Microsoft Excel 2010™
Microsoft Query (Level 3)

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Introduction

Microsoft Query lets you link to data held in a database and extract a subset of the data to a sheet in Excel. By providing a value in a cell or picking one from a drop-down list, the matching data is automatically passed back from the database to Excel.

Importing Data from Access into a New Query

Data can be imported from an Access (or other) database into Excel via the Import External Data command. You can also import data stored in another Excel file.

1. Start Excel, as usual, to get a new spreadsheet
2. Move to the Data tab then click on [From Other Sources] in the Get External Data group
3. Select From Microsoft Query

![Choose Data Source dialog box]

4. The Choose Data Source dialog box appears - select MS Access Database+ then press <Enter> for [OK]
5. Select the required file - change Drives to d:Data, open up the Training folder and change List Files of Type: to All Files (*.*)
6. Choose example.accdb then click on [OK] (the file can be downloaded via the link provided here)
7. The Query Wizard now starts up:
   i. Select the students table and click on the + to display the fields - move across the first 6 fields up to and including Hall (double click or select and click on [>] - click on [Next>]
   ii. Set up a filter (none is required here) - click on [Next>]
   iii. Set up any sorting required (again none is required here) - click on [Next>]
   iv. Choose Return Data to Microsoft Excel to simply paste in the data (you will be looking at View data or edit query in Microsoft Query later) - click on [Finish]
8. Finally, state where you would like your imported data to appear - which cell on which sheet, here choose A1 on the current empty sheet - press <Enter> or click on [OK] to finish

The data appears in Excel as a table (alternatively, you could have chosen a Pivot Table or Pivot Chart at the fourth step of the wizard above). Filters are automatically provided in the cells on the header row; these also give you sorting options. These facilities may provide you with everything you need, but Microsoft Query offers extra powerful advanced features, as you will see.

Editing the Query

You can now make any amendments required by editing the query:

1. Right click inside the table and choose Table then Edit Query… - the Query Wizard again appears
2. Click on [Next>] (unless you wish to add extra columns)
3. Set up a filter - click on Hall in Column to filter then use the list arrows to first select equals then choose any hall (eg Bridges) - click on [Next>]
4. Set up a sort on Surname in ascending order - click on [Next>]
5. In the final step of the Query Wizard turn on [View data or edit query in Microsoft Query] then click on [Finish]

The results of the query are shown in the bottom half of the Microsoft Query Window. The query would be of wider use if it were turned into a parameter query. To do this, you have to change the current filter Value into a question surrounded by square brackets.

6. In the Value: row, replace Bridges by [Which Hall?]
7. Close the Microsoft Query window by clicking on the red close window button
8. A dialog box appears - enter a parameter value (eg Wessex) then press <Enter> for [OK]
The results appear on the Excel spreadsheet, as before.

To refresh the data or obtain a different set (as a result of supplying a different parameter):

9. Click on the [Refresh] button on the Table Tools Design tab
10. Type in another hall (eg Wantage) – press <Enter> for [OK]

The Refresh button has additional facilities:

11. Click on the arrow below the [Refresh] button and choose Connection Properties...

12. Note the Refresh control settings – here you can ask for the data to be refreshed each time the file is opened, or every n minutes (to reflect any changes which have been made to the database)

The Connection Properties dialog box also has a Definition tab – have a look, if you like, but the settings are quite complex here. Note the links to [Edit Query...] and [Parameters...] at the bottom. You’ll look at parameters next:

13. Press <Esc> or click on [Cancel] to close the Connection Properties dialog box
14. Next, move to an empty cell (eg K1) and type any character – (eg press the <x> key)
15. Now, right click inside the table and choose Table then Parameters – a dialog box appears:

16. Turn on the Get the value from the following cell: option and set the cell to K1
17. Also turn on Refresh automatically when cell value changes
18. Press <Enter> for [OK] to close the Parameters dialog box
19. Now type the name of a Hall (eg Windsor) into cell K1 and press <Enter> - the query results change to reflect the new value
20. Repeat step 19 for another hall – eg Bridges
Using a Drop-Down Menu to Supply a Value

If you really want to be clever, you can use a drop-down menu to supply the value for the query parameter:

1. Move back to cell K1 then, on the Data tab click on the [Data Validation] button and select [Data Validation...] – a Data Validation dialog box appears:

2. On the Settings tab, set Allow: to List

3. Now in Source: type the names of the Halls (here, type just some of them: Bridges, Sibly, Wantage, Wessex, Windsor) then press <Enter> for [OK]

4. Test out the drop-down menu by choosing different Halls from the list in K1