

A step-by-step guide to making better spreadsheets

by Richard Sumner

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Contents

Introduction

Starting a new spreadsheet

Headers and setting line limits

Formatting the text

Required formulas whether hidden or visible

Conditional formatting

Headers, totals, and alerts

Hiding columns and unlocking entry cells

Locking the worksheet and workbook

Locking the view

Conclusion

Introduction

I get sent so many spreadsheets to remake or review and most of them can be improved massively. You may think that these improvements come in the form of complicated formulas and VBA coding; they often don't. It is usually the layout which can be improved the most. Yes, if you really want to make impressive spreadsheets you need to know formulas, but you can make a huge change just by addressing the look and layout of your spreadsheets.

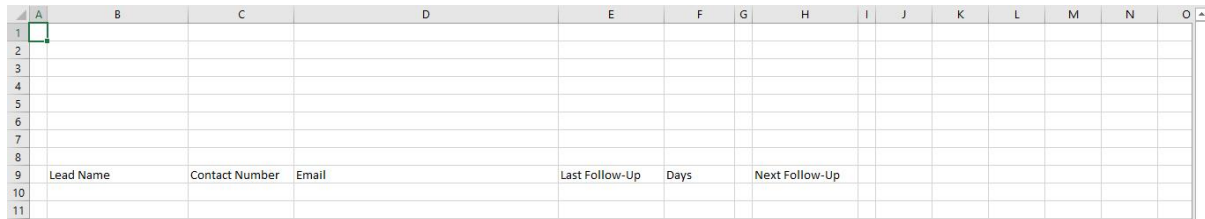
In this book I will take you through step by step as I make a spreadsheet, showing you each stage and explaining why I do it like that. No VBA, no complicated formulas, no experience required. If you want to make better spreadsheets, continue reading.

You can download this example spreadsheet [HERE](#). It is unlocked and has the (soon to be) 'hidden' columns revealed.

I have seen some incredibly complicated formulas in some badly designed spreadsheets, and honestly I've seen people more impressed by far simpler formulas in neat and tidy spreadsheets. Your Excel level is often measured by formulas, pivot tables, and other important sounding functions, whereas a simple layout change sometimes can turn a bad spreadsheet into a good one.

I'll take you through step by step, so make your own spreadsheet and follow along.

Starting a new spreadsheet



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2															
3															
4															
5															
6															
7															
8															
9		Lead Name	Contact Number	Email		Last Follow-Up	Days	Next Follow-Up							
10															
11															

In the image above, I have opened a new workbook and taken the following steps. Firstly, I clicked on the section in the top left, between the 1 and the A. That selected the whole worksheet. I then right clicked and formatted the text to 'shrink to fit' under alignment and clicked 'hidden' under security. Now the spreadsheet is set to hide and lock ALL formulas, and all the content will shrink to fit each cell. This is so that I can unlock all the relevant cells where data will need to be entered, and the rest of the cells will be locked (when I lock the worksheet). The 'shrink to fit' option is preferred because it doesn't hide text or encroach on other cells. In some cases I may switch that to 'wrap' but, as a default, I prefer 'shrink to fit'.

I've then gone on to set the column widths, simply by dragging them from the lettered headers. You'll be surprised how many people don't even do this. I've also made the columns wide enough for the respective data.

Notice how I have left some narrow blank columns with no headers in columns A, G, and I. I have done that for a very good reason. Most spreadsheets I get sent start in column A and just go nuts. The locked data is mixed with the entered data, so you end up trying to type in a locked cell (if it is locked) or you end up over-writing required formulas. I have therefore separated the (later to be) unlocked cells and the locked ones that will contain formulas. Columns B to F in this case will be unlocked for people to enter data, and column H will be automated.

This spreadsheet will contain some contact details and show when next you need to follow up with each lead. The narrow columns are simply to separate the two data sets, so that it is clear what needs to be completed and what is automated. There are other reasons too, which will become clear as we proceed. You will also notice that I have started in row 9. There is a very good reason for that, which will also become clear later.

