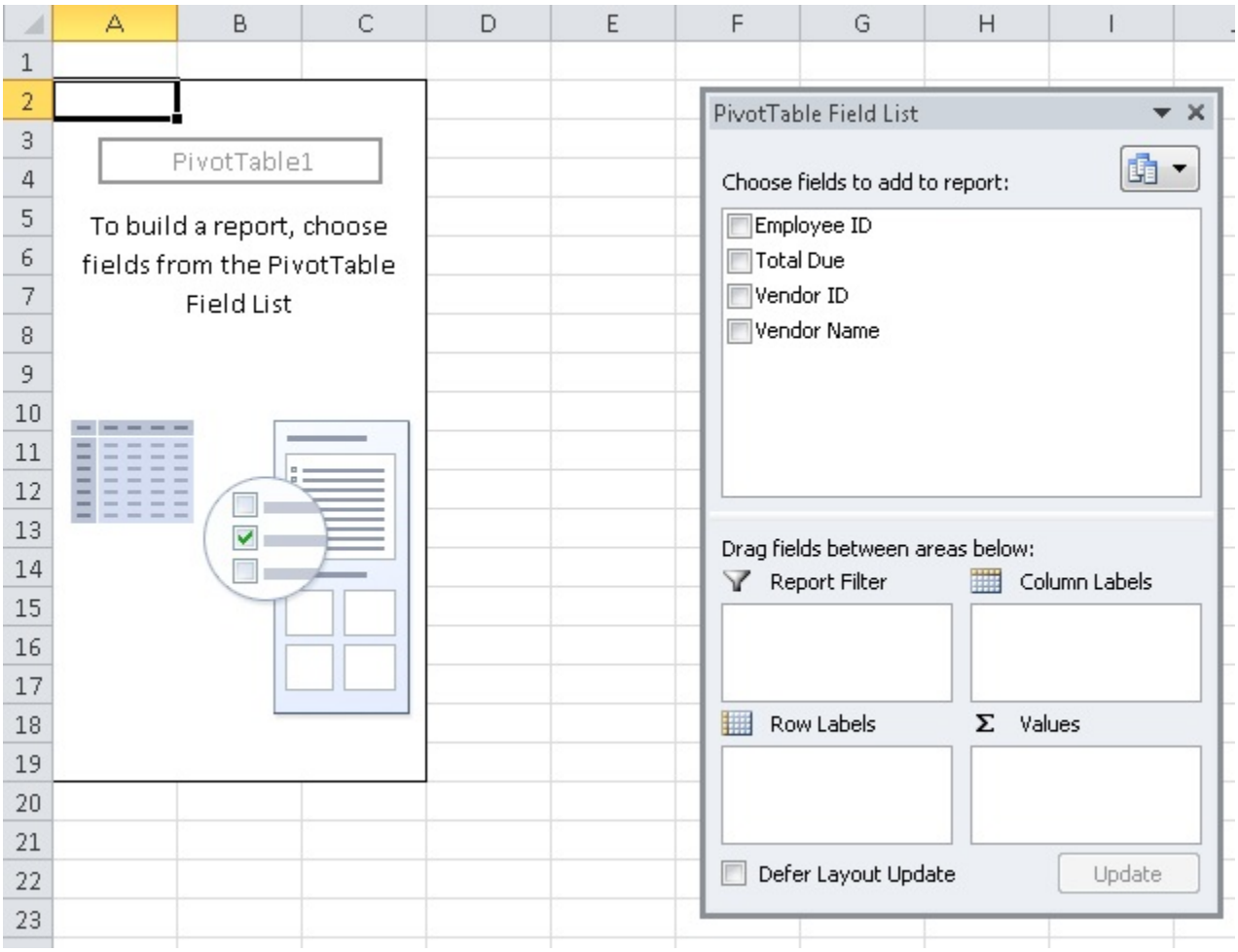
1. On a sheet, different than the sheet with the data markers, select the cell where you would like to insert the pivot table.
2. Go to **Insert** > **PivotTable** on the Excel ribbon



