Now that we know what a data set is and we have an idea of what a pivot table can do for us, it's time to create our first pivot table.

To start with, we're going to need a data set to analyse. Download and open the activity file.

It's a good idea to become familiar with your data before you attempt to analyse it. So let's take a look.

This is a list of tenders that our company has prepared. Each tender is represented as a single record (i.e. data point) in the overall data set. For each record (in each column):

A. A project number is assigned,

B. The date raised has been documented,

C. The project name is listed, and

D. Client name has been recorded

Now for some potential collections (groups of info that we may want to summarise our data by):

E. The submission date,

F. Who prepared the tender,

G. The value of the potential project,

H. The manager of the potential project,

I. Which division is responsible for the tender,

J. The state in which the potential project is located, and

K. The current status of the tender (e.g. won, lost, in progress, etc.)

So now that we've identified some potential summary collections, what do we want to know about our tenders?

- Perhaps we'd like to know the total value of all tenders submitted?,

- Or maybe just the total value of upcoming projects?,

- Possibly we'd like to know what percentage of all tenders has been won or lost?,

- Or which division is responsible for the greatest number of projects won?,

- Or how many tenders each division has in progress?

These are all great questions that our pivot table can easily answer. So let's create it.

There are a couple of different ways to create a PivotTable, so I'll show you both and you can decide which is easier for you (nb. They're both pretty simple).

Method 1: The Insert Tab

Generally when we need to insert anything in an Excel spreadsheet, we go directly to the Insert tab of the ribbon. On the insert tab, we find that Pivot table is the very first command and we'll click it.

The 'Create Pivot Table' dialog box is launched. We're going to accept all of the default settings, but let's first take a minute to understand what each of the options are.

Choose the data that you want to analyse:

This is our source data (aka the data we want to analyse). We have 'Select a table or range' selected, but there are options to use an external data source or use this workbooks data model.

a. Select a Table or Range: Use this option when the data to be analysed is in the current workbook.

Excel populates the 'Table/Range' field for us based on our current selection. When our data is laid out nicely in a table (with no blank rows or columns), it picks up the entire range (A1 through to K636). If for any reason the entire range hasn't been chosen, we can simply re-select.

To re-select the data range, delete the entries in the 'Table/Range' input box and use your mouse to select the cells A1 through to K636 in the spreadsheet. I find the easiest way is to select just A1, then use the keyboard shortcut to select the current range (CTRL+A). Notice that the box now says A1:K636.

b. Use an external data source: Select this option when analysing (building a pivot table based on) data in another workbook or another application (e.g. Access)

c. Use this workbooks data model: Use this option when a data model has already been created. It's ideal for connecting multiple data sources – as we'll learn about in later lessons.

2 Choose where you want the Pivot Table report to be placed:
This is the location where our pivot table will be created. We have selected 'New Worksheet' to ensure a new worksheet is created especially for the pivot table, however when building a report with multiple pivot tables all in a single worksheet, you may prefer to insert the pivot table on an existing worksheet.

   a. Inserting the pivot table on a new worksheet ensures the pivot table won't overlap any existing content when new items are added and the pivot table changes shape.
   b. To add to an existing worksheet; select 'Existing Worksheet' and click within the 'Location' input box to select the worksheet and cell where the new pivot table should be placed.

3 Choose whether you want to analyse multiple tables:

When connecting multiple data sources (which we'll cover in later topics), we'll add the selection to the data model. However, some of the PivotTable functionality is restricted when working with the data model, so we'll leave it off for now.

Click OK to create a pivot shell.

Method 2: Quick Analysis Tools

To easily create a pivot table using the default options (discussed above), we can simply use the quick analysis tool kit.

Right click anywhere within your data set and choose 'Quick Analysis' from the right click menu.

This will display the quick analysis options box. The quick analysis tools has lots of great options to analyse your data set (Formatting, Charts, Totals, Tables and Sparklines), including PivotTables

Select the 'Tables' tab in the Quick Analysis pop up box and hover over the different PivotTable icons. Notice the recommended PivotTable options.

If one of these recommended PivotTables is exactly what you want, click the icon to create the PivotTable in a new blank worksheet.

Click More to see a dialog box with more PivotTable options (including Blank PivotTable).

Method 3: Keyboard Key Tips

To easily create a blank PivotTable using the keyboard, press ALT then N then V in order (not all at the same time), then press Enter when the Create PivotTable dialog box appears.

A new blank worksheet has now been created for your PivotTable with the following attributes:

Pivot Shell: Within your worksheet, the empty pivot shell has been created.

Pivot Table Field List Pane: To the right of your worksheet, the Pivot fields pane is displayed. Note that this pane is only visible when the PivotTable is active (selected). Within the field list pane, the following areas are used to control the appearance and calculations within our PivotTable:

- Filters
- Columns
- Rows
- Values

You've now completed the activity and should have created your own empty pivot shell. If you need to, take some time to practice before continuing onto the next step.