I make sure to rename the tab, so I know what is on it. One tip I will give you here (which I haven't done in this case) is to keep the tab name as short as possible. The shorter the tab name, the more tabs you can see at once without having to scroll through. Also, shorten the scroll bar to the right of the tab names, to give yourself as much space as possible if you have a few tabs. I also go as far as to colour code the tabs based on whether it is mainly data entry or mainly formulated data. You'll see later what I mean by that when I write about colour coding the headers.

Another habit I get into in most cases is to turn the page into landscape rather than portrait. The main reason for this is that many pages will not need to be printed or saved to PDF, and as most screens are landscape, it makes sense for the pages to be. When I do need to save a particular page as a PDF or print it, I then make it portrait but often make it wider than the default.

Everything I do, in every spreadsheet I do, I do with one question in the back of my mind. How will the user use this, and what will be the most efficient layout for that purpose? This keeps me on track to make the spreadsheet in the best possible way to serve that user.

Headers and setting line limits

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
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17										
18										
19										
20										

As you can see, I've boxed the headers (divided into editable and formulated (see why we needed the gaps now). I have also coloured them both in with different colours. I will usually do this throughout the spreadsheet, so that people are clear what to fill in and what to leave alone. Even doing this can make a spreadsheet far more user-friendly and easier to understand. As you can see, I have boxed off two lines for the headers - the actual header cell and then the one below. You'll see why I did that later. I centred the text and made it bold, to stand out.

I then wanted to set a limit on how many rows people could use. This is not to be restrictive, but to limit how many cells are included in the formulas, to keep the size of the spreadsheet manageable. To do this I simply typed 1 into line 11, and 2 into line 12, selected both, and then dragged it down to the number of rows I wanted (in this case 250).

I then boxed in the two ranges (entered data and formulated data) with borders and I also hid all the rows below the data. I did leave one line at the bottom, to space it, like I did down the left.

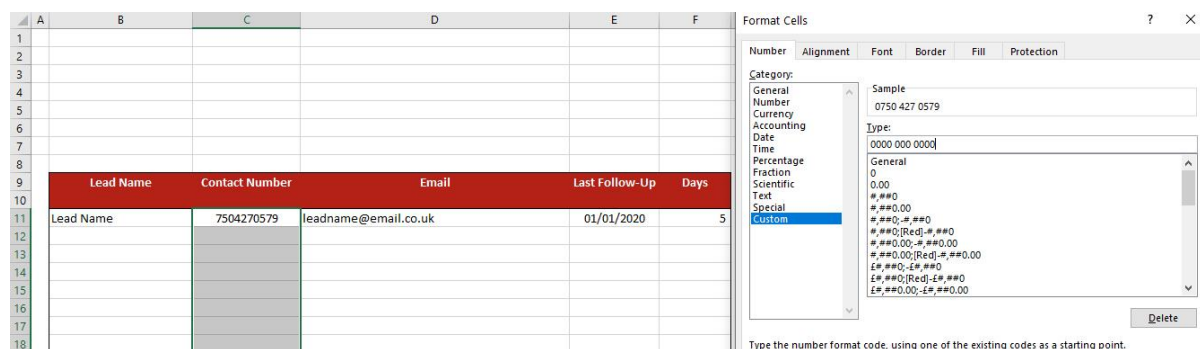
You may or may not be able to tell, but I did colour in the narrow columns with a white fill. All those lines and column lines can get

irritating, so I colour in all the unused sections of the spreadsheet in white, but we need the grid lines within the 'entry box'. Lastly, I would clear the numbers I added (by selecting and using 'clear contents') before continuing to the next stage.