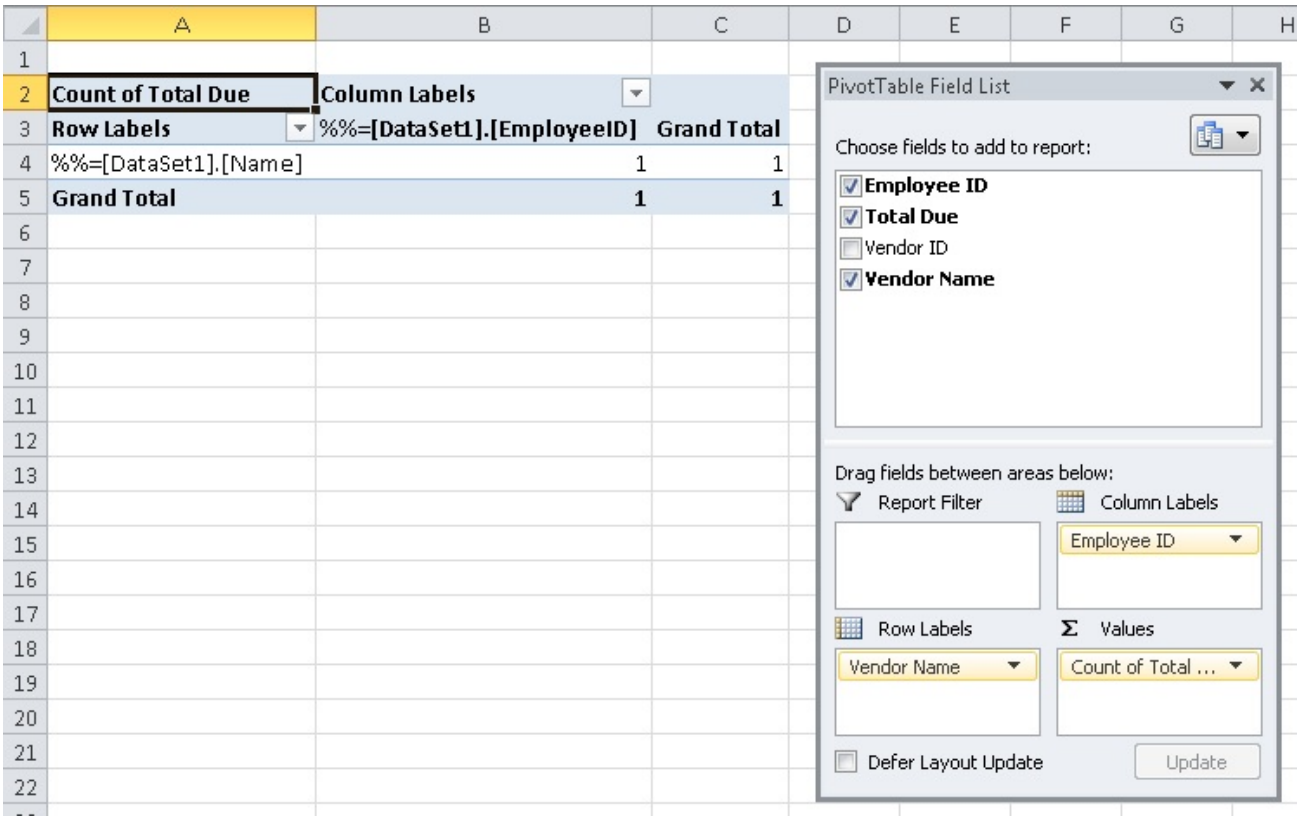
3. When prompted to select data, navigate to the sheet with the data markers. Select the header row and the data marker row. Click **OK** wh en finished.



