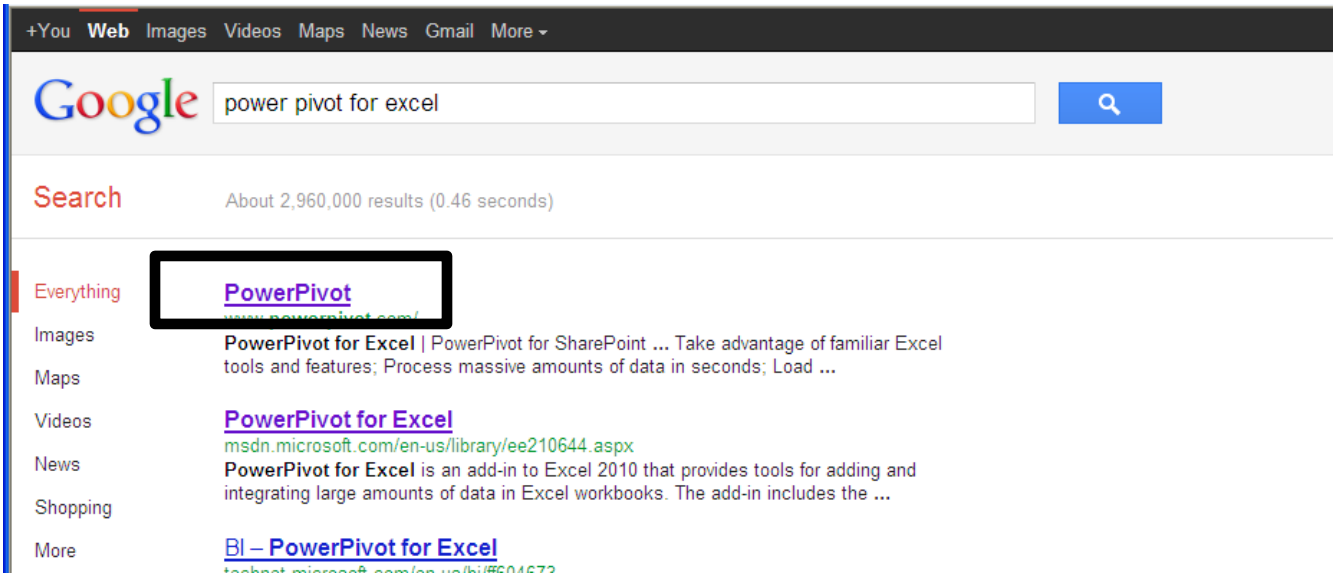
POWER PIVOT 1

This session is for users who have Excel 2010. Power Pivot is not available in previous versions of Excel.

The POWER PIVOT tool in Excel offers a new and different method of querying data from the Foundation Database. It allows the creation of Pivot Tables by joining tables with similar fields in the query tool, and allows the user to create Pivot Tables using these joined tables. Is it an essential upgrade, no, but it does offer some unique and interesting tools.

Installing POWER PIVOT in Excel. POWER PIVOT is not resident in Excel 2010 "out of the box". It is an additional download available from Microsoft's web site.

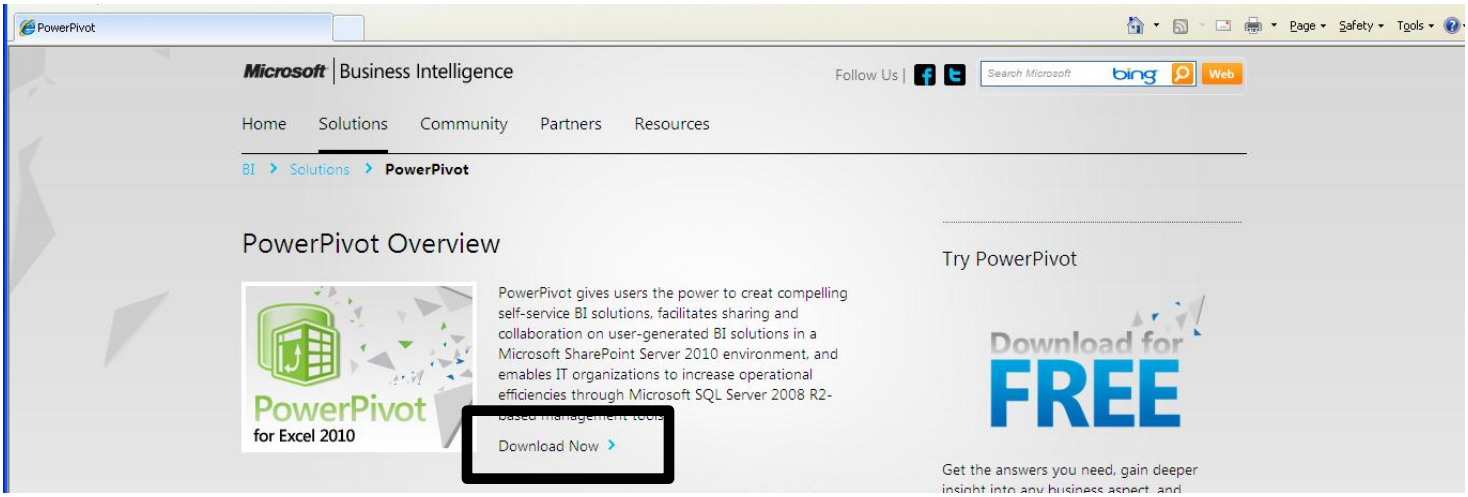
If you Google search "Power Pivot for Excel", click on the following link.



This will take to the Power Pivot home page:

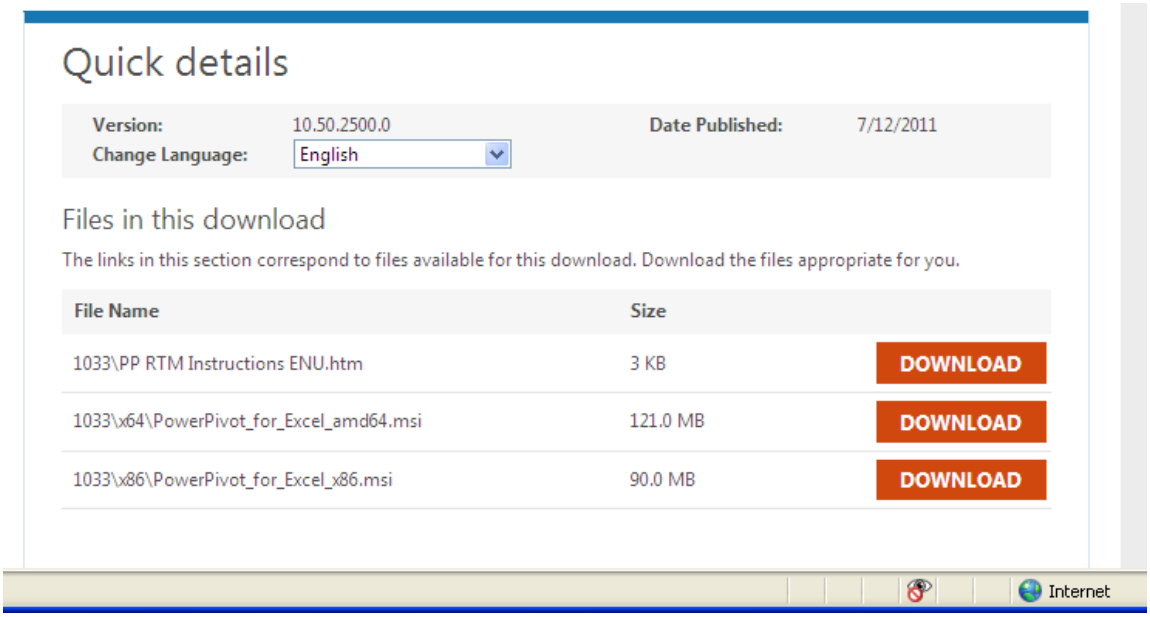
(you may also copy the following link into your browser:)

http://www.microsoft.com/bi/en-us/solutions/pages/powerpivot.aspx



There are a good number of Videos at the bottom of the screen that help with installation and use of the power pivot tool pack.

When you click Download Now – you will have a couple of choices – 64 bit machine or x86. Please download the appropriate version based on your hardware.



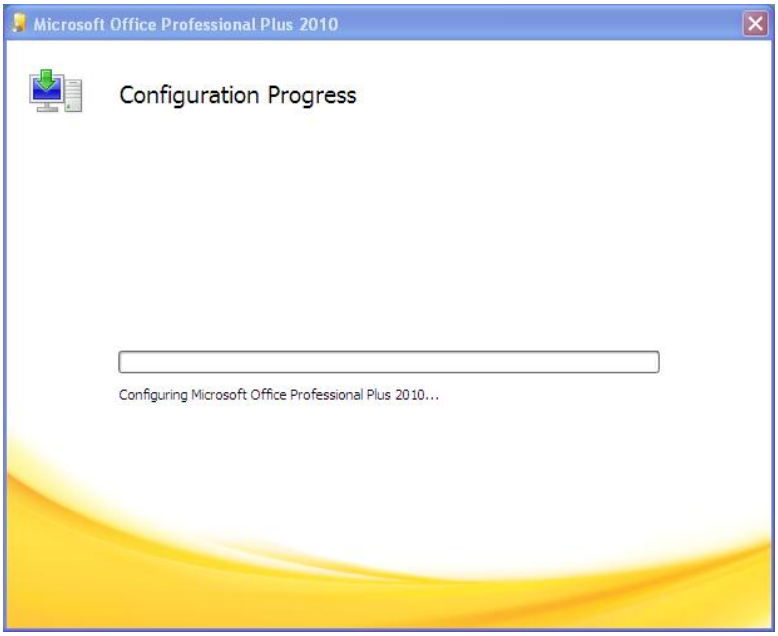
Once you have downloaded the power pivot executable, you will need to run the package and install it in Excel.

1) Download either the x86 (32-bit) or the x64 (64-bit) version of PowerPivot_for_Excel.msi installation program:
    a. To install the 32-bit version, click the **Download** button. The 32-bit version is the default. Clicking **Download** selects the default.
    b. To install the 64-bit version, scroll down the page and select the 64-bit installation package.
2) Double-click the .msi file to start the Setup wizard.
3) Click **Next** to get started.
4) Accept the license agreement, and then click **Next**.
5) Enter your name, and then click **Next**.
6) Click **Install**.
7) Click **Finish**.

