

Using the copy down formulas feature

Sometimes it is useful to utilize one or more functions on data that comes into a spreadsheet via a form. For example, to save users time, you may want to look up a student's email address or home contact information based off of their name or more student ID number. At New Visions we generally try to eliminate as much data entry on the end of the user as possible. But how do you apply formulas to rows of data that have not yet been submitted? The answer lies in a handy feature that is now available in both formMule and autoCrat.

Example Case: Dynamically look up student info based on their name

In this case we will create a simple behavior logging system where teachers and school staff can submit behavioral incidents. We will use the VLookup formula to match student names to their various personal contact information, and we will use a feature available in both autoCrat AND formMule that allows you to copy a formula into new rows added through form submission. The scripts will ensure that these formulas are applied every time a new incident is logged.

You can view the documents created during this tutorial here: [copy down formula tutorial docs](#)

[Step 1: Create a new spreadsheet and attach a form](#)

[Step 2: Add a new sheet with student contact information](#)

[Step 3: Enter your formulas on the form response sheet](#)

[Step 3: Install formMule and/or autoCrat](#)

[Step 4: Set up formMule or autoCrat](#)

[Give Us Feedback!](#)

Step 1: Create a new spreadsheet and attach a form

For this tutorial we will be creating a simple behavior logging system (similar to the one used in our [docAppender tutorial](#)). First, create a new spreadsheet and insert a form. In this example we have the following fields:

Behavior Logger (Responses)_AutoCrat Tutorial ☆

File Edit View Insert Format Data Tools Form Help All changes saved in Drive

Print Undo Redo Paste \$ % 123 Arial 10 B I S A

A	B	C	D	E
Timestamp	Student Name	Date and Time of Incident	Type of Incident	Description of Incident

Step 2: Add a new sheet with student contact information

We will next added a student roster with the following contact information for each student:

	A	B	C	D	E
1	Student Name	Grade	Email	Parent Contact	Parent Email
2	Bonnie	9	test15@youpd.org	Mr. Orange	test21@youpd.org
3	Connie	10	test16@youpd.org	Mrs. White	test22@youpd.org
4	Donnie	9	test17@youpd.org	Ms. Black	test23@youpd.org
5	Johnny	11	test18@youpd.org	Mr. Pink	test24@youpd.org
6	Lonnie	12	test19@youpd.org	Ms. Tan	test25@youpd.org
7	Ronnie	11	test20@youpd.org	Mr. Greene	test26@youpd.org
8					
9					

+
☰
Behavior Logs
StudentRoster

Step 3: Enter your formulas on the form response sheet

Next, we will use the VLookup formula to find student email and parent/guardian contact info for each student. If you are unfamiliar with VLookup you should really spend a few minutes Googling for a tutorial on it. It is by far one of the most useful spreadsheet functions you can know.

In this example, to find the grade of a student in row 2 of the Behavior Logs sheet we would enter “=vlookup(B2, ‘StudentRoster’!A:E, 2, 0)”. Feel free to [make a copy of our document](#) and play around with the formulas!

=vlookup(B2,StudentRoster!A:E, 2, 0)				
C	D	E	F	G
Date and Time of Incident	Type of Incident	Description of Incident	Grade	Email
10/16/2013 14:00:00	Profanity, Eating in class	Dummy data	=vlookup(B2,StudentRoster!A:E, 2, 0)	

I put a similar formula into each of the other columns to the right of our form response columns:

D	E	F	G	H	I
Type of Incident	Description of Incident	Grade	Email	Parent Contact	Parent Email
Profanity, Eating in class	Dummy data	10	test16@youpd.org	Mrs. White	test22@youpd.org

Step 3: Install formMule and/or autoCrat

Next we are going to install both formMule and autoCrat to show how they are basically identical in terms of the copy down feature interface. If you are following along, feel free to only install one or the other.

To install a script from the Google Script Gallery, [see this mini-tutorial](#).

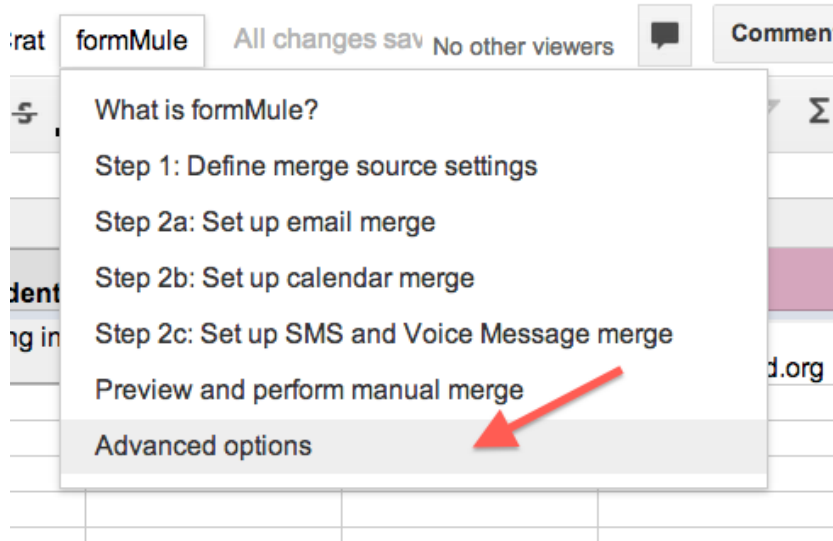
Step 4: Set up formMule or autoCrat

If you are completely unfamiliar with formMule, please see [this basic tutorial](#) for how to use the script to automate email merges. If you are unfamiliar with autoCrat, please see [this basic tutorial](#) on how to automate document merges.