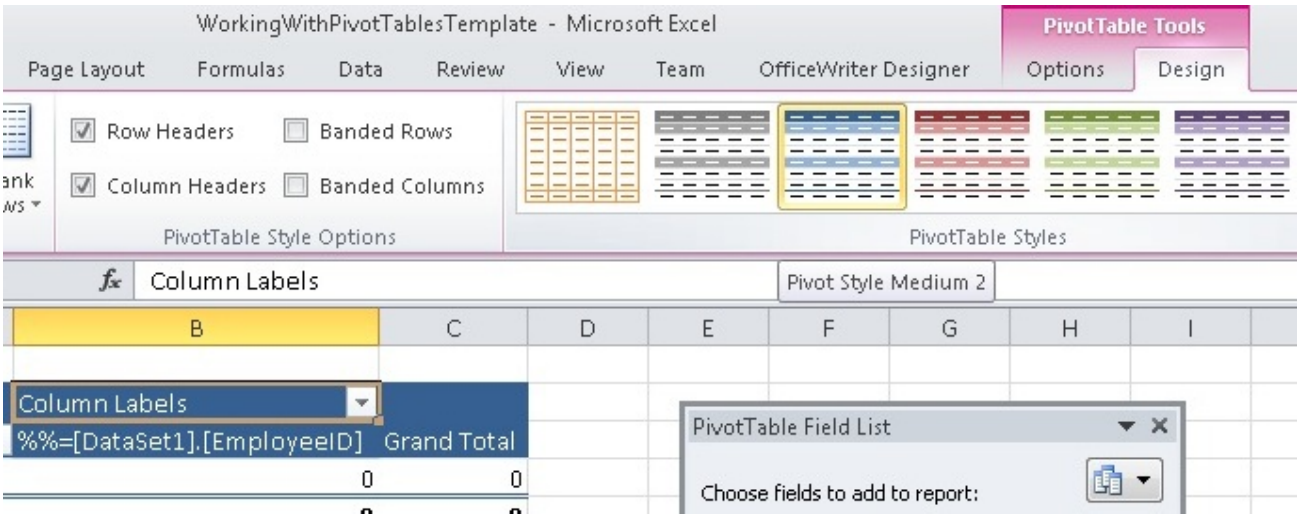
4. This will insert a blank PivotTable into the second worksheet.



5. Drag **VendorName** into the **Row Labels** section and **EmployeeID** into the **Column Labels** section. Drag **TotalDue** into the **Values** section.



6. In the Excel ribbon, go to **Design** and select a style to apply to the PivotTable.

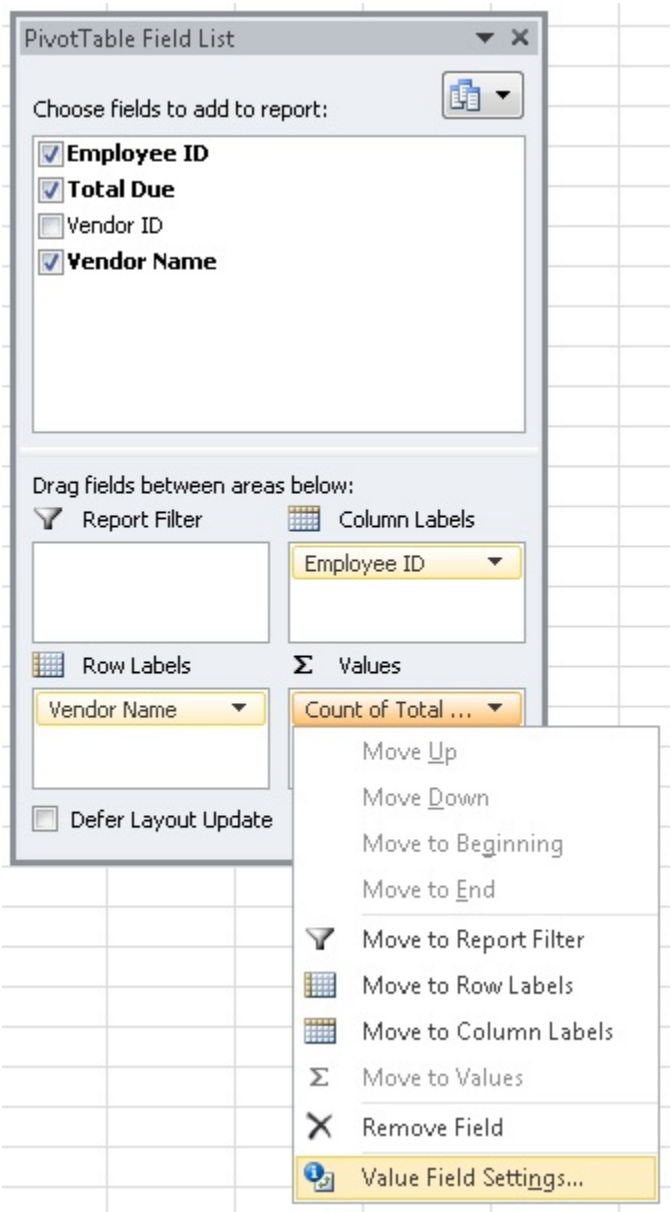


You've added a PivotTable to your report, but there are a few settings that need to be changed before we're done.