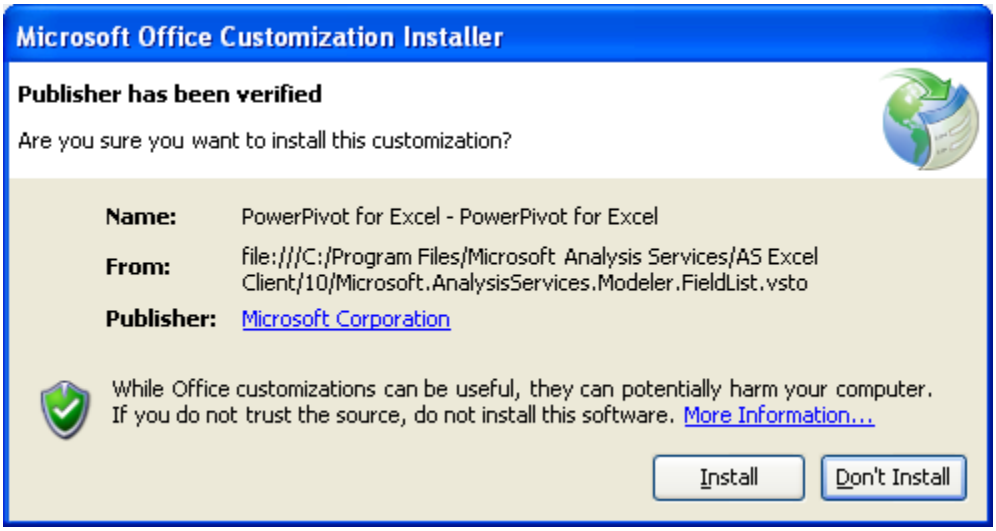
The information above comes from Microsoft's web page at the following address:

http://msdn.microsoft.com/en-us/library/ee210599.aspx

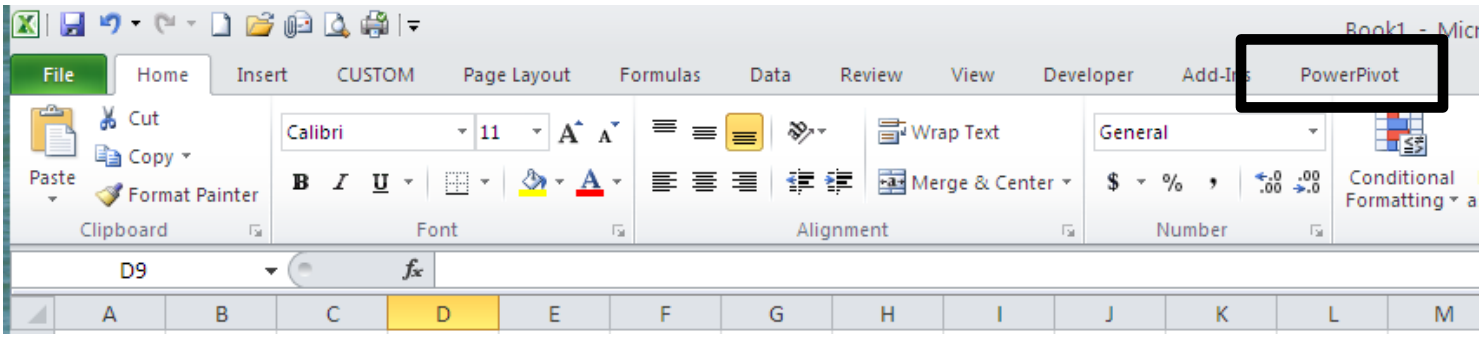
After you have installed the package, when you first open Excel you will be greeted with the following screen. Don't Panic, but it may take a while for this configuration to complete.



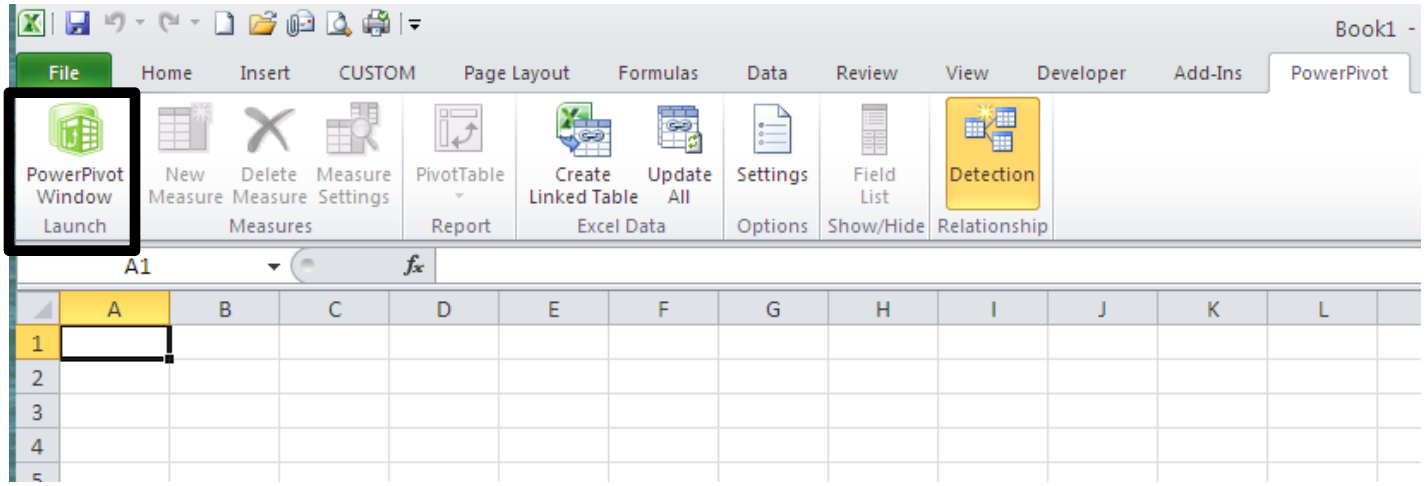
You will then have to verify the install… again



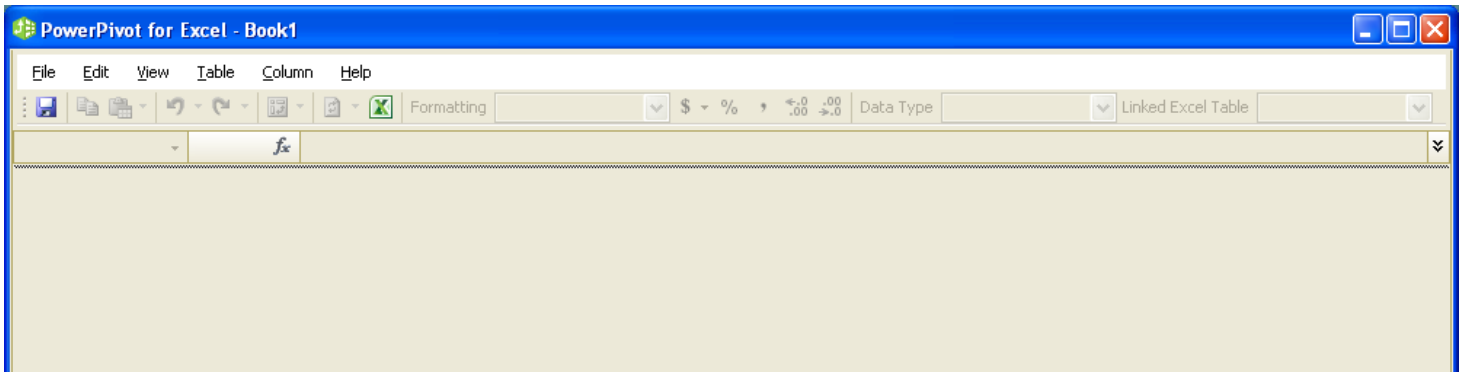
Once you verify the install, you will now have a new tab in Excel.



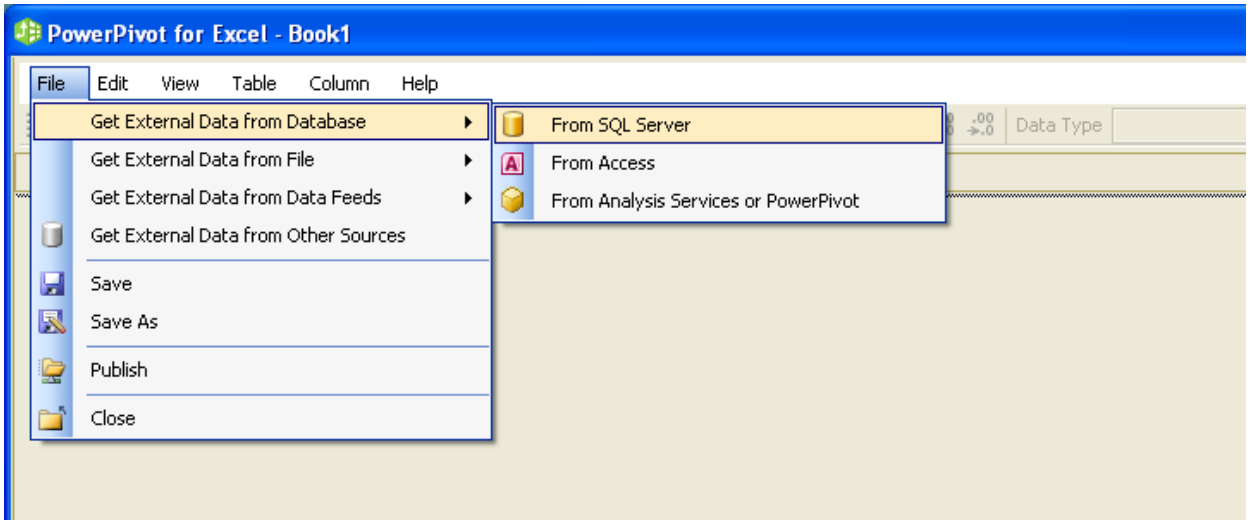
Once on the PowerPivot tab, to begin, select PowerPivot Window / Launch



You will see a new window available.

