

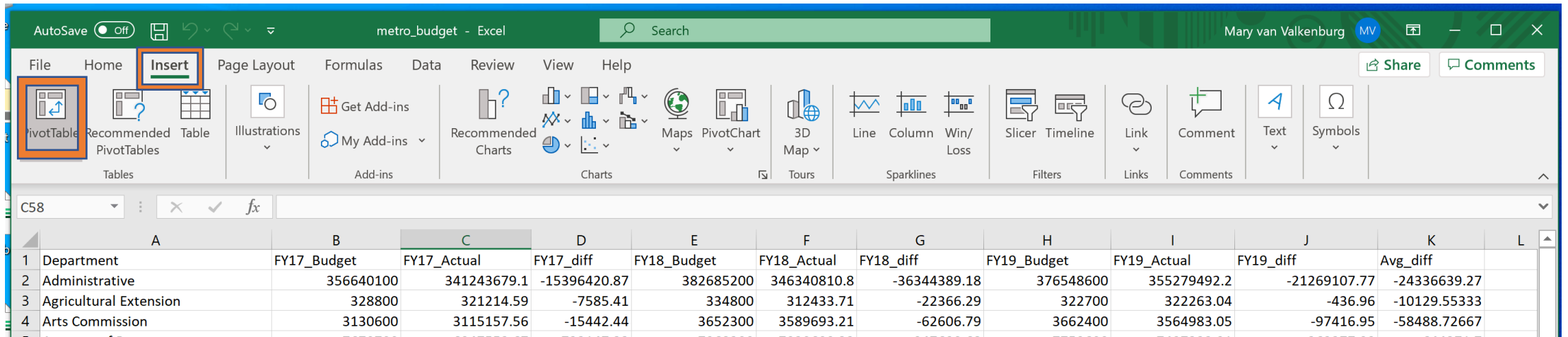
Pivot Tables

The most likely 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:



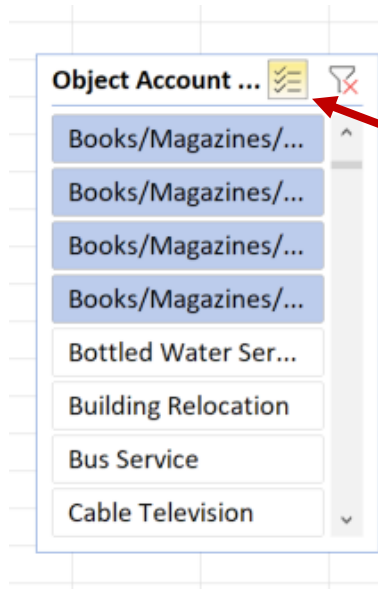
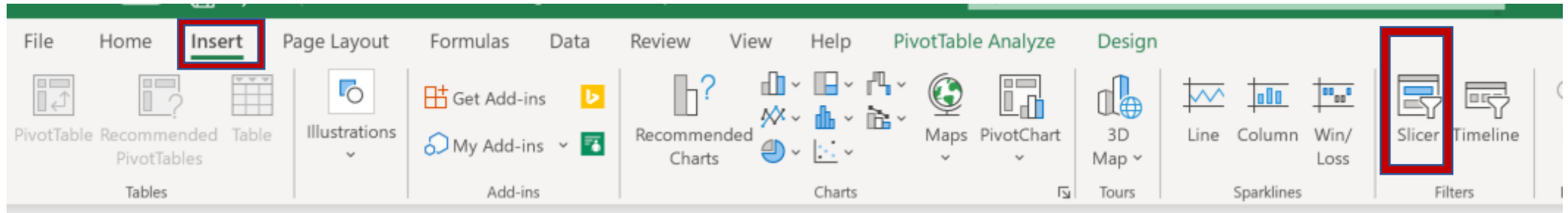
The interface also looks different,
but the execution is the same.

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

The image shows the 'PivotTable Fields' task pane in Microsoft Excel. At the top, the title 'PivotTable Fields' is displayed in green. Below the title, there is a button with a gear icon and a dropdown arrow, and the text 'Choose fields to add to report:'. A search bar with a magnifying glass icon is located below this. A list of fields is shown, 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. Below the list, the instruction 'Drag fields between areas below:' is present. The area is divided into four quadrants: 'Filters' (top-left, with a funnel icon), 'Columns' (top-right, with a vertical bar icon), 'Rows' (bottom-left, with a horizontal bar icon), and 'Values' (bottom-right, with a summation symbol icon). Each quadrant is currently empty.

Using Filters in Excel Pivot Tables

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

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	

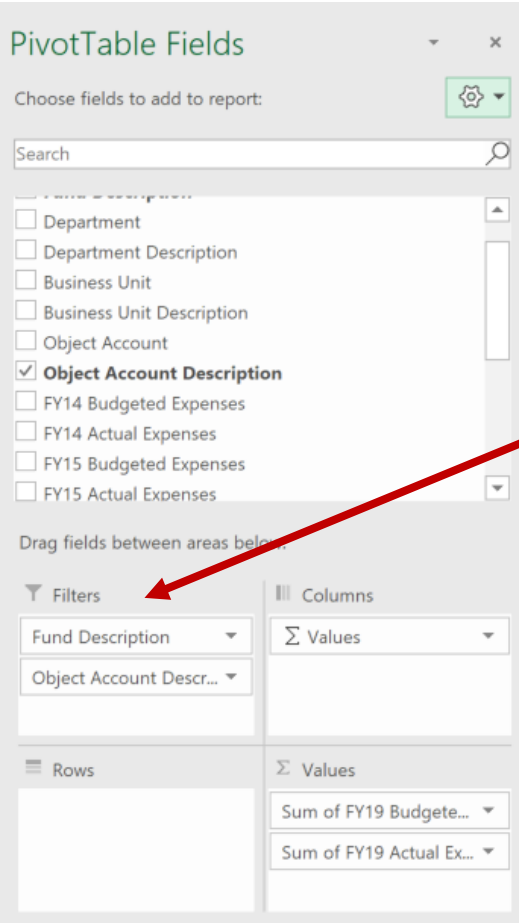
magic cell

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filter dropdowns

Using Filters in Excel Pivot Tables

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.