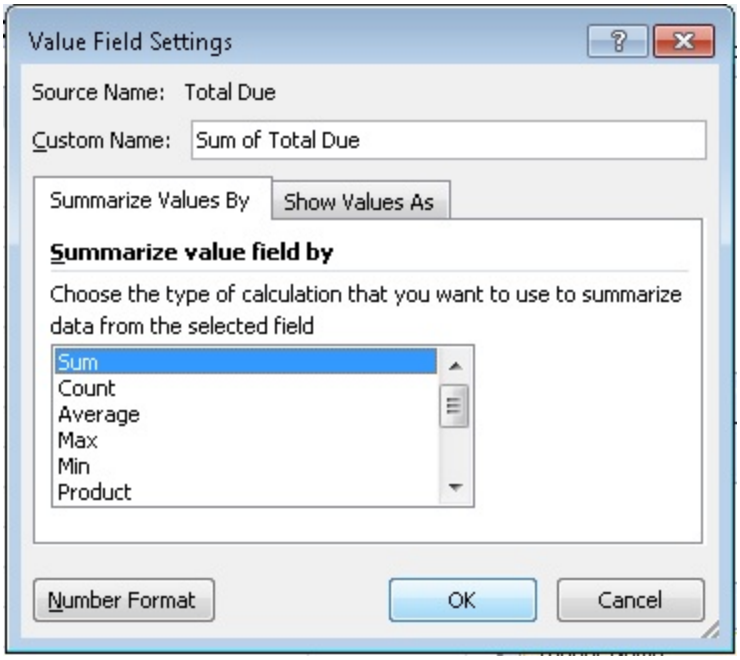
Field Settings and PivotTable Options

Field Settings

1. You will note that the formula used to aggregate the **TotalDue** field is currently set to **Count**. This is because the only data in the data source is a data marker, which is a string. Right click the **TotalDue** field and select **Value Field Settings**.