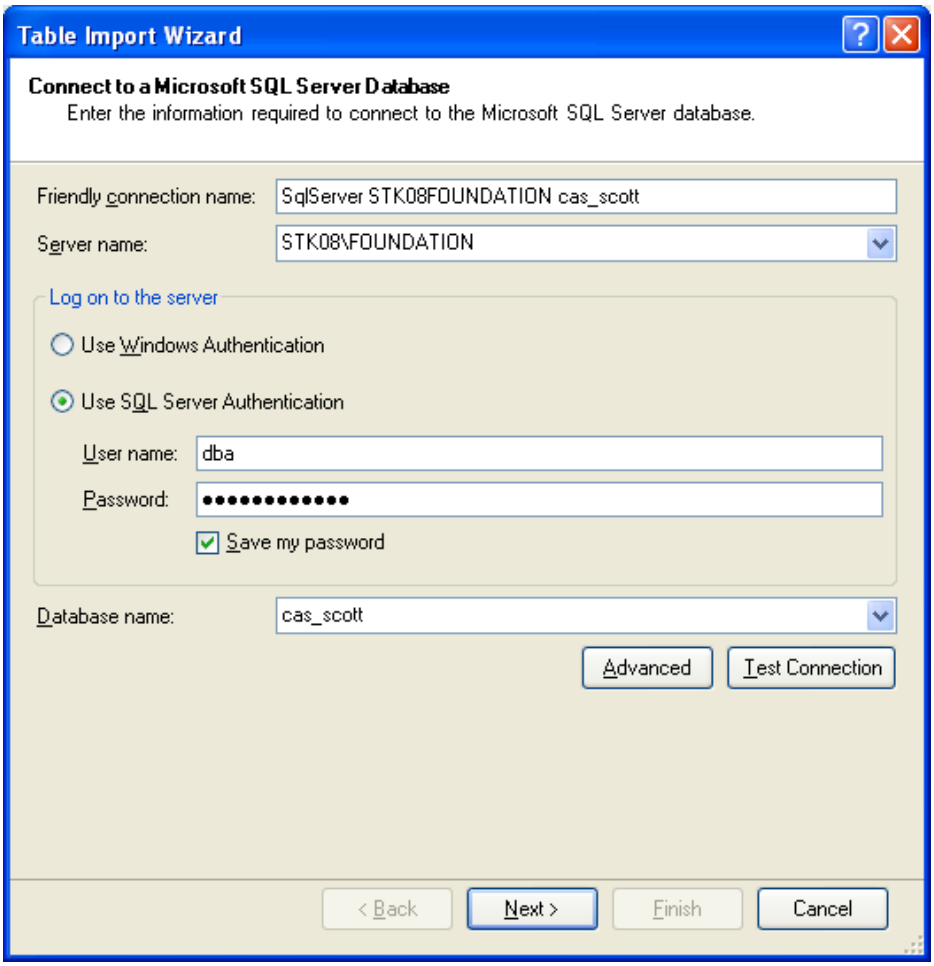


Access FILE – Get External Data from Database – From SQL Server

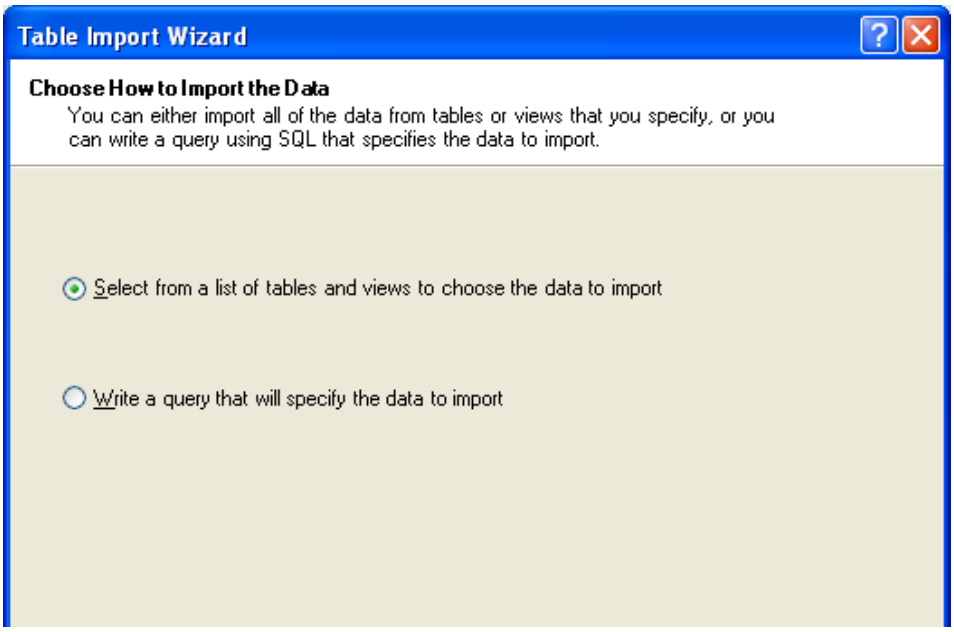


You will be prompted with a TABLE IMPORT WIZARD.

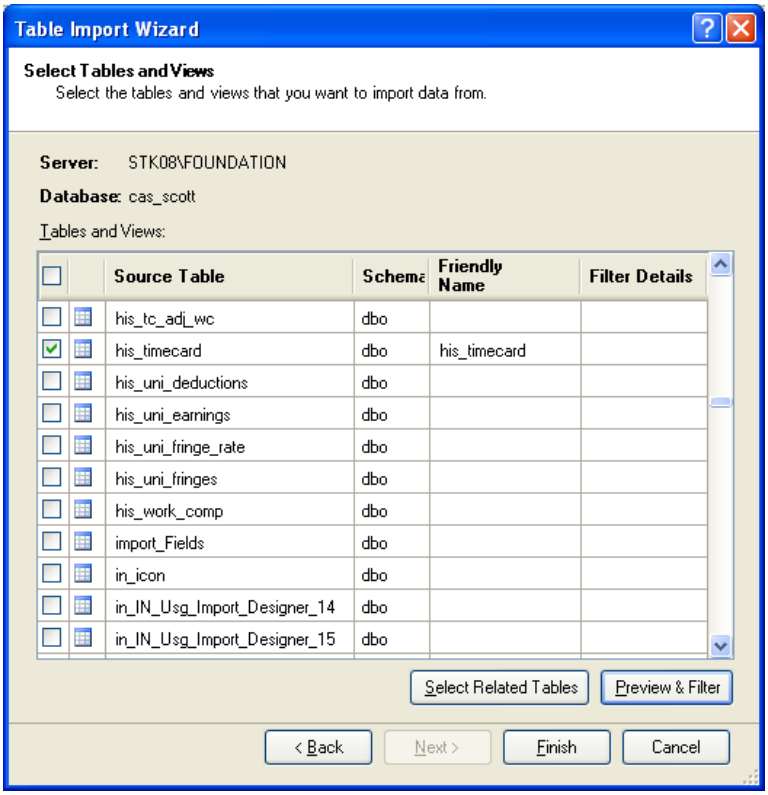
You will be required to define the server that the SQL database resides on, provide the password for the database and select a database name.



Click NEXT and select the option to Select from a list of tables and views to choose the data for import.

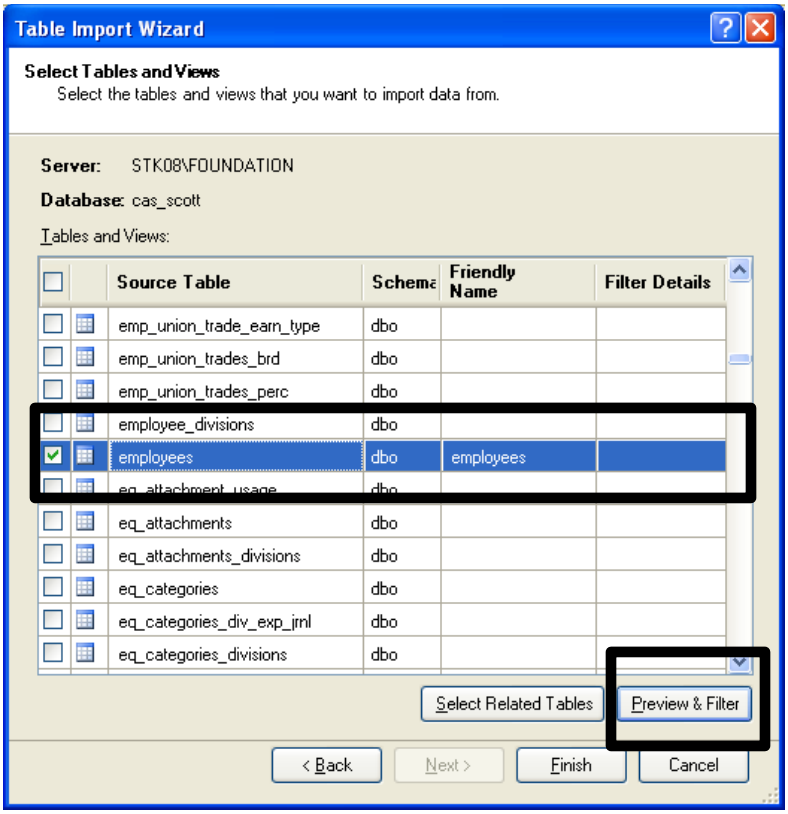


For this exercise, we are going to select the his_timecard, employees and jobs tables.



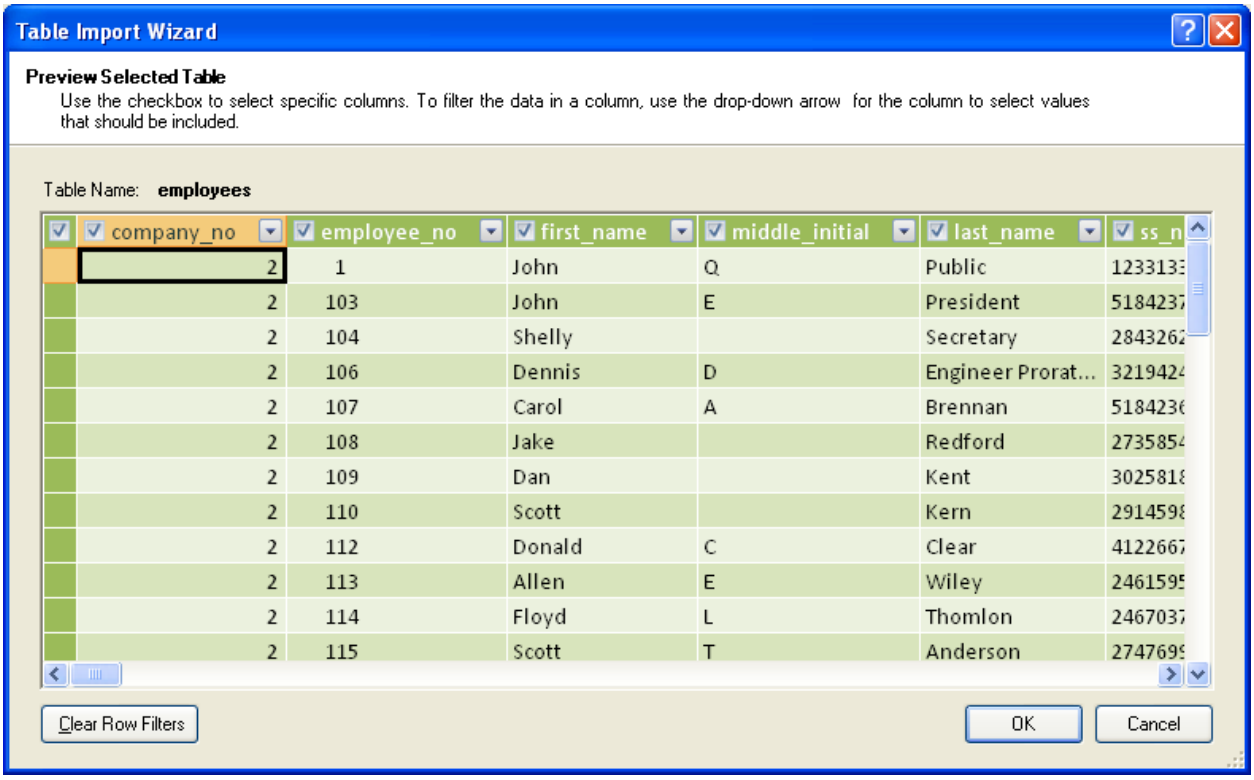
You may filter the items in the query at this point by selecting / deselecting items within the table.