Many of the spreadsheets I see have no borders, or they have borders around every cell. It is often just a mess of data and it is usually very unclear as to what is going on. The way I do it makes it so clear as to what is required. Each data set is clearly bordered, almost like an Excel table (although I don't make tables for various reasons). It is clear to a user what they need to fill in and what is automated. In the circumstance where there are quite a few columns that all need to be together (in order to have one sort filter), they may need to be filled in at different stages. In that case I leave them together, but simply add a black border line between the columns for each stage. That way you can see what needs to be filled in at the start, and then what needs to be filled in later. All these small things add up to make an efficient spreadsheet. Every second you don't have to think what to do, is one second saved. Also, it makes you less prone to making errors.

The idea behind doing it this way is to have the finished product look more like a page in a programmed software solution than just another spreadsheet. A spreadsheet doesn't have to be a mass of lines in rows and columns. It should look inviting and easy to use. The lines are just there to help you build it. People often ask why I don't just remove all the gridlines when I'm done making the spreadsheet. I could, but I often want the gridlines in the boxes where data is entered. I don't want to colour them in with borders, so I leave the gridlines on, and just colour in all the other cells. Some platforms (other than Excel) will still show the grid lines when you fill the cells, but I don't often use them. If I did, I'd find another way around this.

Formatting the text



After setting the page to landscape, and dragging the page break border to the end of column I, I got to formatting each column. This is only the data under the coloured header, and above the white spacer row at the bottom. Columns B and D I simply set to the left, and Columns E and H were set to the centre and formatted as a date. Column F was set as a number with no decimal places. Column C, the one for the phone numbers, was slightly different. Under formatting, if you select custom (like in the image) you can show what format to use. By simply entering in the correct number of zeros with spaces in the right places, this will ensure that all numbers conform to that format when entered (as numbers, with no spaces). Now that we have the right columns for the right data, we can look at where to put required data and formulas, which are not needed to be visible to the user. Some data needs to be shown, some can be hidden.

I often see unformatted cells where prices don't show in a currency, phone numbers are a mess of text and numbers, and people use the default date version (which Excel auto-selects if it thinks it's a date) and it just looks terrible. Formatting cells correctly can improve the look of a spreadsheet considerably.

Required formulas whether hidden or visible

The screenshot shows an Excel spreadsheet with the following data and formulas:

Lead Name	Contact Number	Email	Last Follow-Up	Days	Next Follow-Up
Lead Name	0750 427 0579	leadname@email.co.uk	10/11/2020	14	24/11/2020

Formulas and conditional formatting details:

- Formula bar: `=IF($H11="", "", IF($H11<L2, L7, IF($H11=$L$2, L6, IF($H11<=L3, L5, "")))`
- Cell H3: "Alert Days" with value 3.
- Cell L2: "22/11/2020" (Alert Due).
- Cell L3: "25/11/2020" (Alert Overdue).
- Cell H11: "Next Follow-Up" with value 24/11/2020.
- Cell L11: Formula `=L5, ""))`.

Alright, I've done a few formulas and added some more data entry cells. I'll talk you through each formula, but notice again how I have boxed off the formula cells. This shows me where the formulas are, as they often show up blank (when the formula dictates it). Where I've added more data entry cells (H3) I've once again used the right colour header, but this time it's only one cell high - you'll see why, later. I also selected View and Page Break to move the end of the page to the right of column I. This way anything to the right of that will not show or print. If you look at the page view, it will appear in grey as it is off the page. The formulas will still be used as required, though. Here's what I have added (formula-wise) and what formulas I've used.

Cell H11. This is to calculate when the next follow-up date is for each lead entered. In this case it is a simple formula. **=IF(\$E11="", "", \$E11+\$F11)** will calculate the date. It simply says that if E11 is blank, then make this blank, otherwise add the days to the next follow-up on to the last follow-up date.

Cell L2. This will need the current day's date. This is created by simply entering **=TODAY()**.

Cell L3. This is the date in X number of days, to enable you to check when an alert is due. This used the new value entered in cell H3. The formula here is simply **=\$L\$2+\$H\$3** which is today's date plus the number of days warning.