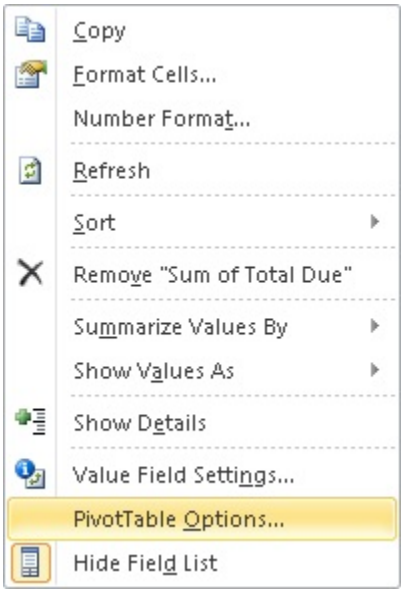


2. Switch the summarize formula to be **Sum** instead of **Count**. Click **OK** when finished.



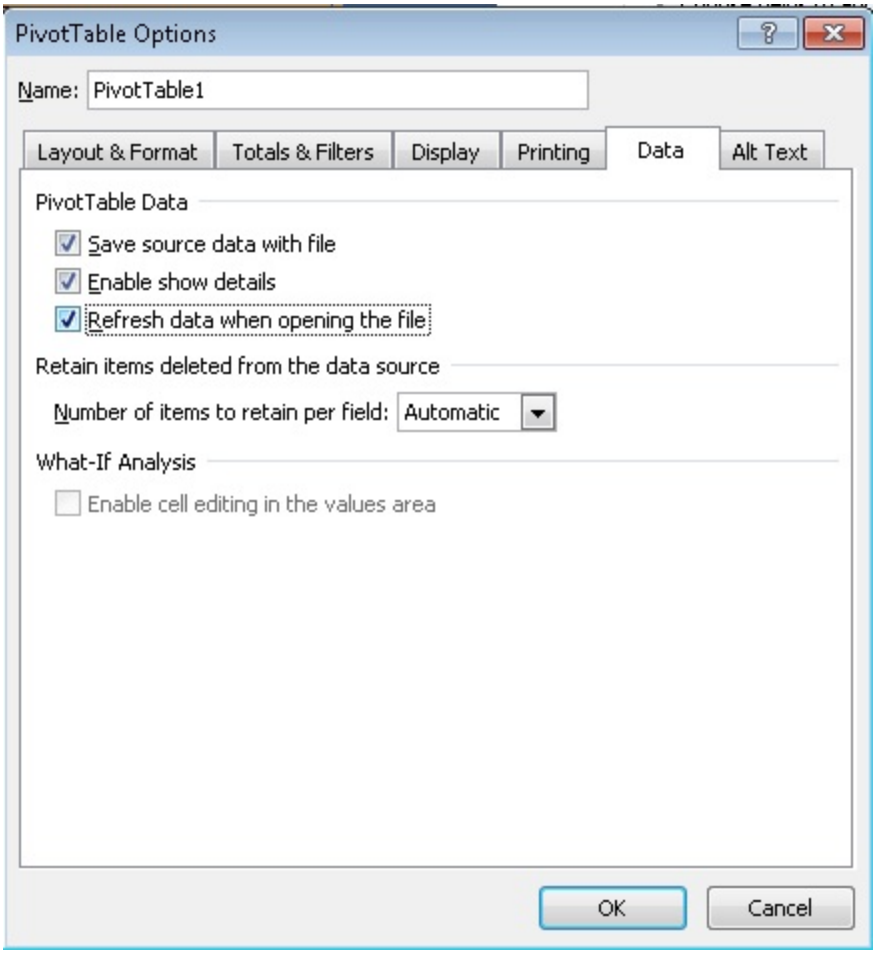
PivotTable Options

1. Right click on the PivotTable go select **PivotTable Options**



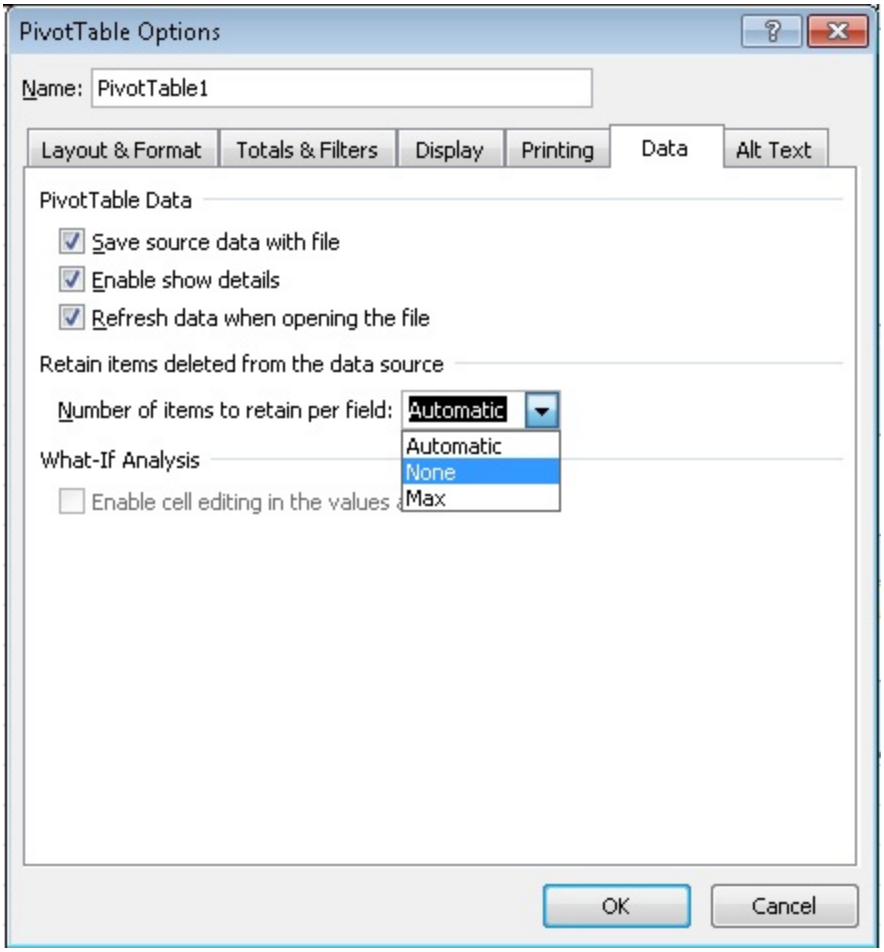
2. Go to the **Data** tab.
3. To make sure that the new imported data is pulled into the PivotTable when you open the rendered report, you have to set the PivotTable to **Refresh data when opening the file**.

   If you don't do this, your PivotTable will look exactly the same as it does in the template until the PivotTable is refreshed.



4. Under the **Retain items deleted from the data source** you will see a **Number of items to retain per field** drop-down. Select **None** fro m the dropdown.

   If you don't, the data markers that are currently in your data source will be carried over to the output file. The data markers will appear in the PivotTable label filters.



