Dazzling DLI Data Sparkles with Excel Magic!
DLI Workshop Handout

Opening an Excel file containing macros

When you open an Excel file that contains macros, you must click on "Enable content" for things to work properly. Examine the macros *before* doing this with a file you don't know or don't trust. You'll recognize an Excel file with macros by the "!" in the logo, by its ".xlsm" extension, and by the security warning when opening the file.

Create a macro

1 - Select the "View" ribbon, then all the way to the right, click on "Macro" and then "Record Macro". Click on "Ok".
2 – Do some actions, they will be recorded by the macro.
3 - Click on "Stop Recording" in the same spot where you clicked on "Record Macro".

Explore the code of an existing macro

1 - Select the "View" ribbon, then all the way to the right of the ribbon, click on "Macro", and then "View Macros".
2 – Select the macro that interests you and click on "Edit".
3 – When you're finished looking at the code, close the Visual Basic window.

Assign a key to an existing macro

1 – Select the "View" ribbon, then all the way to the right of the ribbon, click on "Macro", and then "View Macros".
2 - Select the macro to which you want to assign a key stroke and click on "Options".
3 - Hit the key strokes you want to assign to the macro, in addition to the "Ctrl" key. Click on "Ok".

Save a file with embedded macros

1 – « File » in the menu bar, then click on « Save as ».
2 - Under "Type", select "Excel Macro-Enabled Workbook".
3 - Save.
If you distribute the file, make sure to warn recipients to enable macros.

Save macros

1 – Follow the procedure in "Explore the code of an existing macro" to get to the codes.
2 - Copy everything (Ctrl-A works great). Paste it in a text editor and save.

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Useful Excel functions

Returns strings

- **Concatenation** = address or "text" & address or "text"
- **LEFT** = LEFT("text" or address , # of characters to extract)
- **RIGHT** = RIGHT("text" or address , # of characters to extract)
- **MID** = MID("text" or address , # of starting position , # of characters to extract)

Returns numbers

- **FIND** = FIND("character to find" , "text" or address)
- **LEN** = LEN("text" or address)
- **SUMIF** = SUMIF(Range of cells with criteria $:$, criteria , range of cells to add $:$)
- **VLOOKUP** = VLOOKUP(address or "text" to lookup , range of where to lookup , index of column containing data to extract , true or false where false is an exact match)
- **SUMPRODUCT** = SUMPRODUCT (range of condition compare condition such as B13:B17 > 10) * (range of condition compare condition --keep going until you run out of conditions) * (range where the function should add things together))
- **CSE Formulas** = function returning number ((range of values compare criteria such as B13:B17 > 10) * (range of values compare criteria --keep going until you run out of criterias) * (range on which function should act))   Use * for AND, use + (and often "IF") for OR.

Useful Excel tools

- **Paste as values:** Start by selecting cells. Copy the cells. Click on the arrow under "Paste" in the "Clipboard" section of the "Home" ribbon. Select "Paste as Values".
- **Select cells with criteria:** Start by selecting cells or just a cell if you want to do the whole worksheet. Press F5. Click on "Cells". Select criteria. Press "Enter" to go from one selected cell to the other, use Excel's menus to change all selected cells simultaneously.
- **Find/Replace**: Start by selecting cells or just a cell if you want to do the whole worksheet. Press Ctrl-F, or click on "Find and replace" in the "Editing" section of the "Home" ribbon. Click on "Options". Notice that you can change formats.
- **Remove duplicates:** Start by selecting cells. Go to the "data" ribbon then click on "remove duplicates" in the "data tools" section.