

RCESaskAssistance

Solution Documentation

Documentation Date: November 11, 2023

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About this Project

This project aims to help the RCESaskatchewan community, a community that deals with trying to educate the local region of Saskatchewan on sustainable development as it relates to the united nations' 17 goals for sustainable development. One component of educating people on sustainable development in Saskatchewan is making them see that there is opportunity in Saskatchewan for sustainable development. The way that is thought to do this is through displaying the sustainable development projects going on in Saskatchewan that are recognized by RCESaskatchewan, as they do yearly a recognition award for sustainable developments in the province. These projects can be displayed for visitors of the RCESaskatchewan website to engage with.

This solution that visitors to the website will see is a table of projects, displaying the project name, a short intro about the projects, and what of the 17 sustainable development goals the project relates to. A visitor can filter out their choices of the projects they want to view with the search bar. As well as a

recognition award application form on the website that is connected to the solution and will eventually become project info that will populate the project table of the website.

From the perspective of the volunteers of the community what this solution entails is a solution that will provide an easier way to collect and interact with user data, such as for the purpose of mass emailing recognition award winners, as well as ways to filter and approve applications easily collaboratively with other volunteers without needing duplications of data/datasets that could lead to confusion on what is the current version of the data set. The solution will consist of the application form in the editor to which changes can be made to gain more or less data from visitors of the RCESaskwebsite. Volunteers will also interact with a spreadsheet program that will allow visitors to approve applications and have the project data ready to post on the Saskatchewan website in a manor of seconds. Though with the convenience of this solution may come challenges in changing the configuration. this document aims to give a full scope of the components of this solution including the functions used in the spreadsheet program so as to give the best understanding of how the program works so that if changes are need to add new functionality future technology directors will have a better understanding of how the system works.