5. Click **OK** when finished.

You are now done setting up the PivotTable in your report template.

Viewing the PivotTable

Deploy, and View your report.

> ⚠ When using the OfficeWriter Designer **View** functionality, you may be prompted to re-deploy your report even if you have not made changes since the report was last deployed or retrieved. This is because when the report is opened or deployed, Excel considers this a *workbook open* event, so the PivotTable refreshes.
>
> Although there are no visible changes to the report, Excel treats the refreshed PivotTable as a change to the file. Any time Excel detects changes to the file, it will prompt you to redeploy the report before viewing in the Designer.

Notice that on the first sheet, your data columns display the correct data.

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	A	B	C	D
1	Employee ID	Total Due	Vendor ID	Vendor Name
2	164	158.0608	1	International
3	164	158.0608	1	International
4	164	158.0608	1	International
5	164	158.0608	1	International
6	198	158.0608	1	International
7	198	158.0608	1	International
8	198	158.0608	1	International
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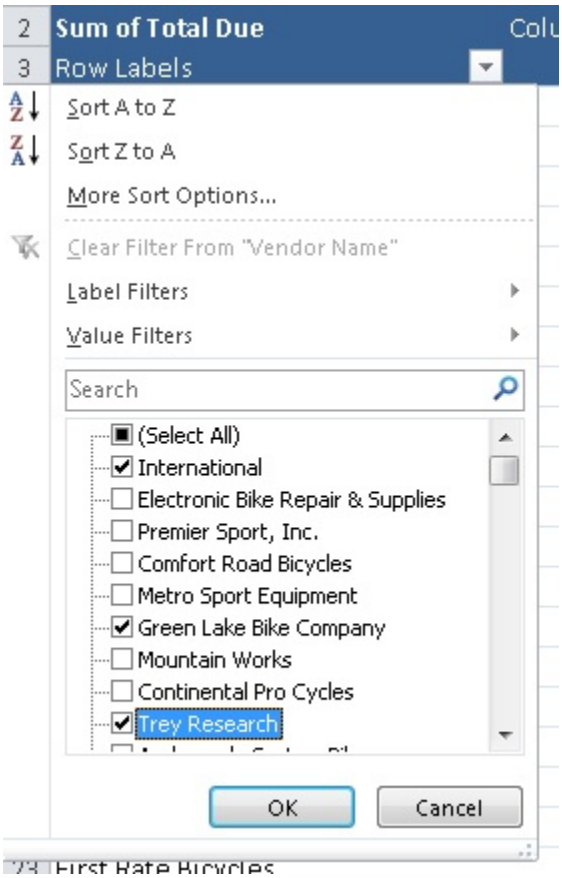
12	223	158.0608	1	International
13	223	158.0608	1	International
14	231	158.0608	1	International
15	231	158.0608	1	International
16	231	158.0608	1	International
17	231	158.0608	1	International
18	233	158.0608	1	International
19	233	158.0608	1	International
20	233	158.0608	1	International
21	233	158.0608	1	International
22	238	158.0608	1	International
23	238	158.0608	1	International
24	238	158.0608	1	International
25	238	158.0608	1	International
26	241	158.0608	1	International
27	241	158.0608	1	International
28	241	158.0608	1	International
29	241	158.0608	1	International
30	241	158.0608	1	International
31	244	158.0608	1	International
32	244	158.0608	1	International

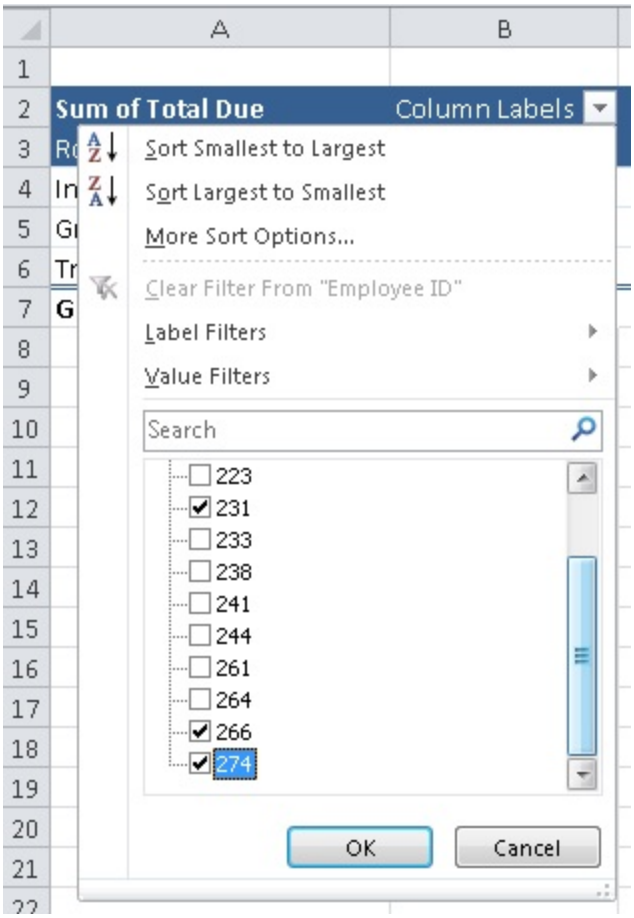
Now look at the sheet containing your PivotTable. You should find the EmployeeID numbers across the top and all the vendor names along the left column. Each cell will contain the sum for each vendor/employee combination.