If we only wanted to see hourly employees on this query, we would select the PREVIEW & FILTER option while the cursor resides on the employees table.

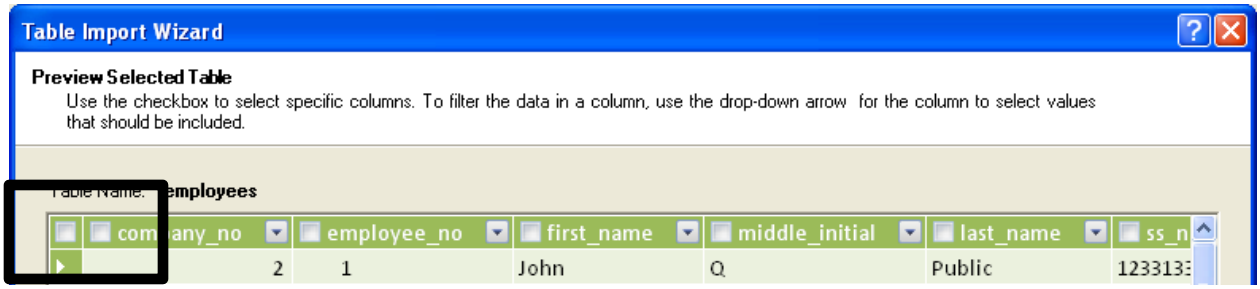


Here, we may select what fields we want to bring into the query, and what fields we want to include or exclude.

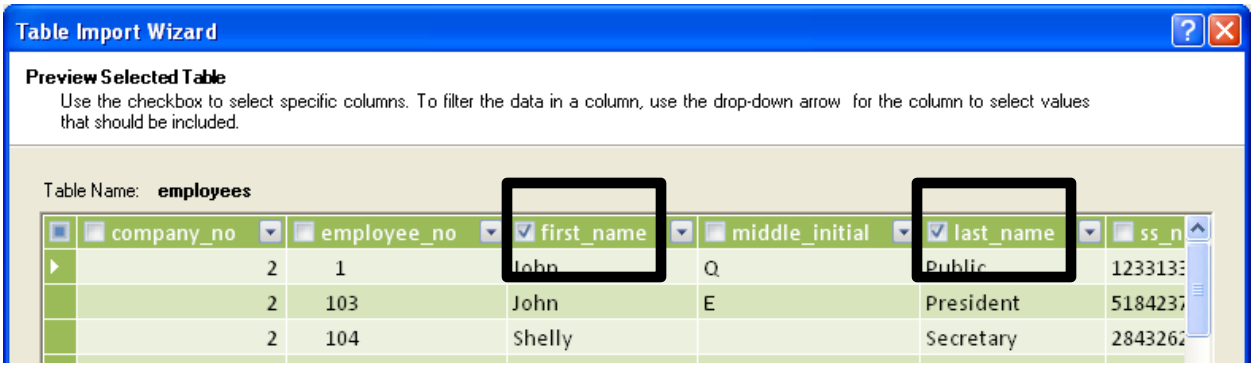
In this example, we are going to include the employee_id, first_name and last_name.



Deselect all fields by clicking the check box in the upper left hand corner.

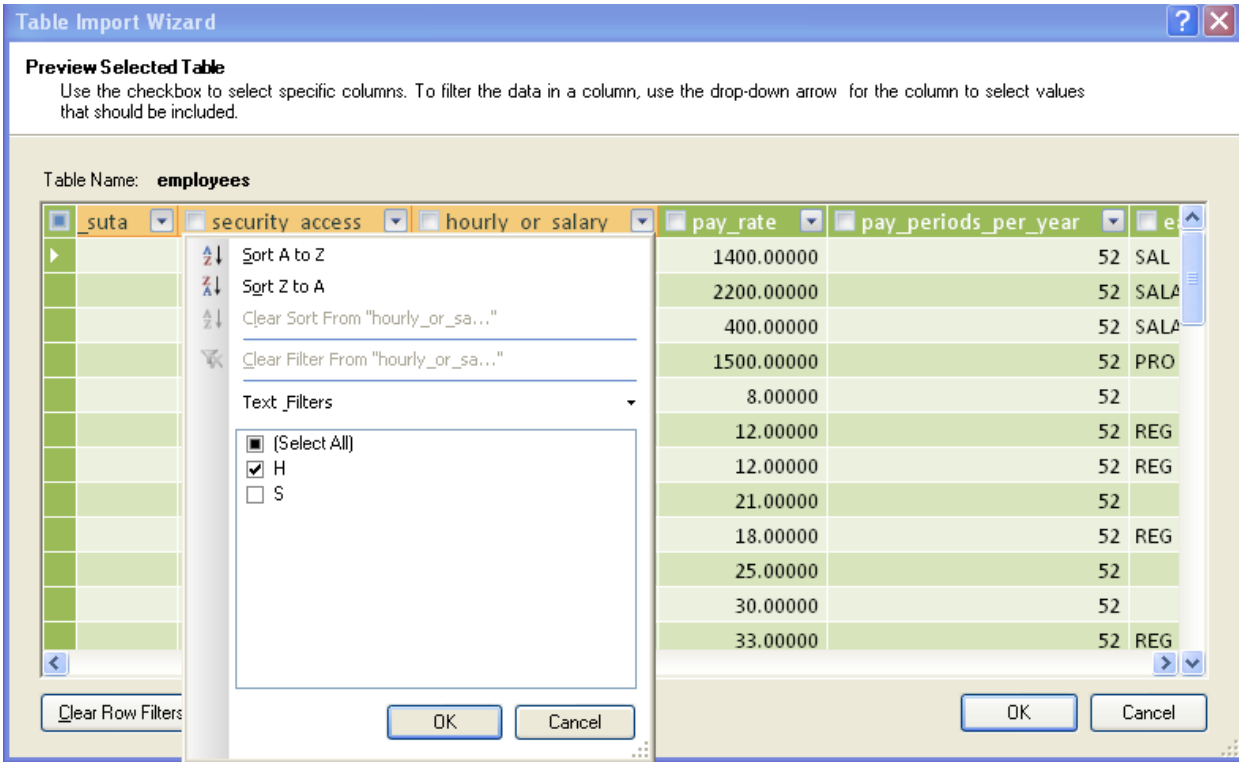


Then select the desired fields.

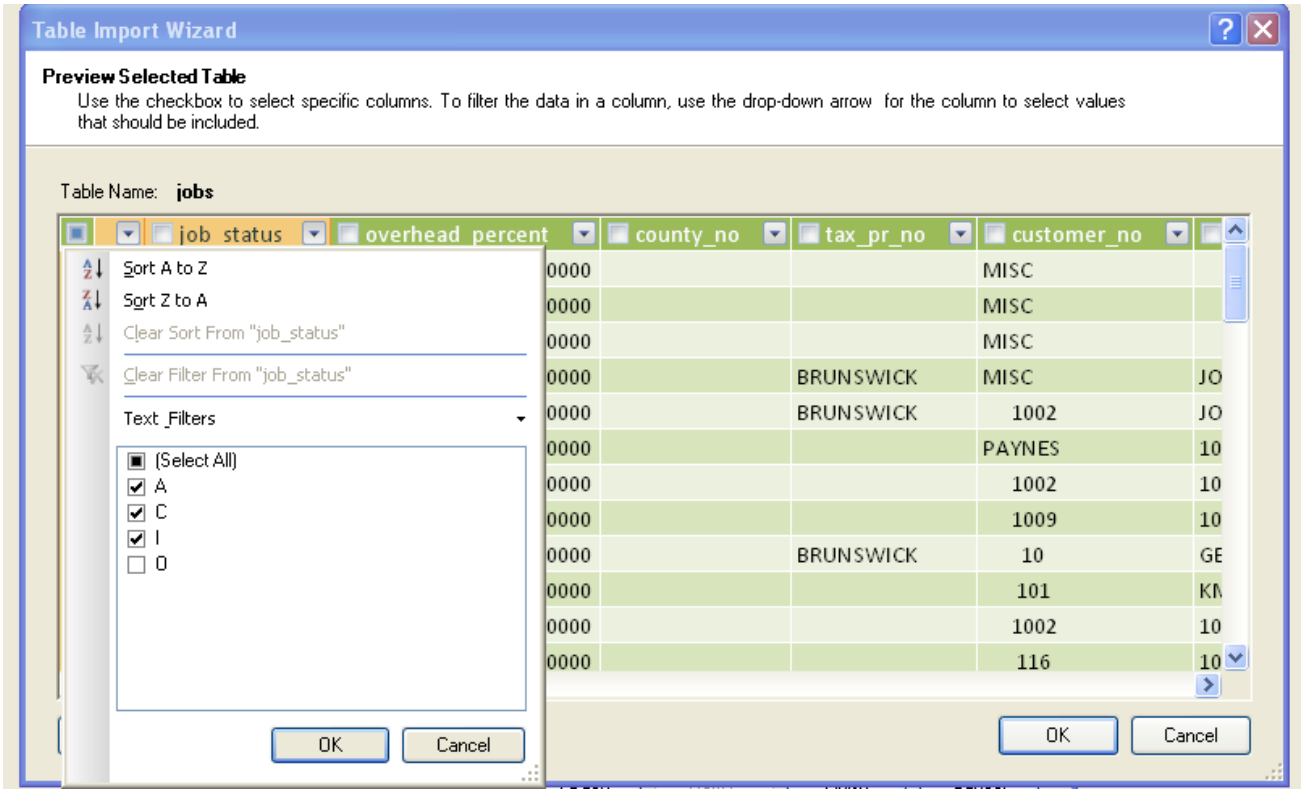


(repeat for the employee_id as well)

