

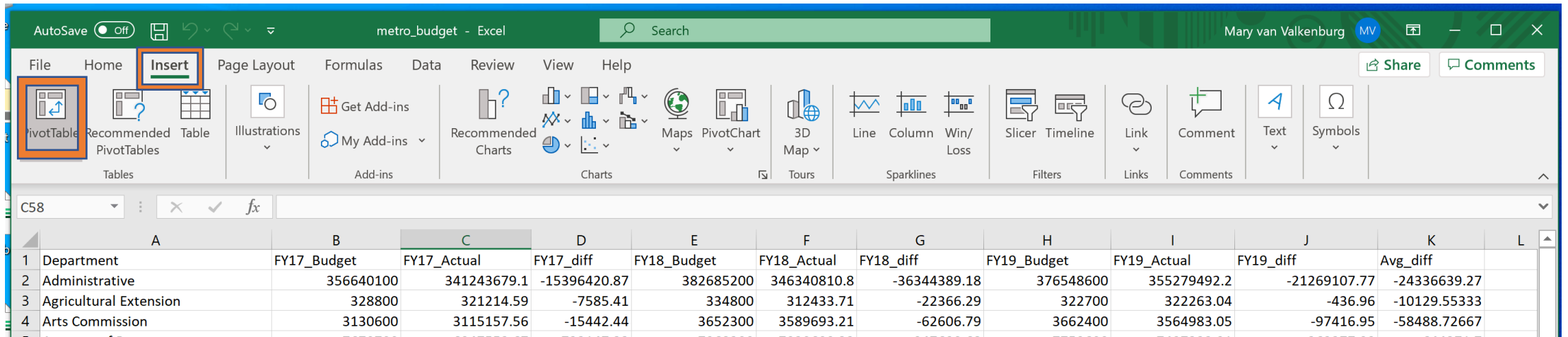
Pivot Tables

The most likely job interview Excel coding task (along with VLOOKUP) for roles that heavily use Excel.

Useful for creating reports and getting quick insights from tabular data.

- Filter
- Sort
- Aggregate
- Analyze

Unlike Google Sheets where the pivot table option is in the Data menu, in Excel you'll find PivotTable under the Insert menu:



The interface also looks different,
but the execution is the same.

1. Choose rows
2. Choose columns
3. Add Values

The screenshot shows the 'PivotTable Fields' task pane. At the top, it says 'Choose fields to add to report:' next to a settings icon. Below this is a search bar. A list of fields follows, each with an unchecked checkbox: Fund, Fund Description, Department, Department Description, Business Unit, Business Unit Description, Object Account, Object Account Description, FY14 Budgeted Expenses, FY14 Actual Expenses, FY15 Budgeted Expenses, FY15 Actual Expenses, and FY16 Budgeted Expenses. At the bottom, there are four drag-and-drop areas labeled 'Filters', 'Columns', 'Rows', and 'Values'.

PivotTable Fields

Choose fields to add to report:

Search

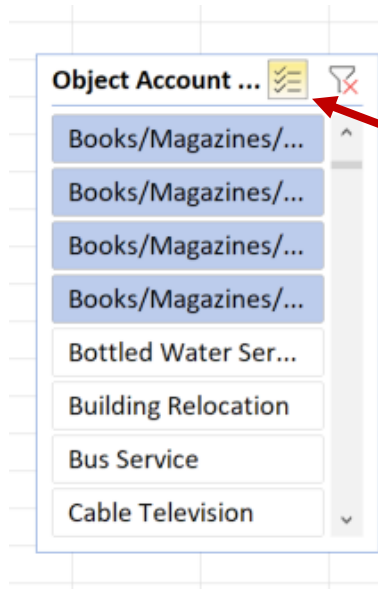
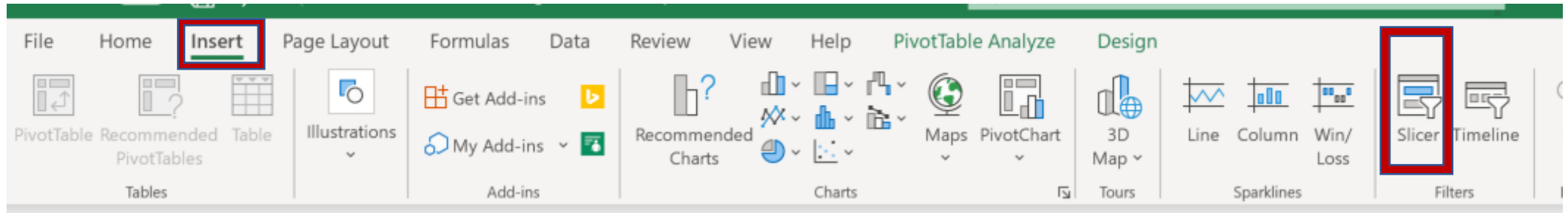
- ☐ Fund
- ☐ Fund Description
- ☐ Department
- ☐ Department Description
- ☐ Business Unit
- ☐ Business Unit Description
- ☐ Object Account
- ☐ Object Account Description
- ☐ FY14 Budgeted Expenses
- ☐ FY14 Actual Expenses
- ☐ FY15 Budgeted Expenses
- ☐ FY15 Actual Expenses
- ☐ FY16 Budgeted Expenses

Drag fields between areas below:

Filters	Columns
Rows	Values

Using Filters in Excel Pivot Tables – method 1

Slicers – By choosing **Slicer** under the **Insert** menu, one or more slicers can be added to the pivot table.