Components of the solution

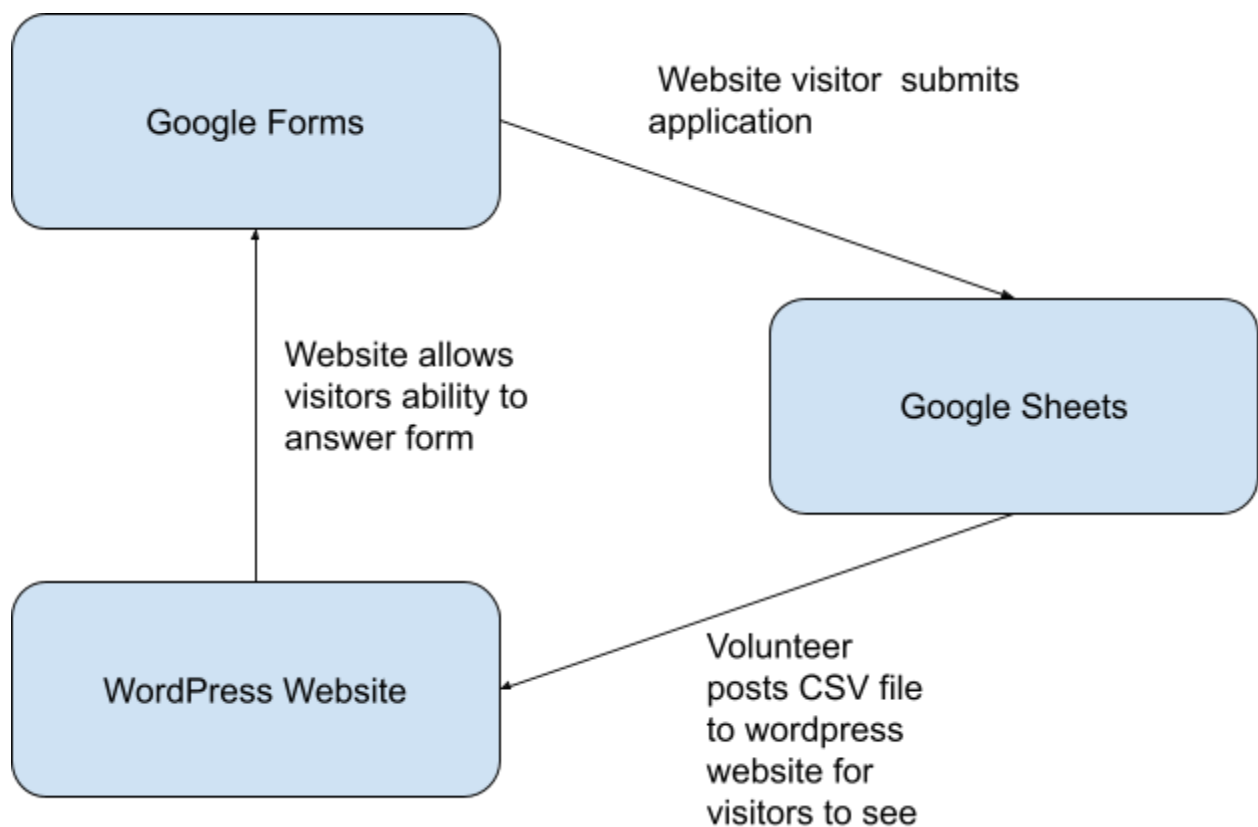


Fig 1: Simplified connections of components of solution

Google Forms

Google forms is an online software for forms and applications , it provides a form creation interface that seems simple to use to create forms, that includes common form question types such as paragraph answers , checkbox answer ect. It also provides elements such as a captcha system to avoid robot answers. There are ways of confirming to the person filling out the form that their application was submitted, such as sending a copy of their application to their email. Finally , all answers to the form can be sent to google sheets automatically so that answers can be sorted out and filtered from.

Google Sheets

Google Sheets is an online spreadsheet program that is used for storing , and organizing data in a table format, it features several functions to apply to your data to sort and filter it for different purposes. being part of the google ecosystem means it can be automatically filled by answers to google forms. Spreadsheet programs utilize a common media type called comma separated values(CSV), this means data entered can easily be migrated from one spreadsheet program to another.

WordPress (wpDataTables plugin)

Wordpress is a website building program , it's greatest advantage is the ability to use plugins , these are community built features built by and for the community, these plug ins can be supported over their lifetimes by the creators to continue to function no matter the changes to wordpress or the browsers it functions on. For this solution, the wordpress plugin that is used is called wpDataTables it is a plugin that is used in 70,000+ different wordpress websites. The features that are important in the free version of this table plug in is that it allows data to be input from a CSV file. Next, the formatting of how a table that is displayed to the visitors of the website seems to be saved after first being set and saved, this means the data for the table can be swapped out easily without needing to change how it is displayed to viewers. Lastly, there is the ability to hide some columns of the table away from visitors of the website. This was useful in the solution to give visitors the ability to filter out data.

How to Implement the Current Solution

Form

First we can start with the creation of the form, this was done by copying the online form currently on the RCESaskatchewan website, this was a more simple task , google has designed the form creator to be a fairly easy tool to use with no real need to be technical still, there are two things to note about form

creation, one is creating sections, this ability allows one to chop up a form into more manageable pieces. The second thing to know is about response validation, where a check can be made on an answer, to make sure it adheres to some rules, these are called Regular Expressions or RegEx. RegEx is a more technical feature, But searching online is often a good way to find the wanted rules to follow.

The screenshot shows a form editor interface with three tabs: Questions, Responses (7), and Settings. The 'Questions' tab is active. At the top, there is a 'Description (optional)' field. Below it, a question is being edited: 'What project name would you like on the certificate (Maximum 8 words)?'. The question type is set to 'Short answer'. Below the question text, there is a 'Short answer text' field. Underneath that, a 'Regular expression' validation rule is applied, showing the pattern `(\w*\W*){0,8}` and the label 'Maximum 8 words'. To the right of the question, there is a vertical toolbar with icons for adding, deleting, and editing questions. At the bottom of the question card, there is a 'Required' toggle switch which is turned on. Below the question card, there is a 'Long answer text' field with the prompt 'Tell us about your project – why where, what, when and how (about 200 words) *'. A 'Show' dropdown menu is open, showing options for 'Description' and 'Response validation' (which is checked).

Fig 2: Form Regular Expression

In the settings tab we can set email collection to be by Responder Input so that email is collected even if it is not a Gmail email address, as well there are the settings for email the response back to the recipient. Lastly, we can turn on the progress bar, this is a useful feature for forms with multiple sections to show people responding to the form how many more sections they have to go. Unfortunately, all other settings seem to need a person responding to this form to be signed into a GMail if we activate them.

The screenshot shows the 'Settings' tab of a form configuration tool. At the top, there are three tabs: 'Questions', 'Responses' (with a notification badge), and 'Settings' (which is selected). The 'Settings' panel is divided into three main sections: 'Make this a quiz', 'Responses', and 'Presentation'. The 'Make this a quiz' section has a toggle switch that is currently turned off. The 'Responses' section, titled 'Manage how responses are collected and protected', includes settings for 'Collect email addresses' (with a dropdown menu set to 'Responder input'), 'Send responders a copy of their response' (with a dropdown menu set to 'Always'), 'Allow response editing' (with a toggle switch turned off), and 'Limit to 1 response' (with a toggle switch turned off). The 'Presentation' section, titled 'Manage how the form and responses are presented', includes a 'FORM PRESENTATION' section with a 'Show progress bar' toggle switch that is turned on.