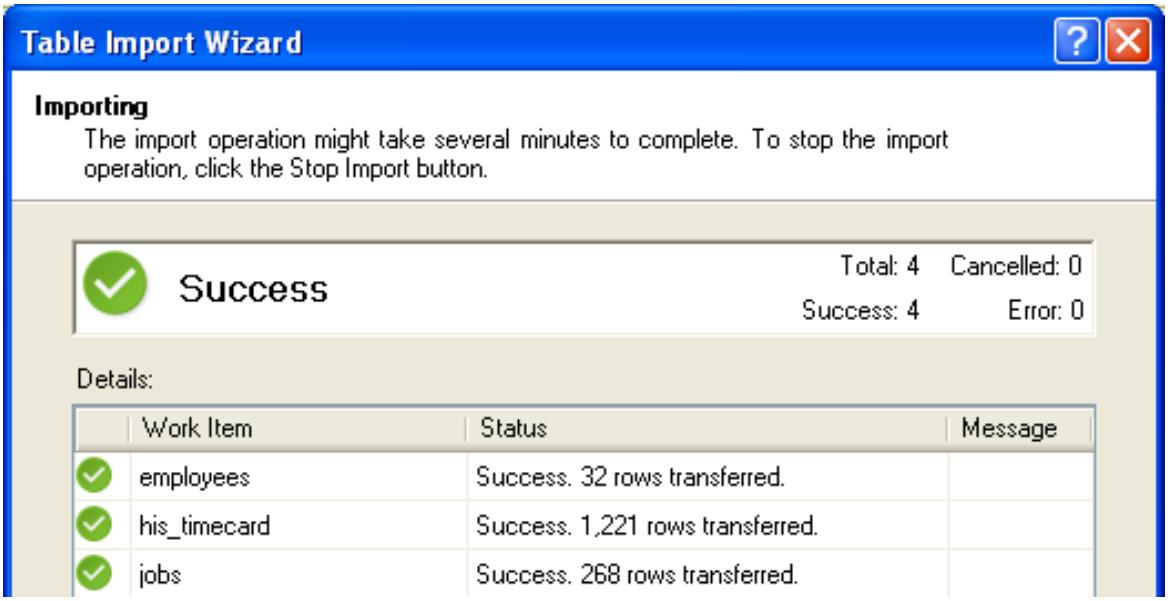
We will then select only the HOURLY employees from the hourly_or_salary field.



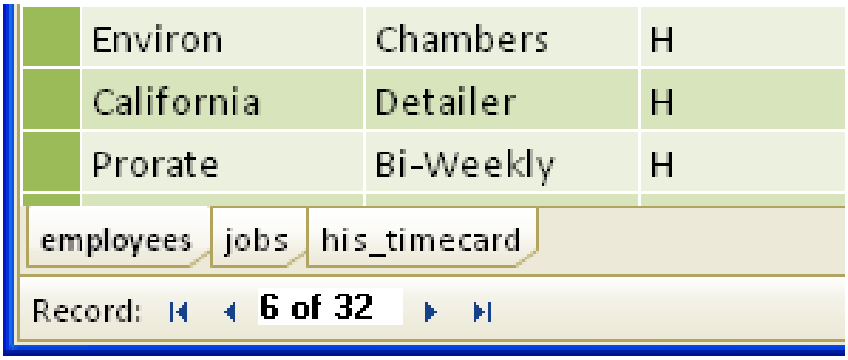
From the JOBS table, we will select the job_id and description, and filter out the overhead job(s)

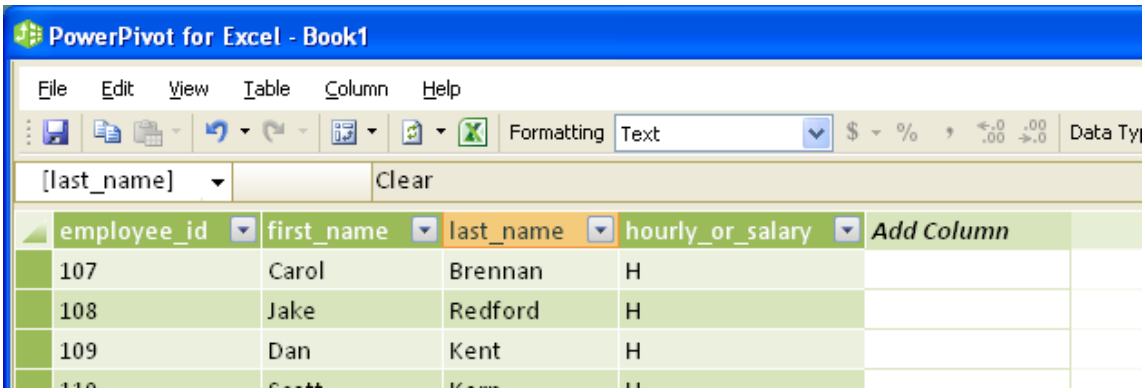


You will see a import status box appear, depending on the size of your database, this may take a while.

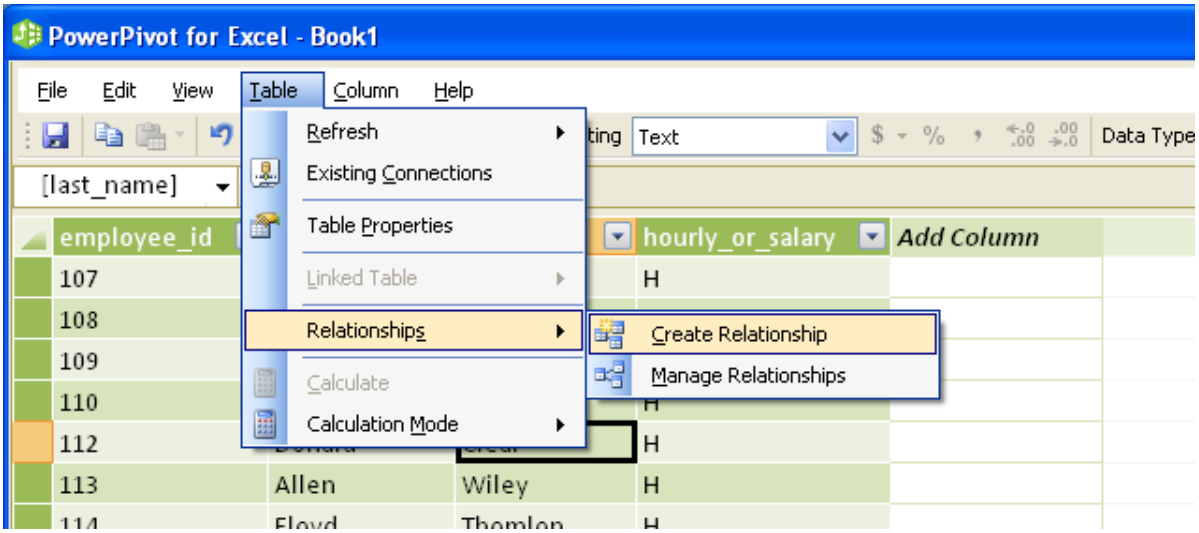


When you close the import wizard, you will be shown multiple tabs at the bottom of the screen that represent the tables of data – jobs / employees / his_timecard)



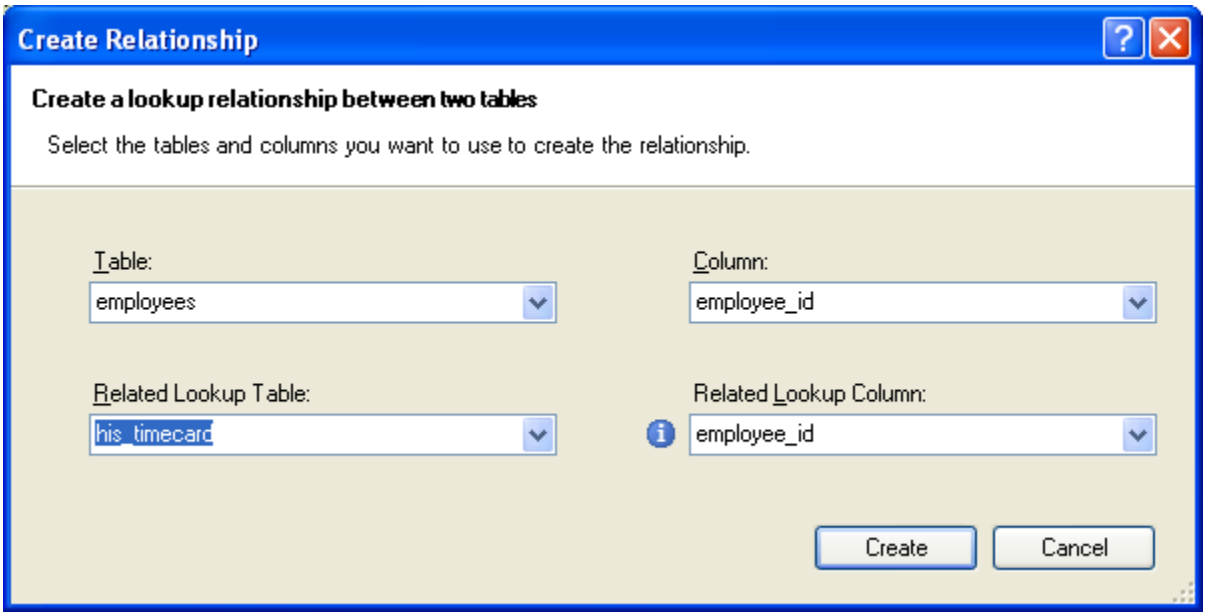


We need to create the relationships between the tables. These are like the table links in the MS query mode. From the main toolbar, select TABLE – RELATIONSHIPS – CREATE RELATIONSHIP



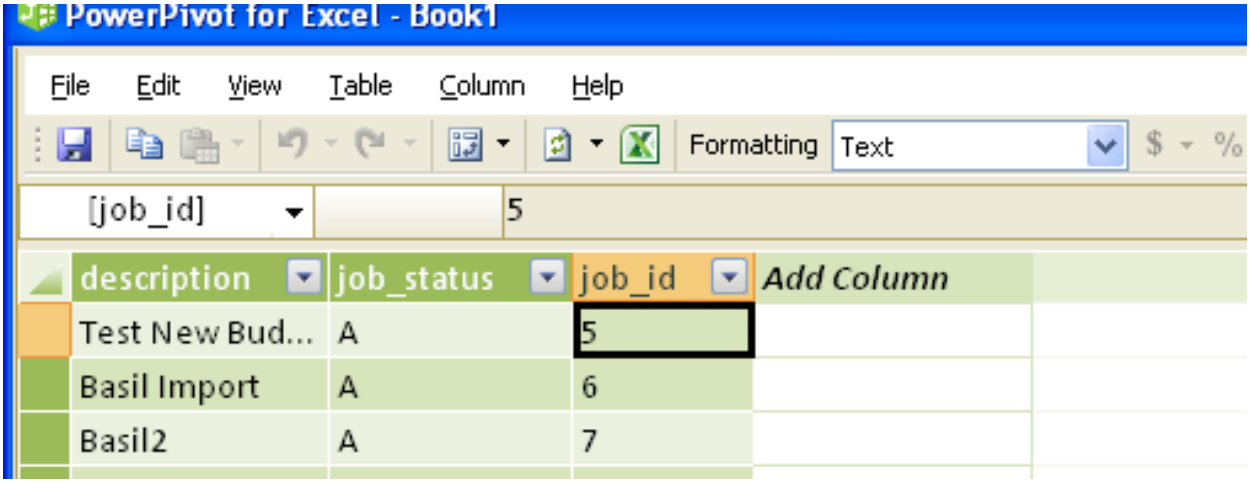
If your cursor is in the correct column (in this case – the employee_id column), the CREATE RELATIONSHIP window will prompt you to choose a relationship between the tables. The default employees table will be linked to the his_timecard table by the … employee_id.