I've then typed in 3 words in cells L5 to L7 (again, with a border around). These will be the options to assign to each line. It will then show if each line is due today, has an alert (based on the setting), or is overdue. These won't be shown, but it will use the data to change the colours of the cells later. This formula is by far the most confusing of all, it is `=IF($H11="", "", IF($H11<L2, L7, IF($H11=$L$2, L6, IF($H11<=L3, L5, ""))))` . This is simply saying that if H11 is blank, make this blank. It then says that if H11 is less than cell L2, then show L7 which is 'Overdue'. If H11 is today (L2) then show 'Due'. If H11 is less than or equal to L3 (the alert date) then show 'Alert'. The last "" means that if none of these criteria are met, it will simply show a blank. I've copied that formula (and the one in H11) and pasted them down to all the valid rows.

If you're wondering why there are dollar signs in the formula, that is to lock column or row references in order to copy and paste formulas correctly. If you're not familiar with this, do some research and see how it works. It can save you so much time when copying and pasting formulas, and it makes sure they are correct. If they were not used correctly here, the copied formula would not work when pasted. The \$ before the column reference (letter) locks that column reference in place. The \$ after the letter locks the row number in place. As an example, =A1 copied down will change to =A2. =A\$1 copied down will stay at =A\$1 because the row number is locked. The same applies to the columns if \$ is before the letter. You can toggle this by clicking on that section of the formula in the formula bar and clicking F4.

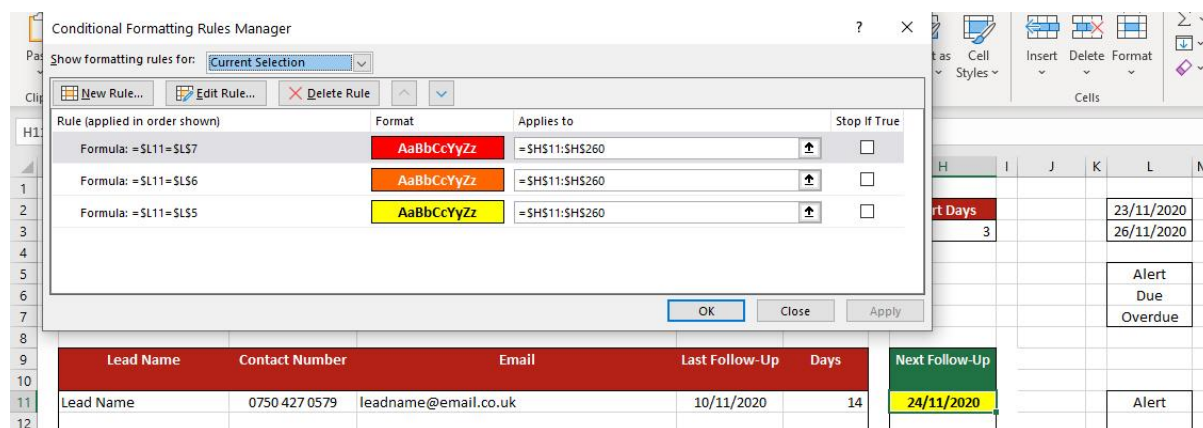
That should put you up to date with what I've done. Before we jump to the next chapter, I'd like to write more about the `=IF($H11=""` part of the formula. This and another option to hide errors (**IFERROR**) can make a huge difference to spreadsheets. How many times have you seen calculated cells in a spreadsheet with loads of zeros or errors where data is calculated from a blank cell? I see it all the time and it looks unprofessional. By telling it to make the formulated cell blank if

the source data cell is blank, it removes all of that. If you only want it to be blank to hide all the **#ERRORS** popping up from formulas, then use the **IFERROR** function. This one change can make a huge difference to the look of a spreadsheet.