	A	B	C	K	L	M	N
1							
2	**Sum of Total Due**	Column Labels					
3	Row Labels	164	1	264	266	274	Grand Total
4	International	632.2432	474.18				
5	Electronic Bike Repair & Supplies	212295.5836	21256.36	790.304	948.3648	316.1216	8061.1008
6	Premier Sport, Inc.	95286.6916	71465.01	0344.0391	244113.1194	84891.4317	2154773.372
7	Comfort Road Bicycles	124079.4556	62039.72	9108.3645	119108.3645	47643.3458	1191083.645
8	Metro Sport Equipment	632.4525	126.45	5099.3195	155099.3195	62039.7278	1582013.059
9	Green Lake Bike Company			505.962	632.4525	252.981	6324.525
10	Mountain Works	7326.6307	1064.20		16406.5		76348.25
11	Continental Pro Cycles	3268.0067	907.11	1237.8591	2660.6854	696.5677	39754.4465
12	Trey Research	57460.2212	10828.61	1173.6046	1800.3136	1064.483	22960.0724
13	Anderson's Custom Bikes	64656.0916	32328.04	5965.7598	66283.2261	18056.0426	577793.3632
14	Compete, Inc.	37458.6713	16846	0820.1145	80820.1145	32328.0458	824365.1679
15	Beaumont Bikes	9623.856	1984.61	5163.6376	46775.4788	13081.8188	350018.4197
16	SUPERSALES INC.	2320.5	1740.3	1496.2	7938.4768	3669.9984	79384.768
17	Compete Enterprises, Inc	164920.2556	123690.19	2900.625	2900.625	1160.25	29006.25
18	G & K Bicycle Corp.			199794.47	206150.3195	80341.5113	1731662.684
19	Jeff's Sporting Goods		11	5036.1465			5036.1465
20	Business Equipment Center	833.1175	333.2	41536			42658
21	Victory Bikes	228019.2916	15455.69	833.1175	833.1175	166.6235	8497.7985
22	Norstan Bike Hut	3981.2472	1406.77	0354.1042	277296.2694	60763.4528	2052173.624
23	First Rate Bicycles	281003.848	56200.76	1775.4611	2402.1701	301.0501	31824.1501

Click on the down arrow next to the **Vendor Name** label. Clear **Show All** and just select a few vendors.



Do the same for the **EmployeeID** field.



Now look at your results.

Sum of Total Due	Column Labels			
Row Labels	231	266	274	Grand Total
International	632.2432	948.3648	316.1216	1896.7296
Green Lake Bike Company	59941.75	16406.5		76348.25
Trey Research	28909.7172	66283.2261	18056.0426	113248.9859
Grand Total	**89483.7104**	**83638.0909**	**18372.1642**	**191493.9655**

Viewing the Report in Reporting Services Report Manager

In your browser, type the path to the Report Manager (Usually http://<YourReportServer>/Reports). Navigate to the report and view it.

To see the report as you designed it with OfficeWriter:

1. From the export option drop-down list, choose **Excel designed by Officewriter**.
2. You will be prompted to save or open the output file. If your report contains a PivotTable AND you are using Internet Explorer 8 or earlier, you **MUST** select **Save**. After it saves to disk, then you may select **Open** to view it.

This is because of an issue with how Internet Explorer caches temporary internet files. If you are using any other browser or Internet Explorer 9 or later, this issue does not occur and you can open the file directly.