As with the MS query tool, joining tables with dissimilar fields would be a very, very bad idea.



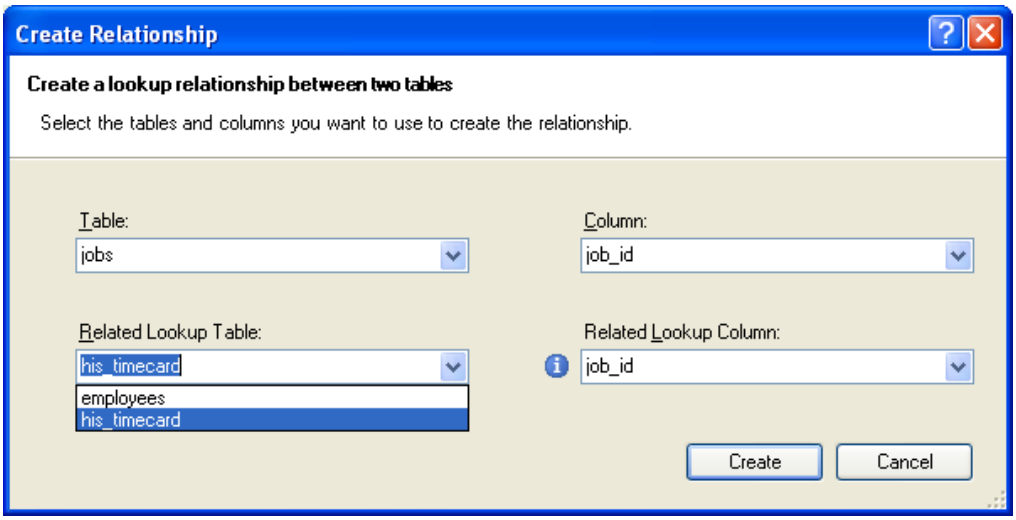
Next, we will link the JOBS table to the his_timecard table.

Select the JOBS tab from the bottom of the screen. Select an item in the job_id column.



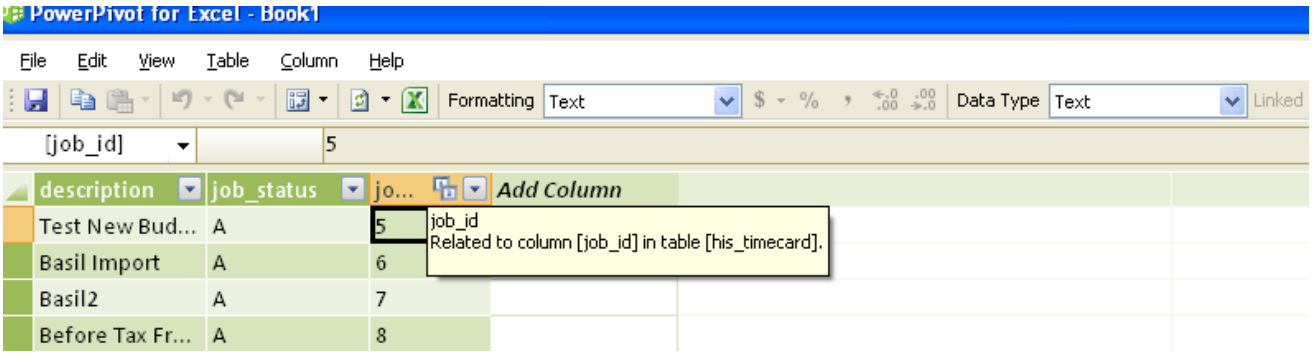
Select TABLE – RELATIONSHIPS – CREATE RELATIONSHIPS

Select the Related Lookup Table as the his_timecard table , and the related lookup column should default to job_id. If it does not, you may select it from the dropdown menu.



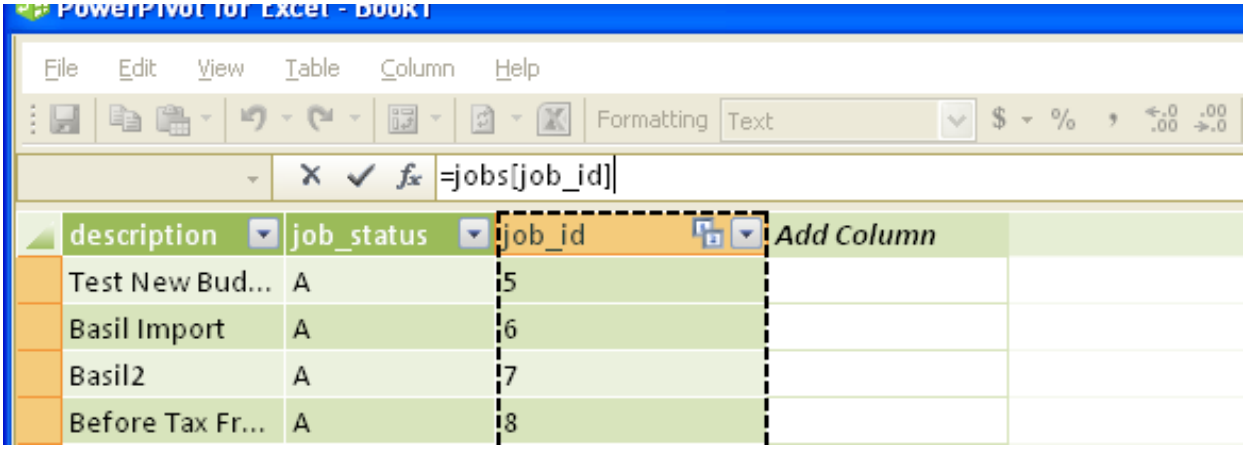
Once the correct selection is in place, click CREATE.

If you hold the cursor over the column heading, you will see some text that displays the Relationships between the two tables.

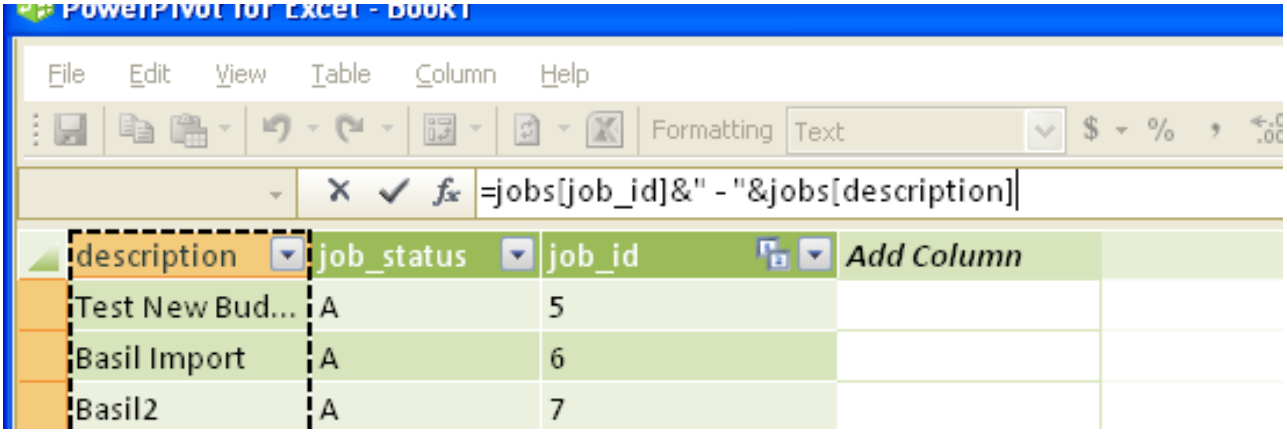


We will write a formula to create some joined field names. ON the JOBS tab, highlight the ADD COLUMN…. Column.

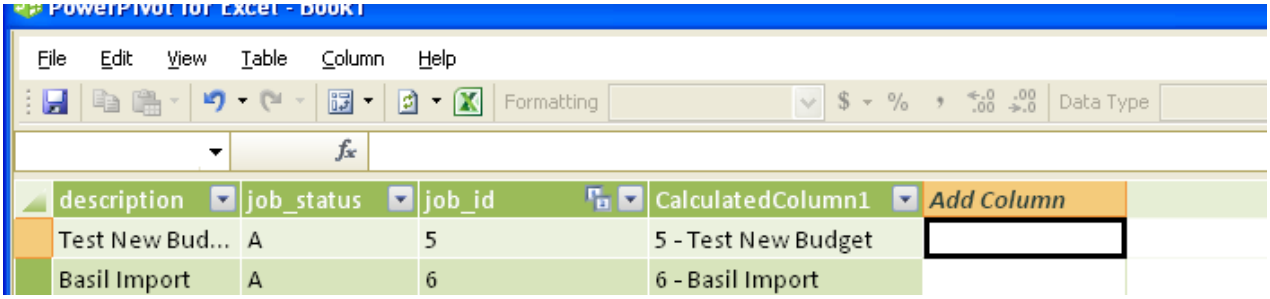
In the Formula toolbar, enter the = sign, and click the column header for job_id.



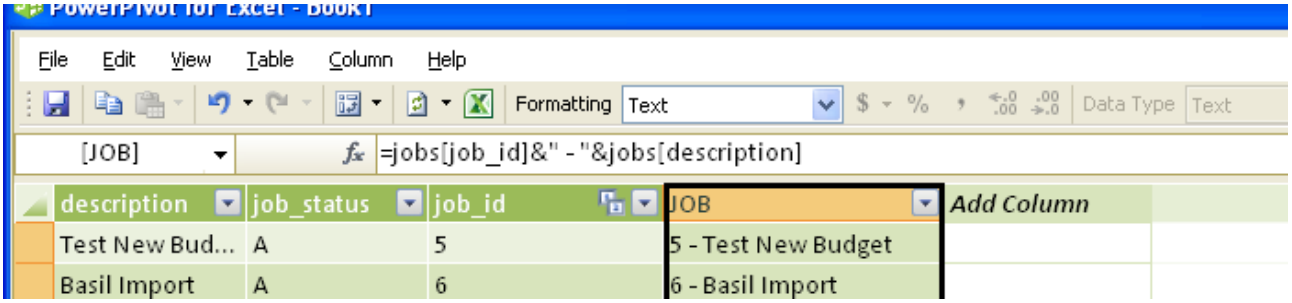
Then enter &" – "& this will separate our fields with a dash. Click the description column.



