EXCEL BASICS

Introduction

Microsoft Excel is an electronic spreadsheet program that runs on a personal computer. As with a paper spreadsheet, you can use Excel to organize your data into rows and columns and to perform mathematical calculations.

What is Microsoft Office? The term "Microsoft Office" refers Microsoft's entire suite of office productivity applications. Microsoft Excel is one of the many applications that are grouped under of the "Microsoft Office" umbrella. What is Office 365? Office 365 is a service where you pay a monthly subscription fee (around $10 a

month) to use Microsoft Office programs (as opposed to paying $100 or more up front, as was traditionally done). One benefit to using Office 365 is that software updates are free (for example, if a new version of Microsoft Excel comes out, you can upgrade to that new version for free). In this class, we will be using Excel 2016. An Excel spreadsheet contains one or more worksheets. Each worksheet contains a grid of cells. Related worksheets are held together in a workbook. When you save a spreadsheet made in Excel it saves a workbook regardless of how many worksheets it contains. An Excel workbook can hold a maximum of 1,048,576 rows and 16,384 columns. A row goes left-to-right, a column goes up-and-down

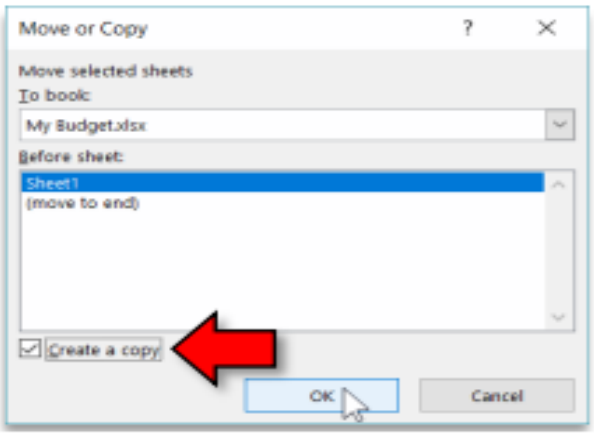
Modifying Worksheet

In our example below, column C is too narrow to display all of the content in these cells. We can make all of this content visible by changing the **width** of column C.

Copying a worksheet

Follow the steps to make a copy of Sheet 1.

1. In your My Budget.xlsx workbook, right click the Sheet 1 tab to bring up a menu.
2. Select "Move or Copy" from the menu.
3. Click in the checkbox next to "Create a Copy" and click OK.
4. Note there is now a new worksheet that is exactly the same as Sheet 1. The new worksheet's name is Sheet 1 (2).



Renaming a worksheet

The new worksheet is going to become the template on which we base future month's budget worksheets. We're going to give it a name and edit the data. The template will not contain any data in the Actual column, but it will still retain formula(s) in that column. We will use copying and renaming to set up worksheets for future month

1. Let's rename "Sheet 1 (2)":

a. Right click the Sheet 1 (2) tab and click Rename on the menu.

b. The sheet tab is now in edit mode and you can type Template.

c. When you are done typing, tap Enter or click in a clear cell to get out of edit mode.

2. Switch to the Formulas view of the Template worksheet (key combination: Ctrl + ~).

3. Delete the "Actual" data (not the formula, just the data). Select cells C3:C12 and tap Delete on keyboard (do not use the Delete key on the Number Pad).

4. Return to the Normal view of the worksheet (key combination: Ctrl + ~).

5. Rename "Sheet 1" to "January".

6. Make 2 copies of the Template sheet (refer back to the "Copying a worksheet" section for instructions on how to make a copy).

7. Rename "Template (2)" to "February".

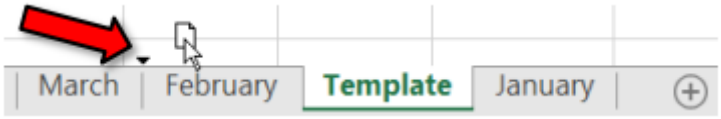
8. Rename "Template (3)" to "March".

Formatting Worksheets

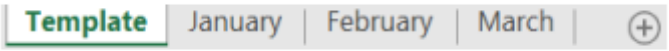
The order of the worksheet tabs can be manipulated by dragging them into position. In our case we want to organize our worksheets from left to right starting with Template at the far left, then January, February, and March.

1. Click the Template worksheet tab and hold the mouse button down as you move your mouse slightly upwards. You will notice an image attaches itself to the cursor and a small black triangle appears. This triangle is the drop point.