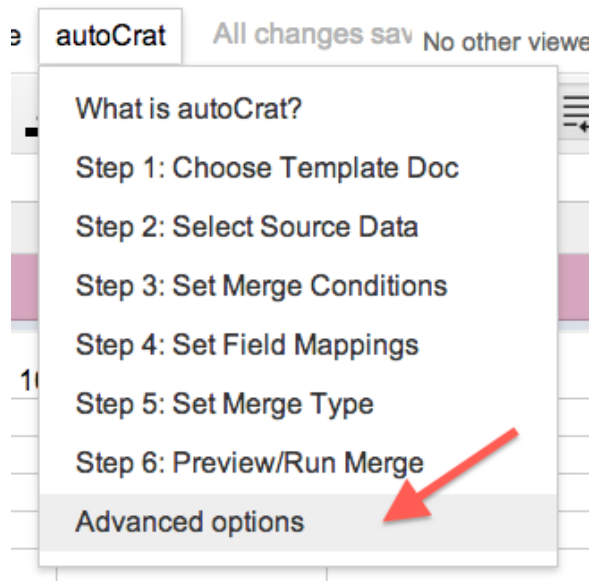
The copy down formulas functionality will work whether or not you use the primary functionality of formMule to send emails, create calendar invites or send text messages. This can be used as a standalone feature. In autoCrat, you will need to run through all of the prior setup steps before you can get to the advanced options.

In either the formMule or autoCrat menus, click on “Advanced options”:

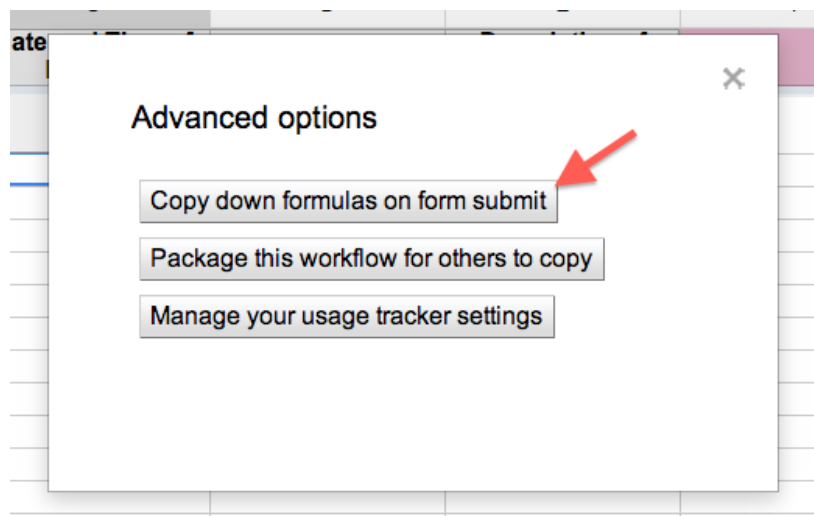
formMule



autoCrat



Then click on “Copy down formulas on form submit”:



The number in the drop down tells the script which row contains the formulas you would like formMule/autoCrat to copy. Typically this is row 2, but not always.

The script will find the columns that have been added to the right of the form submission columns that contain formulas. In our example, these are columns F, G, H and I. You may need to scroll to the right to find the columns you're looking for. You select a formula by clicking on the column letter of the column it is stored in. So if we only wanted to copy the formula looking up student grade level, we could just click on the "F".

In this example we will click all four columns F through I.

Copy down formulas within form response sheet

This feature allows you to use additional columns in the form response sheet to calculate or look up values upon form submission. Only columns that are not part of your form will be available for selection below. Selecting the "Paste as values?" checkbox will paste the calculated values into the form submission row, without formulas.

Be aware that any changes you make to the column order or structure of the form responses sheet will require you to redo these settings.

2 Row containing master values/formulas

				F	G	H	I
Name	Date and Time of Incident	Type of Incident	Description of Incident	Grade	Email	Parent Contact	Parent Email
	Wed Oct 16 2013 14:00:00 GMT-0400 (EDT)	Profanity, Eati...	Dummy data	=vlookup(B2,Stu...	=vlookup(\$B\$2,S...	=vlookup(\$B\$2,S...	=vlookup(\$B\$2,S...
				☐	☐	☐	☐

Next, we have the option to tell the script whether to copy and paste our formulas as formulas or "as values". In different instances you may choose differently here. Pasting as values will improve the performance of your spreadsheet, particularly if the spreadsheet is very large with many complex formulas.

However, pasting the formula itself will be useful when you want the sheet to be able to dynamically update. For example, if parent email addresses were updated in our StudentRoster sheet, they would also update in any row they applied to in our

Behavior Logs sheet, so long as we did not paste as values.

In this example, we will paste each formula as a value.

		F	G	H	I
ent	Description of Incident	Grade	Email	Parent Contact	Parent Email
iti...	Dummy data	=vlookup(B2,Stu...	=vlookup(\$B\$2,S...	=vlookup(\$B\$2,S...	=vlookup(\$B\$2,S...
		☒	☒	☒	☒

The next time we submit a behavior log through our form, student grade, email, parent contact and parent email will automatically be looked up and inserted into our row, saving our end users time and effort!

Give Us Feedback!

If you found anything in this tutorial to be unclear, incomplete, out of date or otherwise confusing, please let us know! You can insert comments directly into this document by highlighting the relevant text that you want to address, clicking on the “insert” menu and clicking on “comment”.