Click the CHECK MARK next to the Formula editor to verify the equation. We now have a job number and name.



Double Click the Calculated Column1 heading and change the column heading to JOB

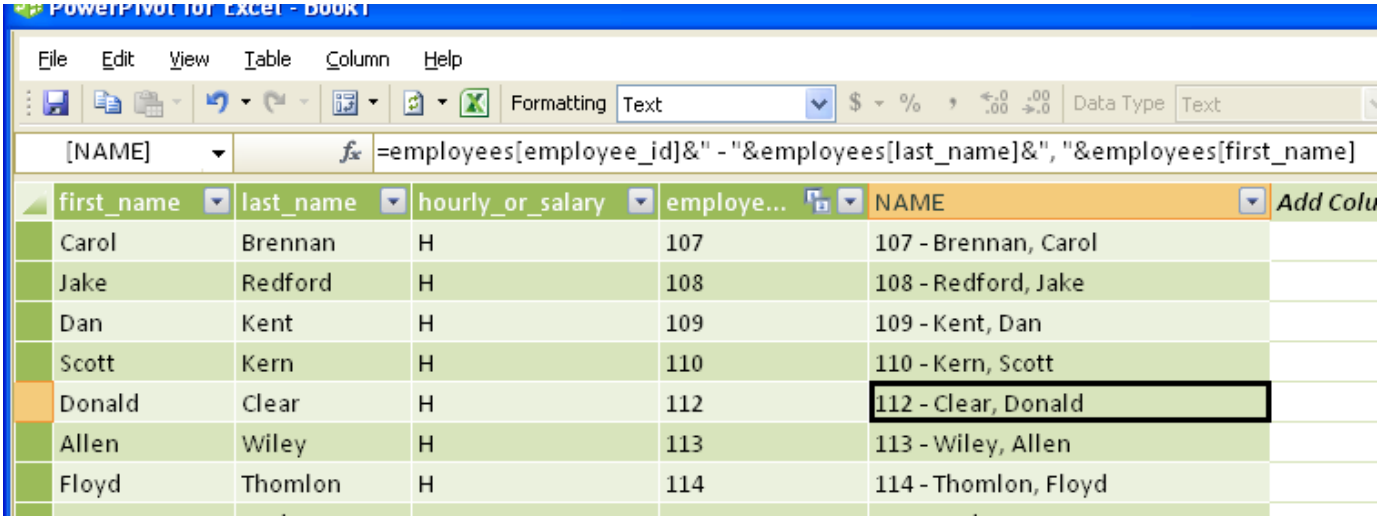


Repeat this process on the EMPLOYEES TABLE to join the employee_id with the employee first_name and last_name.

Here is the formula:

=employees[employee_id]&" - "&employees[last_name]&", "&employees[first_name]

… and the result:

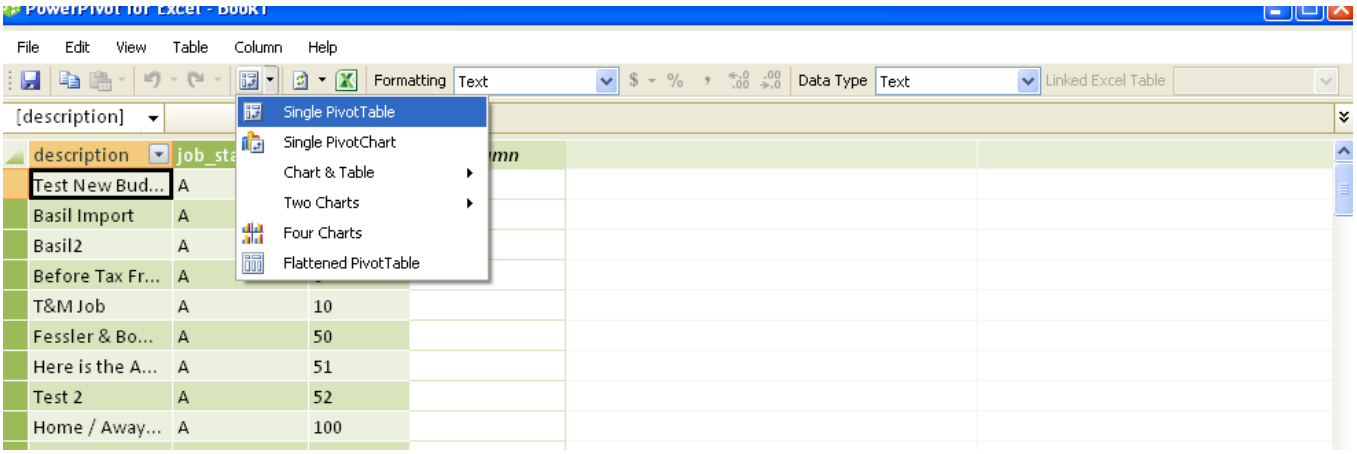


first_name	last_name	hourly_or_salary	employe...	NAME	Add Colu
Carol	Brennan	H	107	107 - Brennan, Carol	
Jake	Redford	H	108	108 - Redford, Jake	
Dan	Kent	H	109	109 - Kent, Dan	
Scott	Kern	H	110	110 - Kern, Scott	
Donald	Clear	H	112	112 - Clear, Donald	
Allen	Wiley	H	113	113 - Wiley, Allen	
Floyd	Thomlon	H	114	114 - Thomlon, Floyd	

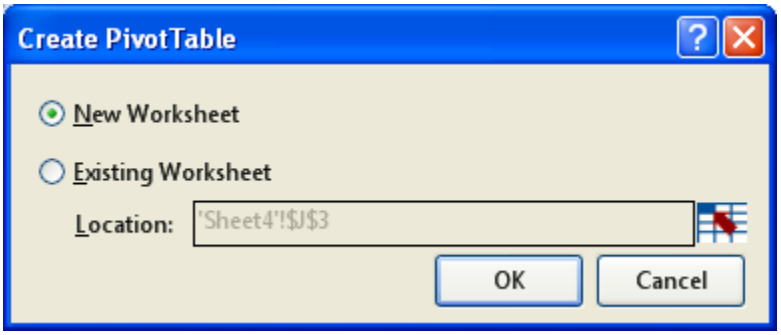
OK – now our relationships are created and our fields are cleaned up…. Now what ?

We are going to take the data and create a PIVOT TABLE from it.

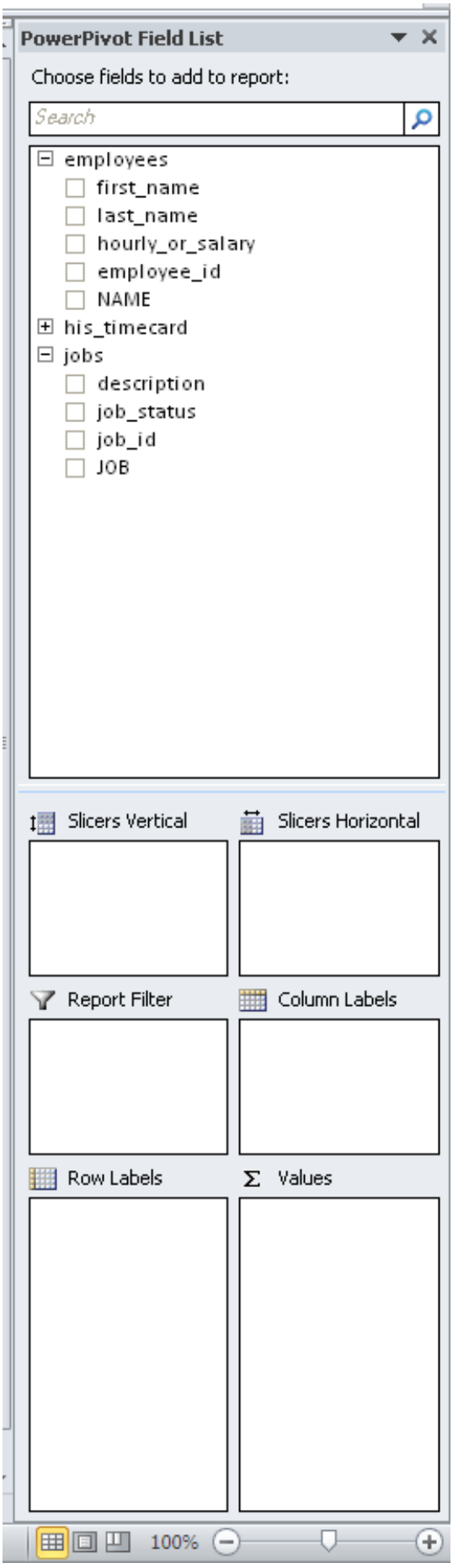
From the top menu, select VIEW – PIVOT TABLE



Return the data to a new worksheet in Excel



We now have some new options for our Pivot Table creation.

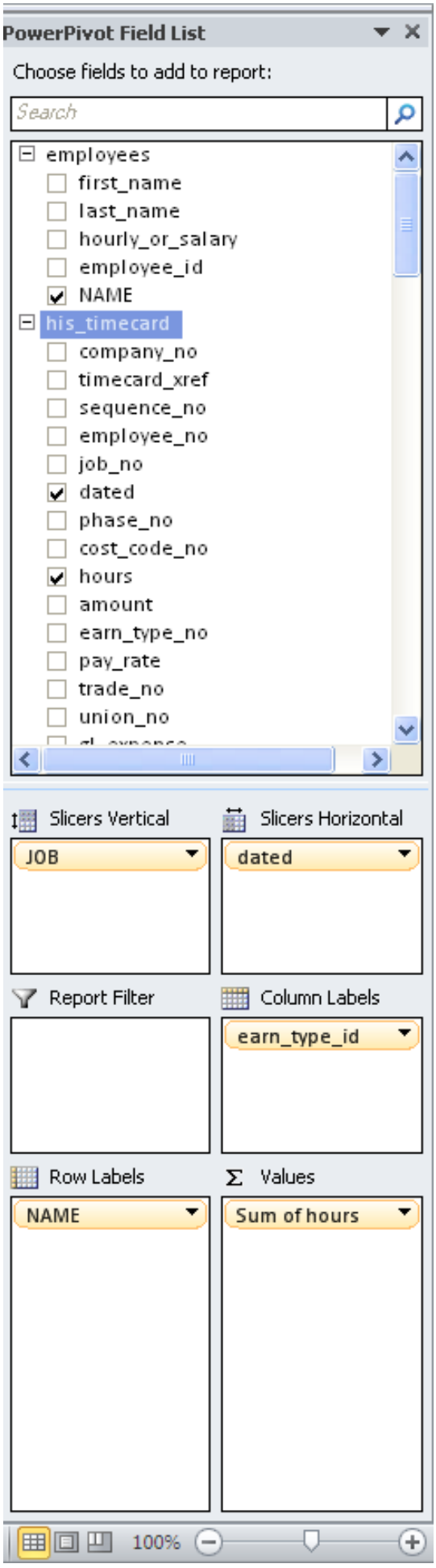


This field includes all of the items that are on the selected tables. All of the tables behave as one because of the relationships we defined in the previous steps.