2. As you move your mouse with the mouse button still held down (dragging), the drop point will move. When the drop point is where you want it to be, let go of the mouse and the tab will be in the new location.



3. Click and drag the sheet tabs to put them in order left to right, Template through March.



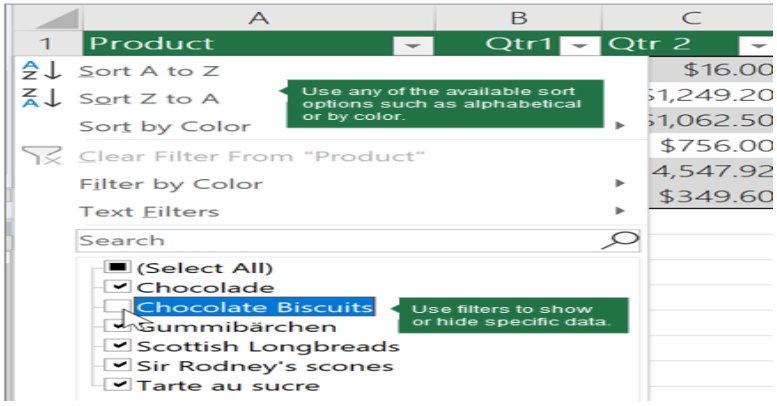
Introduction to Excel Tables

To make managing and analyzing a group of related data easier, you can turn a range of cells into an Excel table (previously known as an Excel list).

	A	B	C	D
1	Product	Qtr 1	Qtr 2	Grand Tota
2	Chocolade	$744.60	$162.56	$907.16
3	Gummibarchen	$5,079.60	$1,249.20	$6,328.80
4	Scottish Longbreads	$1,267.50	$1,062.50	$2,330.00
5	Sir Rodney's Scones	$1,418.00	$756.00	$2,174.00
6	Tarte au sucre	$4,728.00	$4,547.92	$9,275.92
7	Chocolate Biscuits	$943.89	$349.60	$1,293.49
8	Total	$14,181.59	$8,127.78	$22,309.37

➢ **Header row** By default, a table has a header row. Every table column has filtering

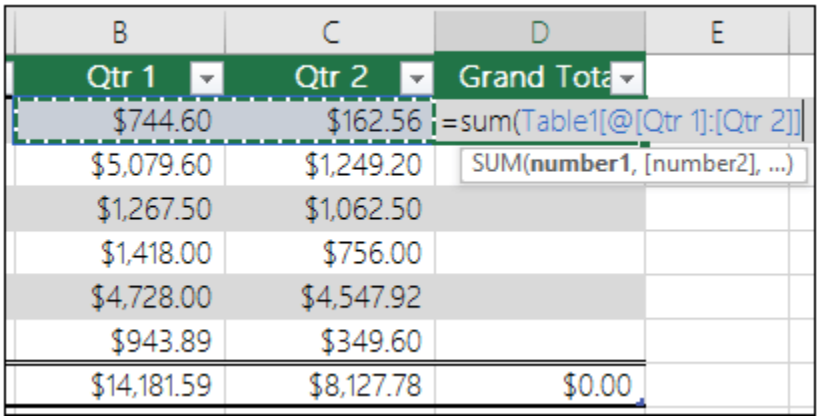
enabled in the header row so that you can filter or sort your table data quickly. For more information, see Filter data or Sort data.
You can turn off the header row in a table. For more information, see Turn Excel table headers on or off.



➢ **Banded rows** Alternate shading or banding in rows helps to better distinguish the data.

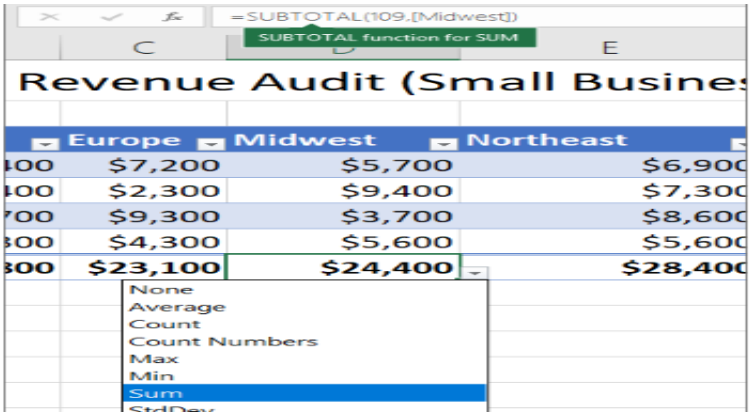
	A	B	C
1	Column1	Column2	Column3
2	Product	Qtr 1	Qtr 2
3	Chocolade	744.6	162.56
4	Gummibarchen	5079.6	1249.2
5	Scottish Longbreads	1267.5	1062.5

➢ **Calculated columns** By entering a formula in one cell in a table column, you can create a calculated column in which that formula is instantly applied to all other cells in that table column. For more information, see Use calculated columns in an Excel table.

