Excel: Lists

Familiarity with basic Excel is required for this class. Learn to create field names, sort lists, and link worksheets. You'll learn lists that can also be used in our Word: Mail Merge class.

Excel’s primary purpose is performing mathematical calculations, but it can do more. You can use Excel as a database (also called a data list or a data table) program to organize, sort, filter and analyze a collection of related information. For example, an address book is a database list of names and addresses. A database uses field names or labels at the top of each column to identify different kinds of information in the list. Each row in the database contains all the information about an item in the list (also called a record).

Design a List

- Type the names of the fields in the first row of the worksheet. This is the header row. Each field name must be unique. It doesn’t matter what order you put the field names.
- Enter the first record below the field names. Remember, do not skip any rows. You cannot have any empty rows between the header row and the records that follow.

Row 1 is called the header row which contains all the field names. Records start in row 2.

After starting the list, you may decide to add or delete some fields. To insert a column, click on the column header to the right of where you want to put a new column. Remember that column headers are the letters of the alphabet. Right click on the selected column header then click on Insert. To delete a column, right click on the column header then click on Delete.

Click on cell I2. It is a date with no year. If you type Feb 1, Excel will automatically add the current year to the date. To type a partial date, type a single quote ‘before the date to make it a text field and not a date field.

Click on cell K2. Notice that there is a number in the cell but look at the formula bar to see the true content. K2 has a formula in the cell: =YEAR(TODAY())-YEAR(J2) (There are no spaces or zeros in this formula. Use left and right parentheses). This is a nested formula that is easiest to see in parts. If you type the function =TODAY() you would get today’s date. Basically, the formula in K2 says to take the year of today and subtract from it the year of the start date which is the date in cell J2.
Enter or Add Data
To add to a data list, click in the first empty cell below the header row. In the example above, that would be cell A3. To move to the cell to the right, press the Tab key or the right arrow key. 

To Add Data using FORM
First, make sure you've selected any cell with data within your spreadsheet. Click the tiny down arrow at the end of the Quick Access Tool Bar. At the bottom of the menu select More Commands. This opens the Excel Options dialogue box.

In the Excel Options dialogue box, select the drop-down menu that says Popular Commands and choose instead All Commands. Scroll down in the alphabetical list and click on Form.

Click the Add button in the Center
Select OK in the lower right of the dialogue box.
Auto Complete will complete your typing if you’ve typed the same word in that column previously. For example, in cell D3 in the City column, if you type a t, Excel will finish typing Topeka because it appears in the cell above (D2). However, if you want Tecumseh instead, keep typing. The next time you type a city that starts with T, Excel will not know which city you want until you type the second letter. If you type to, it will complete Topeka. If the second letter is an e, it will complete Tecumseh.

Delete Data
To delete typing in a single cell, click on the cell and press the Delete key on the keyboard. To delete an entire row, click on the row header of the row you want to delete. Right click on the row header, then click on Delete. Remember, do not leave empty rows in a list. To delete an entire column, click on the column header of the column you want to delete. Right click on the column header, then click on Delete.

Find Data
There are 3 major ways to find data in a list.

- Auto Filter—use to find a group of similar data. Find it on the Home & Data tabs.
- Sort—sort the data alphabetically or numerically. Home & Data tabs.
- Find—use to find specific words in a list. Home tab.

From the Data ribbon, click on Filter. Notice little down arrows by each field name in row 1.
From the Data ribbon, click on **Sort**. The **Sort** dialog box appears.

![Sort dialog box](image)

Click on the down arrow in the **Sort by** box. Click on Lastname. Click on the **Add Level** box to see a secondary sort. Click on the down arrow in the **Then by** box and click on Firstname. Then click OK. You can have up to 64 levels of sort. Just click on the **Add Level** box to add another level. To delete a level, click on **Delete Level**.

Now, the list will be sorted by last name and within that by first name. In our example, Andy Black will appear before Jean Black.

The Order may be listed as: **A to Z** or **Smallest to Largest**
**Z to A** or **Largest to Smallest**

To sort numbers so that the largest number is at the top of the list, choose **Z to A** or **Largest to Smallest**.

From the Home ribbon, click on **Find**.

![Find dialog box](image)

In the **Find what** box, type the word that you want to find in the spreadsheet. Click on **Find Next** to see the results.

Every Excel Workbook has 1 worksheet named Sheet1. Add worksheets by clicking on the + to the right of Sheet 1.
Right click on a worksheet tab. Click on **Rename** to give the sheet a different name. Press the Enter key when finished typing. Right click again on the tab and choose **Tab Color** to add color. Another way to rename a worksheet is to double-click on the worksheet tab. Type the new name and press Enter.

**Link data to another worksheet or workbook**

Use the same data in more than one worksheet without retyping. If you make changes or additions to the original or source worksheet, those changes will appear automatically in the linked worksheets.

**To link data from the same workbook**, first click in the cell where you want the data to appear. Type an equal sign =. Type the source worksheet name followed by an exclamation point !. The ! tells Excel that you typed a worksheet name. Then type the cell reference where the data already exists. Example: =Mail!A2

**To link data from a different workbook**, first click in the cell where you want the data to appear. Type an equal sign =. Type the source workbook or file name surrounded by square brackets. Type the source worksheet name followed by an exclamation point !. The ! tells Excel that you typed a worksheet name. Then type the cell reference where the data already exists. Example: =[ExcelLists.xlsx]Mail!A2

**Another way to link data** (this is much easier):
- In the source file, select the data you want to link.
- From the Home tab, click **Copy**.
- Open the destination worksheet or file and click where you want to insert the data.
- From the Home tab, click on the **down arrow** under **Paste**. Click **Paste Link**.
Hide & Unhide columns or rows
Select the columns or rows you want to hide by clicking on the column header or the row header. Right click to see a menu. Click on Hide. To unhide columns or rows, select the columns to the left and right or the rows above and below. Right click to see a menu. Click on Unhide. If you want to unhide many columns or rows at the same time, select the entire worksheet. A quick way to select the entire worksheet is to click on the shaded box to the left of the A in the column headers.

Freezing the Panes
Click to the right of the column or below the row you want to freeze. Click on the View tab and click on Freeze Panes. Click on Freeze Panes in the menu that appears.

You can freeze columns or rows to keep the labels in view as you scroll through larger worksheets. The area you freeze will not scroll. To Unfreeze, click on the View tab and click Freeze Panes. Click Unfreeze Panes.

COUNT Functions
Examples
COUNTNumber of cells with numbers in a range =COUNT(R6:R25)
COUNTANumber of non-blank cells in a range =COUNTA(R6:R25)
COUNTBLANK Number of blank cells in a range =COUNTBLANK(A2:A50)
COUNTIFNumber of cells in a range that meet a certain criteria =COUNTIF(B2:B13,"Black")

SUM Function
Use SUM to add a range of cells that have numbers. Example: =SUM(R6:R25)

Absolute Cell Reference
By default, Excel treats the cells you include in formulas as relative locations rather than set locations. When you copy formulas, the cell references adjust with the rows or columns. To make a cell reference stick so that it will not adjust, use the $ to indicate an absolute cell reference. Example $A$2 If that cell reference is copied to another cell, it will not change.