While I'm on the topic of formulas, if you are slightly more advanced with Excel and use **VLOOKUP**, please don't. I made the switch from **VLOOKUP** to **INDEX** and **MATCH** several years ago and have never looked back. **VLOOKUP** is simpler to do, but it can only look up from left to right, and if you add a column in the mix, you have to redo all the formulas. It is a pain, and it can cause you no end of complications in a larger spreadsheet. **INDEX** and **MATCH** is a nested formula, so it is slightly more intimidating, but it allows you to look up from right to left and, if you add a column, it still works. This is an excellent way to future-proof a spreadsheet. If you find the nested formula too confusing, and you have a suitable version of Excel, use **XLOOKUP** instead. It's a single formula but performs in a similar way to the **INDEX** and **MATCH** combination.

Most people are put off by formulas, possibly other than **AutoSum**. You really don't need to be. Try them - start with simple ones and experiment. Add the \$ symbols in and see what effect they have. Have a look at all the functions available (they're all categorised under the Formulas tab) and see if you find any that look interesting. Then look them up and learn how to do one at a time. Take one step at a time and go at your own pace; there is no rush.

Conditional formatting



By clicking 'Conditional Formatting', 'New Rule', and then 'Use a Formula to Determine Which Cells to Format', you can get the next follow-up date to change colour accordingly. Take note of the formulas I've used (e.g. **=L11=L\$7**) and where the \$ symbols are. Those will tell the dates to change colour, based on the word written on each line (in column L). You also can see that I have applied each rule to the whole column (M11 down to M260). I've made three rules, one for each text option (Alert, Due, Overdue).

If the formulas in Conditional Formatting confuse you, do them in a cell first. The idea behind conditional formatting formulas is to get a TRUE result to change the colour, or a FALSE result not to effect a colour change. If the cell produces the result FALSE, then it won't change colour. If it says TRUE, then it will change colour. If neither, the formula won't work as conditional formatting. That is why my formula above was **=L11=L\$7** as it either will produce a TRUE or FALSE result. That's what we want. You can use complicated formulas in conditional formatting, but my advice would be to use the complicated formulas in the cells and then simply refer to the cells for the colour changes (like I did). This way you keep the conditional formatting formulas as simple as possible. That will help if you need to change them later on.

There are other conditional formatting options; you don't need to use a formula, you can simply base it on the value of a cell. Play around with this, and look up some examples, because these can be a massive help. If you can open a spreadsheet and see important information immediately (because it has changed colour), that is very helpful. Most of the spreadsheets I make have conditional formatting in many places. It takes up a lot of time to do, and can often be confusing, but when you get this right it is well worth it.

Take a closer look at the conditional formatting options. There are not just colour changes like I did but gradients, icons, bars, mini charts, etc. It is actually a wealth of possibilities, and they all change based on your data. In today's world of loads of data, but no real understanding, these functions are vital. Not only that, but it is quite fun to play around with these and to see what is possible.

If you're really feeling adventurous, there are other options around conditional formatting. You can change the formatting of the cell, add borders, make the text bold, etc. This gives you loads of opportunities. Think about a spreadsheet for different currencies. If you enter or select a currency symbol (look up how to make drop down lists), can you get cells to change to that currency? Yes, you can, with conditional formatting.

There are times when I use this for other kinds of alerts. Imagine a white cell within other white cells - no border, no text. It would blend in and you wouldn't know there is anything there. Imagine I had text appear (if something was wrong, for example) and then the cell changed colour and a border appeared. That would make a perfect warning of sorts. I do that often in spreadsheets I make, and it is all thanks to conditional formatting.

Headers, totals, and alerts

The screenshot shows an Excel spreadsheet with the following structure:

Lead Follow-Up List				
Lead Name	Contact Number	Email	Last Follow-Up	Days
Lead Name	0750 427 0579	leadname@email.co.uk	10/11/2020	14