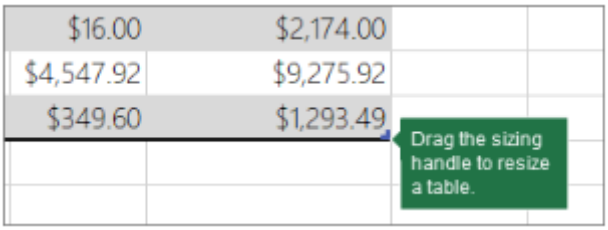


➢ **Total row** Once you add a total row to a table, Excel gives you an AutoSum drop-down list to select from functions such as SUM, AVERAGE, and so on. When you select one of these options, the table will automatically convert them to a SUBTOTAL function, which will ignore rows that have been hidden with a filter by default. If you want to include hidden rows in your calculations, you can change the SUBTOTAL function arguments.

For more information, also see Total the data in an Excel table.



➢ **Sizing handle** A sizing handle in the lower-right corner of the table allows you to drag the table to the size that you want.

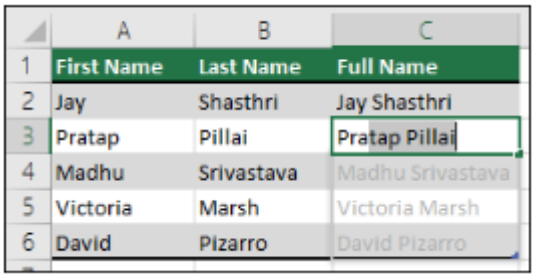


Auto-fill, Custom Lists, and Flash Fill

Flash Fill automatically fills your data when it senses a pattern. For example, you can use Flash Fill to separate first and last names from a single column, or combine first and last names from two different columns.

Let's say column A contains first names, column B has last names, and you want to fill column C with first and last names combined. If you establish a pattern by typing the full name in column C, Excel's Flash Fill feature will fill in the rest for you based on the pattern you provide.

1. Enter the full name in cell C2, and press ENTER.
2. Start typing the next full name in cell C3. Excel will sense the pattern you provide, and show you a preview of the rest of the column filled in with your combined text.
3. To accept the preview, press ENTER.



If Flash Fill doesn't generate the preview, it might not be turned on. You can go to Data > Flash Fill to run it manually, or press Ctrl+E. To turn Flash Fill on, go to Tools > Options > Advanced > Editing Options > check the Automatically Flash Fill box.

Managing Worksheets

Thus far we have been doing all of our work in one worksheet of the workbook, namely, Sheet 1. See the lower left portion of the Excel window; the “active” tab is Sheet 1.

At this point, our monthly budget spreadsheet is working very well for us; so well in fact that it can be used as a model for future months. Excel makes it easy to duplicate data, formulas and formatting through the manipulation of worksheets. We are going to set this workbook up so that we can keep

track of our monthly budgets going forward.
First we'll create a template worksheet which has all the data and formulas that our current worksheet does, except for data that will change from month to month, namely the Actual expenses data. The template worksheet will be copied several times and each worksheet will have the name of a different month of the year. As our bills come in, these amounts can be entered into the worksheet for each given month.

Protect a worksheet

To prevent other users from accidentally or deliberately changing, moving, or deleting data in a worksheet, you can lock the cells on your Excel worksheet and then protect the sheet with a password. Say you own the team status report worksheet, where you want team members to add data in specific cells only and not be able to modify anything else. With worksheet protection, you can make only certain parts of the sheet editable and users will not be able to modify data in any other region in the sheet.

Important: Worksheet level protection is not intended as a security feature. It simply prevents users from modifying locked cells within the worksheet. Protecting a worksheet is not the same as protecting an Excel file or a workbook with a password. See below for more information:

- To lock your file so that other users can't open it, see Protect an Excel file.
- To prevent users from adding, modifying, moving, copying, or hiding/unhiding sheets within a workbook, see Protect a workbook.
- To know the difference between protecting your Excel file, workbook, or a worksheet see Protection and security in Excel.