The multiselect capability can be toggled on and off here.

Using Filters in Excel Pivot Tables – method 2

Manual Filtering (+ magic cell) – If you **select the cell just to the right of the right-most column header** and then choose **Filter**, it enables the filter for every column. This only works if you highlight that particular cell (the magic cell).

Note: you get the row filter automatically

1				
2				
3	Row Labels	Sum of FY14 Budgeted Expenses	Sum of FY14 Actual Expenses	
4	GSD Debt Service	108633000	114363328.9	
5	Accounting Service	0	13414.92	
6	Advertising & Promot'n	0	5036.24	
7	Bank Fees	0	4270.66	

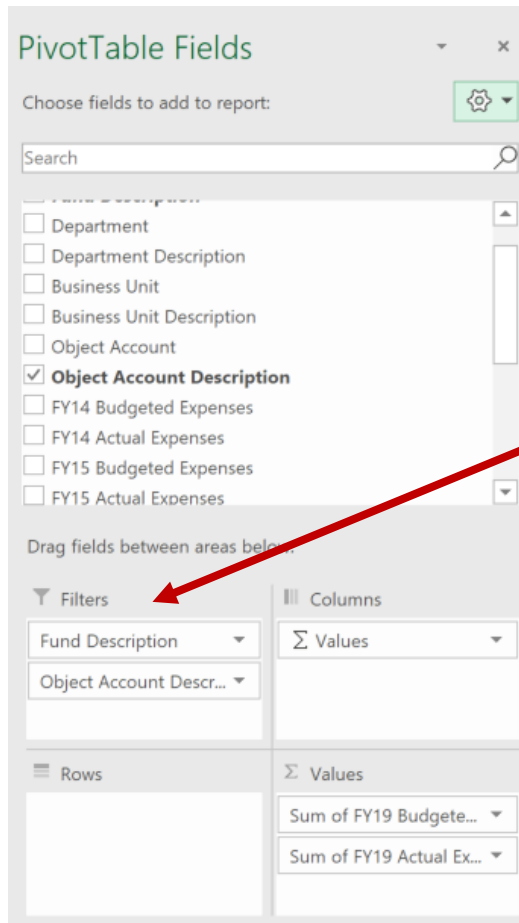
magic cell

1				
2				
3	Row Labels	Sum of FY14 Budgeted Expenses	Sum of FY14 Actual Expenses	
4	GSD Debt Service	108633000	114363328.9	
5	Accounting Service	0	13414.92	
6	Advertising & Promot'n	0	5036.24	
7	Bank Fees	0	4270.66	

filter dropdowns

Using Filters in Excel Pivot Tables – method 3

Report Filters – You can add fields to the Filters area of the Pivot Table Fields control. You lose the detail of the subcategories and just get the summary of the filtered data.



After adding the filters here they will show up at the top of your report like here:

1	Fund Description	(All)
2	Object Account Description	(All)
3		
4	Sum of FY19 Budgeted Expenses	Sum of FY19 Actual Expenses
5	2298125700	2257202890
6		
7		

Exercises

1. Build a pivot table *in a new worksheet* of the Metro_Budget_to_Actual_Expenses__FY14-Present workbook.
 - a. Call the worksheet **high_expense**.
 - b. Use Department Description for the Row.
 - c. Create two Values (Sum of FY19 Budgeted Expenses and Sum of FY19 Actual Expenses).
 - d. Add a filter to show only those departments that had actual expenses that were over \$100 million.

2. Create a new pivot table in the same workbook.
 - a. Call the worksheet for this pivot table **training**.
 - b. Add both the Department Description and the Business Unit Description to the Rows.
 - c. Filter the Business Unit Description to show only the items that contain the word **training**.

3. Create **three more pivot tables one at a time** to show FY19 budgeted and actual expenses for the MNPS General Purpose (Fund Description) spending on Books, Magazines, and Periodicals (Object Account Description).
 - a. Call the first one filter_slicers and use two slicers to filter the report.
 - b. Call the second one filter_manual. Use the magic cell to create manual filters in order to filter the report.
 - c. Call the third one filter_report. This time add filters in the pivot table fields control.