Alerts		Alert Days
Alert	1	3
Due	0	
Overdue	0	

Next Follow-Up	
24/11/2020	Alert

The formula bar at the top shows: `=COUNTIF(L11:L260, $E4)`

Now you will see why I didn't start at the top of the spreadsheet: I now put headers and possible alerts and totals in. As you can see, I've put in the three alert names, and then used the formula **=COUNTIF(\$L\$11:\$L\$260, \$E4)** copied down, in order to count how many of each of the alerts there are. If you have 200 lines, it's hard to see how many alerts there are, so this shows at the top where you will always be able to see (I'll lock the view later). The spreadsheet could be done differently so that you can sort by the due date, but there will always be cases where alerts will be hidden down the page, so I always put an alert at the top. You can see that I've also used the green header, to show that the cells are formulated and locked. If you had a column to total (like a value, for example) then I would suggest putting the total at the top. Why? Same reason as the alerts: it always will be visible. You don't need to scroll to the bottom to see the total. Also, it's right above the header, so you can see what each total is for. Hardly any people do this, but it makes a major positive difference.

I've coloured the rest of the unused cells in white to get rid of the grid lines. This is the point where the download example gets up to.

Hiding columns and unlocking entry cells

The screenshot shows an Excel spreadsheet with the following layout:

- Row 2: A red header cell containing the text "Lead Follow-Up List".
- Row 3: A green header cell containing the text "Alerts".
- Row 3: A red header cell containing the text "Alert Days".
- Row 3: A white cell containing the number "3".
- Row 4: A yellow cell containing the text "Alert".
- Row 4: A white cell containing the number "1".
- Row 5: An orange cell containing the text "Due".
- Row 5: A white cell containing the number "0".
- Row 6: A red cell containing the text "Overdue".
- Row 6: A white cell containing the number "0".
- Row 9: A red header row with the following columns: "Lead Name", "Contact Number", "Email", "Last Follow-Up", and "Days".
- Row 10: A white row with the following cells: "Lead Name", "0750 427 0579", "leadname@email.co.uk", "10/11/2020", and "14".
- Row 10: A green header cell containing the text "Next Follow-Up".
- Row 10: A yellow cell containing the text "24/11/2020".
- Row 11: A white row with empty cells.
- Row 12: A white row with empty cells.
- Row 13: A white row with empty cells.
- Row 14: A white row with empty cells.

I've now hidden all the columns to the right of the last white cell, and all the rows below the last white row. I do that by selecting the first set of blank cells (the whole column or row, by clicking on the column letter or row number) and then clicking Shift + Control + Right arrow (to do columns, or + Down arrow to do rows). Then click anywhere on the selection, right click, and hide. This then leaves me with only the part I want the users to use. I see so many spreadsheets where nothing is hidden, leaving all the workings and support columns free to view and often even edit. I think it looks so untidy. Yes, if it's your spreadsheet and you need to see all the workings, then you can do so. When you're making a spreadsheet for someone else, that can often be distracting and overwhelming. It often takes me hours to figure out what someone's done with a spreadsheet. Then, once I've made a better spreadsheet that does even more than the original, it takes me a fraction of the time to explain to someone how to use the new spreadsheet. That is what a neatly laid out spreadsheet can bring to the table.