Questions Responses 7 Settings

Settings

Make this a quiz
Assign point values, set answers, and automatically provide feedback ☐

Responses
Manage how responses are collected and protected ^

Collect email addresses
Required to **send response copies**
Respondents will manually enter their email response Responder input v

Send responders a copy of their response
Always v

Allow response editing
Responses can be changed after being submitted ☐

REQUIRES SIGN IN

Limit to 1 response ☐

Presentation
Manage how the form and responses are presented ^

FORM PRESENTATION

Show progress bar ☒

Fig 3: Form Settings Tab

What is done next is adding a google spreadsheet to catch the response to the form. This can be added by going to the 'response' and adding a spreadsheet to this form. This tab also contains the ability to turn off and on the ability to accept responses.

Questions Responses 7 Settings

7 responses [View in Sheets](#) ⋮

Accepting responses ☒

Summary Question Individual

Who has responded?

Email
elc475@uregina.ca
elc475@uregina.ca (1)
elc475@uregina.ca (2)
elc475@uregina.ca (3)
elc475@uregina.ca (4)
elc475@uregina.ca (5)
elc475@uregina.ca (6)

Project Name

7 responses

SPOT

Fig 4: Form Responses Tab

Next for the form we have ways to send the form to be answered by clicking the 'send' button at the top of the form builder. Next for the solution you have to go to the embedded table of the send pop up it looks like this: '<>'. For the width it is recommended that the width is 1200px and the height is 640px. What is copied here will be used in the later wordpress section.

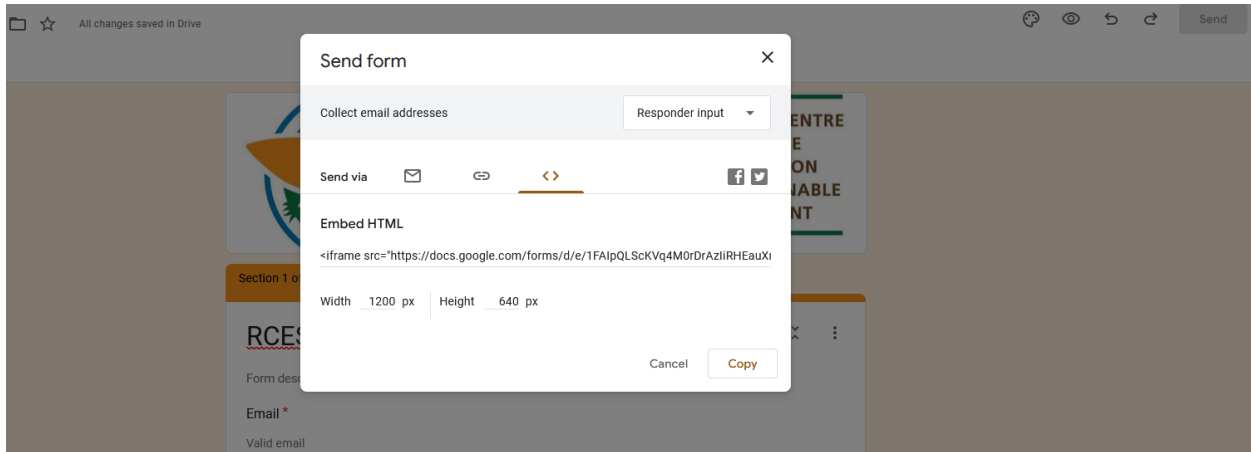


Fig 4: Form Send by Embedded HTML.

Sheets

Implementation

In the created google sheets file , we have the first sheet which is the responses to the google form. What I decided to do was shift all cells left by one by left clicking on the first cell A1 and left clicking and pressing 'insert 1 column left' we can then title this newly created column 'Accepted' in this column we have each row be reviewed by volunteers, when an application is accepted, the volunteer can make the the first column '=TRUE()' this is the first introduction of mathematical functions in the spreadsheet program that is useful for filtering information into more useful forms. If we want to reject the application we can make a column of the application row '=FALSE()'. This is the only edit that is made on this sheet for the file. This is because we want to keep newly entered data untouched and clean.