Slicers…. Wait until you see what Slicers can do….

These fields are the typical layout fields we would expect to see in a pivot table report

Format the pivot table as follows:



From the JOBS table, select the JOBS field and drag it to the Slicers Vertical window.

Drag the DATED field from the his_timecard table into the Slicers Horizontal window.

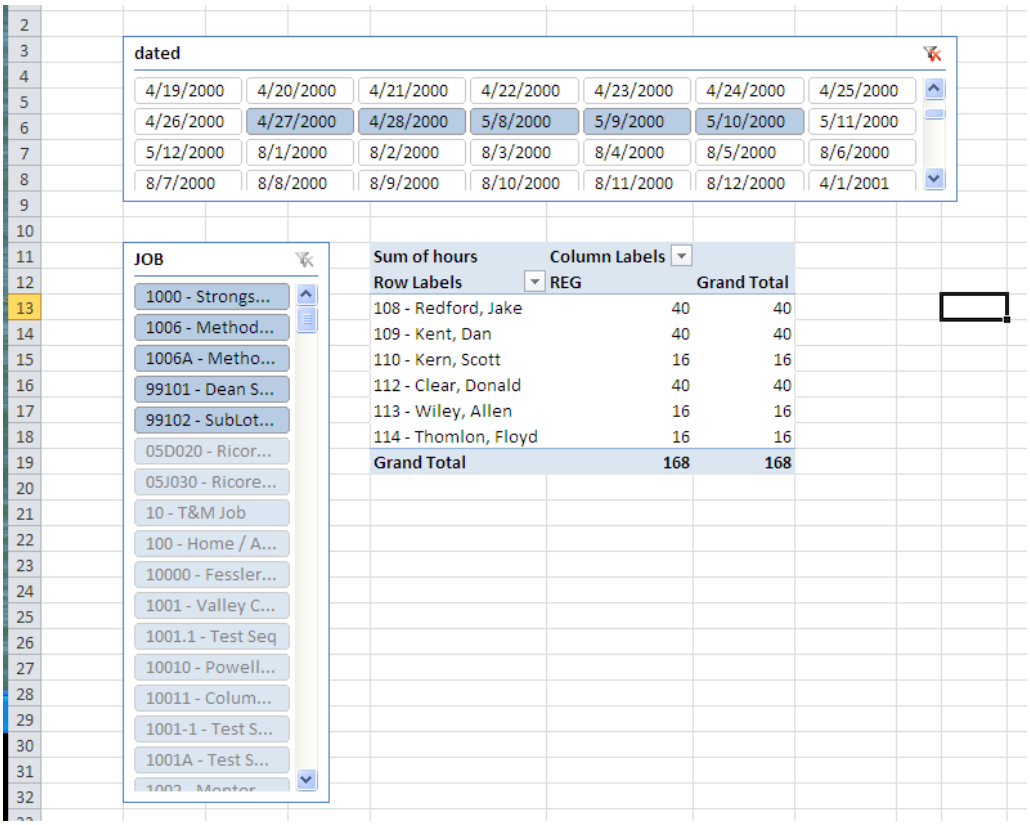
Drag the Earn_type_id from the his_timecard table into the Column Labels window.

Drag the NAME field from the employees table into the row labels window.

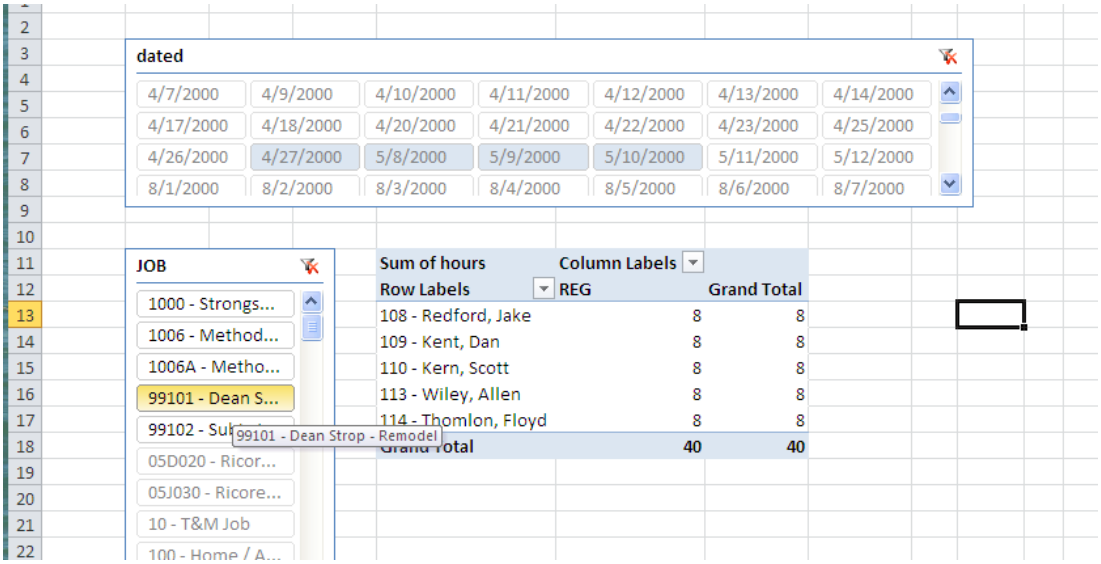
Drag the HOURS field from the his_timecard field into the Values window.

Pardon the pun, but we can now slice and dice the information in many different ways.

You can click – hold and drag the mouse over multiple dates in the dated slicer, and the pivot table will show how many hours were worked by earn code in the pivot table. The actual jobs worked for that period of time are represented in the Vertical Slicer. (Only the highlighted jobs are shown for the selected date or date range)



If you select a single job from the vertical slicer, the hours for that job will be shown.

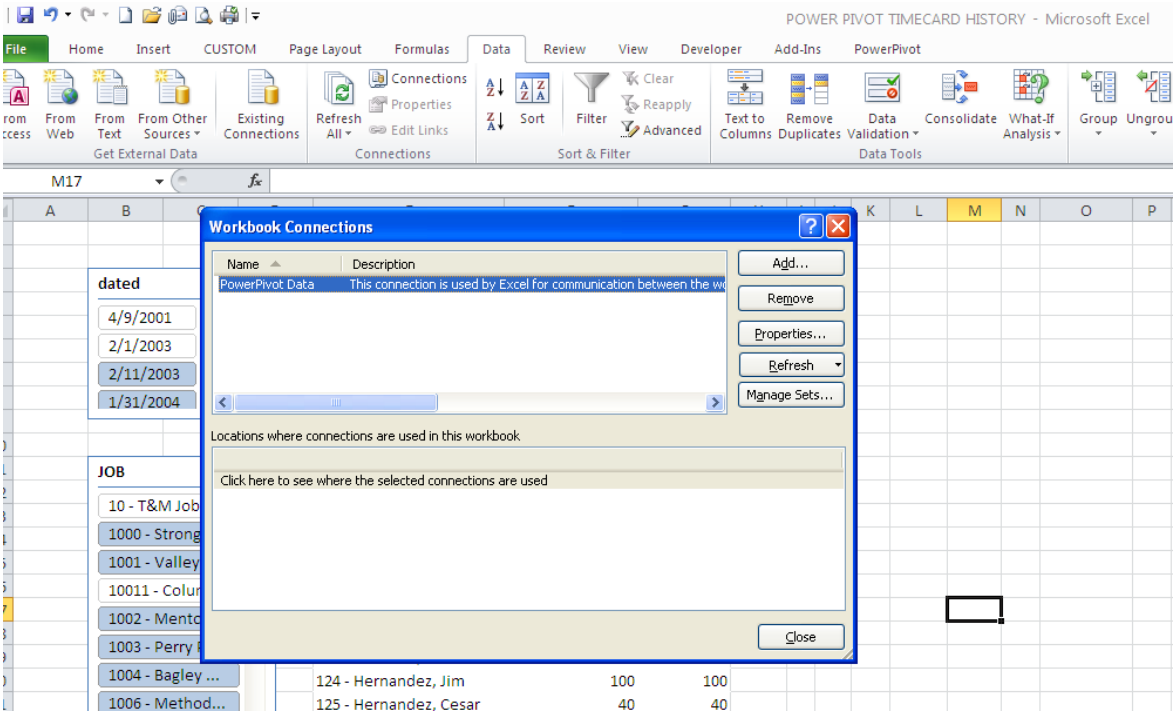


Notice how the date(s) change with the job selection. The slicers are tied together by the resulting data.

Experiment with different layouts in the Pivot Table designer to find interesting combinations for dynamic and useful reports.

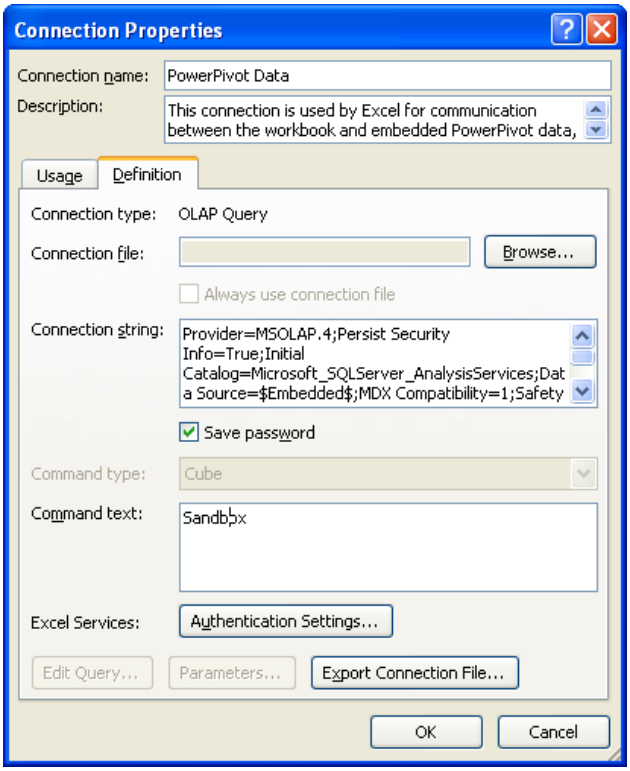
BEFORE YOU SAVE THE FILE !!!!

Make sure to access the DATA tab, and select CONNECTIONS form the main toolbar.



Highlight the PowerPivot Data line and select PROPERTIES.

On the definition tab, select SAVE PASSWORD.



This will save the password so that the PowerPivot table will refresh on it's own in the background.