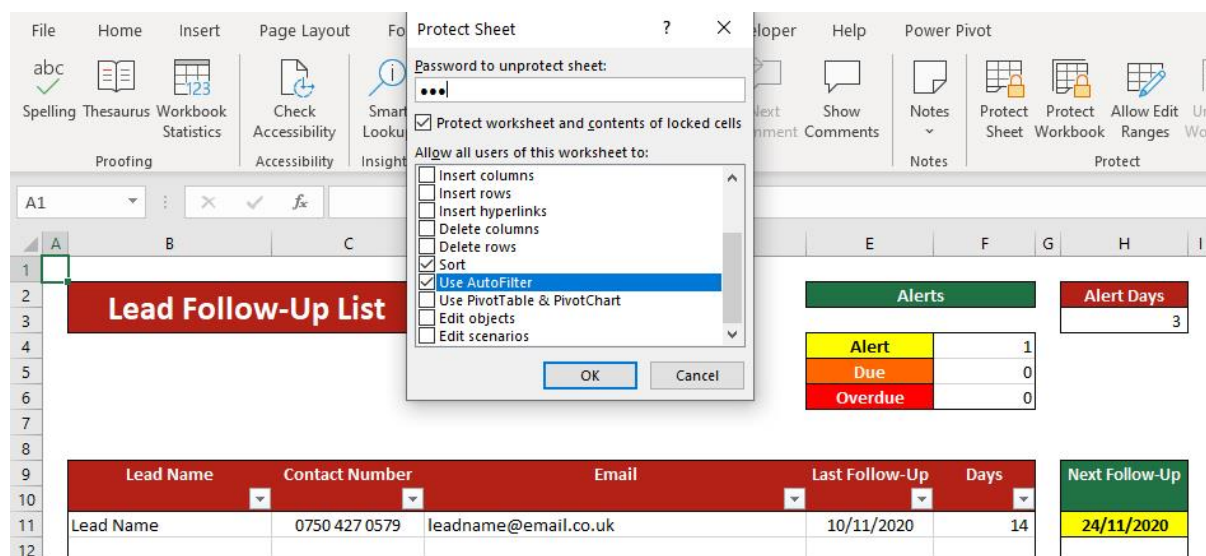
The next thing to do is unlock the editable cells and put in the filters (to sort). Firstly, I selected the section under the red headers, so all lines below the red (except for the bottom white row I use as a border). I DID include the bottom red row, though (directly under the header text). It is part of my header, but this way I use the top line of

the header for the text, and the second line of the header for the filter buttons. That second line needs to be unlocked in order to work. Once you've selected what you wish to unlock, right click on the selection, select 'Format' and then click 'Protection'. Then, uncheck both boxes (Locked and Hidden). Make sure to do this for any other cells which can be edited (in this case H3).

I see so many spreadsheets that businesses use, and I can safely say that more businesses use unlocked spreadsheets than locked ones. For the life of me, I can't figure out why. Given all the points I've shared above, most spreadsheets are untidy and confusing. People then end up over-writing formulas and that can cause massive issues. Think about a simple scenario. You're totalling up a list of expenses and the total doesn't seem right to you, but you need to print it for the client. You simply edit the total figure to be what you need it to be and send it. Then the next person uses the spreadsheet to input their costs, and assumes the total is right. It's not, because you wrote over the formula. They send it and make a huge loss. This is why formulated cells need to be locked and protected. Even in my spreadsheets, the ones I use myself and no one else touches, I still lock them to protect myself from doing this. It is so easily done.

I then put the filters in, select the section for the bulk of the text (including the bottom red row of the header) and click the filter icon under the Data tab at the top of the screen. That put in a filter so people can sort the data easily by using the icons in the second header row. We do have to set permissions when locking the worksheet, though. All cells selected when adding a filter need to be unlocked, that's why the bottom header row was unlocked, and why I used two rows for the header. The top one had the text, and the bottom one was unlocked to include the filter buttons.

Locking the worksheet and workbook

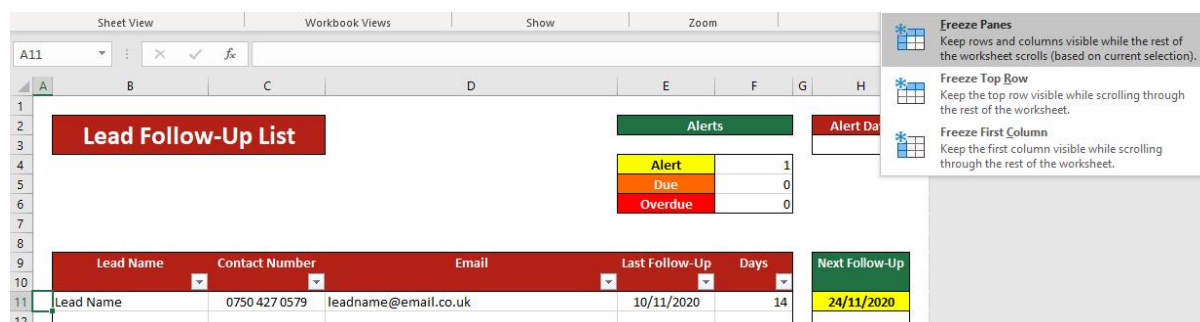


Under the review tab at the top, there are two options. Protect Sheet and Protect Workbook. Protect Sheet protects that tab only, and only lets you edit unlocked cells. Protect Workbook protects the integrity of the workbook (tabs, etc.). When selecting Protect Sheet you not only have to put the password in (twice), but you also can check some boxes to allow certain things. In this case I allowed Sort and Use AutoFilter (because people will need to use that). I also allowed Select Locked Cells, Select Unlocked Cells, and Insert Hyperlinks. The first two are so that people can click anywhere, and the 'Insert Hyperlinks' is so that it creates a hyperlink when an email is entered.

The spreadsheet is now locked and almost ready to use. I've used the password **abc** in the example spreadsheet (although the version you downloaded would be unlocked).

Clicking either icon again will let you unlock the respective lock, but you need to remember your original password. By the way, there is no password recovery, so please don't forget it!

Locking the view



We've carefully laid out this spreadsheet with the headers at the top, so we want the top to stay in place and we need the rest of the rows below to be able to scroll behind the headers. In order to do that I simply selected cell A11 and clicked on the Freeze Panes (under Freeze Panes, under the View tab). This locks the headers in place and allows you can scroll the rows underneath it! If I had more data width-wise that went off the screen, I would have clicked on cell C11, for example. That way if I scroll to the right, the Name column will stay in place so I can see what line I'm looking at. That is a massive help when entering and reading data.

This simple change can make a huge difference to accuracy, efficiency, time taken, and your stress level. I've seen people scrolling right, then scrolling left to see which line, then scrolling right to see the value, then forgetting which line it was on and entering data or reading results on the wrong line. Fix the cells you need to see, so you can always see them. This is useful to remember when you are laying out the spreadsheet design; keep the identifying cells to the left so that you can do this successfully.

Conclusion

A	B	C	D	E	F	G	H	I
1								
2	Lead Follow-Up List			Alerts		Alert Days		
3								
4				Alert				
5				Due				
6				Overdue				
7								
8								
9	Lead Name	Contact Number	Email	Last Follow-Up	Days	Next Follow-Up		
10								
11	Lead Name	0750 427 0579	leadname@email.co.uk	10/11/2020	14	24/11/2020		
12								
13								

That's it, spreadsheet done! I know this is only the beginning, but I hope it's given you a good foundation and a solid start. I'd suggest that you investigate more about all the functions you have learned, as there are so many possibilities! You can also dive deeper into more complicated formulas, if you wish, that will open up more options. There are other resources on my website, otherwise the internet is full of Excel blogs, videos, and instructions to help you. If you would like the benefits of a professionally-made purpose-built spreadsheet, please visit my **WEBSITE** to get in touch.

Here's a recap of 10 main points:

1. Don't start at the top of the spreadsheet, start further down to leave space at the top for headers, totals, and alerts once you've locked the view.
2. Separate data entry cells to formulated cells; colour co-ordinate them, so it is clear. Leave blank white columns and rows in between and around the edges.
3. Box all data so that you can see clearly where it needs to be entered and where the borders are. Make sure there is a limit to the number of rows, to keep the formulas manageable.
4. Double up header rows to allow for filters, if need be.

5. Format all the data correctly, so dates show as dates and money shows as the correct currency.
6. Use conditional formatting to highlight important details.
7. Experiment with formulas, but remember the locked line and column references by using the \$ symbol (or F4). That can save you so much time and effort.
8. Hide all unused columns and rows, so that only what is needed to be seen is visible. Hide all support data.
9. Lock the spreadsheet properly, to protect formulas and only allow data entry where required.
10. Lock the view so that you can see vital data when scrolling.

This e-book was written by

Richard Sumner

from



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