A2 fx =TRUE()

	A	B	C	D	E
1	Accepted	Timestamp	Email Address	Project Name	Was this project pursued by an individual, a group of individuals or an organization?
2	TRUE	10/27/2023 15:17:53	elc475@uregina.ca	SPOT	a group of individuals
3		10/30/2023 13:28:54	elc475@uregina.ca	kjlkj	an organization
4		10/31/2023 15:08:43	elc475@uregina.ca	kjkjgkjg	individual
5		11/10/2023 19:25:18	elc475@uregina.ca	afdaf	a group of individuals
6		11/10/2023 19:33:42	elc475@uregina.ca	uyrru	a group of individuals
7		11/11/2023 17:22:48	elc475@uregina.ca	gigjgig	a group of individuals
	TRUE	1/1/2023		Utilizing Biocementation to Mitigate Calcite Formation	a group of individuals

Fig 5: Sheets =TRUE()

At the bottom of the google sheets editor you can see the ability to add sheets to the file

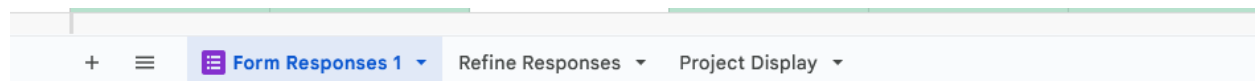


Fig 6: Sheets new sheet

In this way we can start to refine the data down while leaving the original responses intact, the refinement of responses is done automatically with different mathematical functions, all the volunteer would need to do is accept the application.

The next sheet 'Refine Responses' is used to check what sustainable goals a project deals with as well as gets one project link to present to website viewers.

First we get the information from the form responses, this is the project name , small sentence about the project, the block of the UN goals the project deals with , the three possible links to the project websites, and the question of if we can post the link on the website. In this case , this is done by query. Using the formula ‘=QUERY('Form Responses 1'!A1:AH,"SELECT D,V,Z,O,P,Q,R where A = TRUE AND A IS NOT NULL",1)’

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Project Name	Please provide in Which of the UN Website/URL (If Social Media/UR Social Media/UR May we post a li	1. No Poverty –	2. Zero Hunger –	3. Good Health a	4. Quality Educa	5. Gender Equali	6. Clean Water a	7. Affordable and	8. Decent Work	9. Industry, Innov	10. Reduced ineq	11. Sustainable (12. Re			
2	SPOT	SPOT is an AI at spots.	3. Good Health a	https://github.com/edccharlie4/Capstone-2022-Tsar	Yes				TRUE								
3		Microbiologically calcium carbonate precipitation (MIC) potential to reduce infiltration through waste rock piles calcite formation downstream which negatively impact populations. This focuses on using bacterium Sporopasteurella to bio-c waste rock piles a	6. Clean Water and safe, and equall	Sanitation – access to safe feasibility, field s	water and sanitation for all, 14. Life Below Water – influencing factor conserve & sustainably use												
4		Utilizing Biocem environmental in oceans, seas & marine Mitigate Calcite I the process.	1. No Poverty – end poverty in all its forms everywhere by 2030, 2. Zero Hunger – end hunger, improve food security, nutrition and sustainable agriculture, 3. Good Health and Well-being – promote healthy lives and well-being at all ages, 7. Affordable and Clean Energy – affordable, sustainable, reliable and modern energy for all, 10. Reduced inequalities – reduce inequality within and sustainable food Consumption & Production – ensure income and marj sustainable consumption & production, 15. as well as comen Life on Land – halt and reverse land			Yes											
5	URSUS cares	degradation and biodiversity loss				Yes		TRUE	TRUE	TRUE				TRUE		TRUE	T
6																	
7																	
8																	

Fig 7: Sheets Refine Query

This formula gets all of the information from the previous sheet that we just talked about, it will only get the information for a particular row when column A, the acceptance row is true , and not empty , this cuts down the data to only the needed data to be displayed to the visitors of the website. After the 7 filled columns from the query row H is where we start separating the 17 goals into their own cells , we do this by having each cell title be one of the 17 goals, exactly has entered in the form submission , that being:

1. No Poverty – end poverty in all its forms everywhere by 2030
2. Zero Hunger – end hunger, improve food security, nutrition and sustainable agriculture
3. Good Health and Well-being – promote healthy lives and well-being at all ages
4. Quality Education – lifelong, inclusive and quality education for all
5. Gender Equality – gender equality and empowerment of all girls and women
6. Clean Water and Sanitation – access to safe water and sanitation for all
7. Affordable and Clean Energy – affordable, sustainable, reliable and modern energy for all
8. Decent Work & Economic Growth – inclusive & sustainable economic growth & employment
9. Industry, Innovation and Infrastructure – resilient infrastructure and sustainable industrialization
10. Reduced inequalities – reduce inequality within and among countries
11. Sustainable Cities and Communities – inclusive, safe, resilient and sustainable communities
12. Responsible Consumption & Production – ensure sustainable consumption & production
13. Climate Action – take urgent action to combat climate change and its impacts
14. Life Below Water – conserve & sustainably use oceans, seas & marine resources
15. Life on Land – halt and reverse land degradation and biodiversity loss
16. Peace, Justice & Strong Institutions – promote just, peaceful & inclusive societies
17. Partnership for Sustainable Development Goals – revitalize partnerships for sustainability.

	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	1. No Poverty –	2. Zero Hunger –	3. Good Health a	4. Quality Educa	5. Gender Equali	6. Clean Water a	7. Affordable and	8. Decent Work	9. Industry, Innov	10. Reduced Ineq	11. Sustainable	12. Responsible	13. Climate Actio	14. Life Below W	15. Life on Land	16. Peace, Justit	17. Partnership	Project Links
2																		https://github.com/mwischardier/Capstone-2022-Ivan-Cub
3																		
4																		
5	TRUE	TRUE	TRUE				TRUE			TRUE		TRUE						
6																		
7																		

Fig 8: Sheets separate SDG

The function used is ‘=ARRAYFORMULA((IF(ISERR(SEARCH(LEFT(H\$1:4),\$C2:\$C)), "", TRUE()))’ this formula searches to see if the first few characters of the label above are in the block of sustainable development goals that is in column C. if it is then it places true in the cell. This is done for all of the 17 SGDs, the way the formula is structured makes this easily, we place this formula in cell H@ and using the blue circle at the bottom right of the cell to drag the formula into the rest of the 16 SGD columns, the formula will change to accommodate the changing column titles

After this we have the project link. To keep the link active and clickable only one link can be chosen to represent the project. The formula that decides this is :

‘=ARRAYFORMULA(IF(G2:G="Yes", IF(D2:D<>"", \$D2:D, IF(E2:E<>"", E2:E, IF(F2:F<>"", F2:F, ""))), "")’.

From there the last Sheet is final refinement, this sheet gives names to all of the columns instead of the questions that were part of the google form.

To solve this we first query the previous sheet for all the data using:

‘=QUERY('Refine Responses'!A2:Y, "SELECT A,B,X,G,H,I,J,K,L,M,N,O,P,Q,R,S,T,U,V,W,C WHERE A IS NOT NULL", 1)’.

The thing to note is that “‘Refine Responses'!A2:Y” is starting from A2 not A1 so we can add our own column titles. The last column of this sheet is the block of a Sustainability goals this project deals with , this is useful on the wordpress website when a visitor is looking to sort out the projects to ones dealing with one topic.

[illegible]

Fig 9: Sheets SDG search block

While looking at the ‘Project Display’ Sheet , we can download the csv of just this sheet. This csv is the data we want to put in our Wordpress website. We will add this along with the google form in the next section.

Data Migration Tips

If you are a windows machine, you have access to windows powertoys text extractor for free.

Here is a tutorial on how to use it: <https://www.youtube.com/watch?v=H6u635qcLtE>

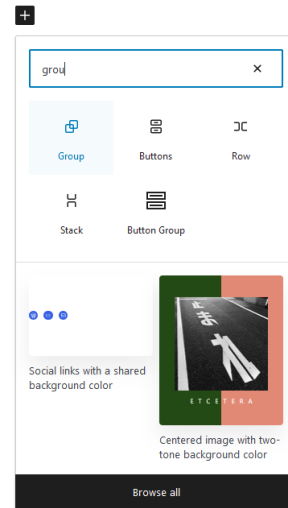
****NOTE**** The extractor is not always 100% full proof, but text extraction is faster than copying via typing when copying and pasting is not an option. ‘

WordPress

WordPress is how we are hosting our website. Our first order of business is to add the form to the website , first we add a new page. In that we create a group and then add into that group a custom html block inside that block we add the form embedded code that we copied in figure 4.

Application

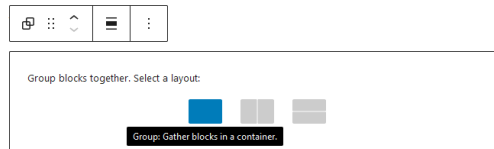
Type / to choose a block



» Social Media – Define which pictures & texts will get shared

Fig 10: WordPress group

Application

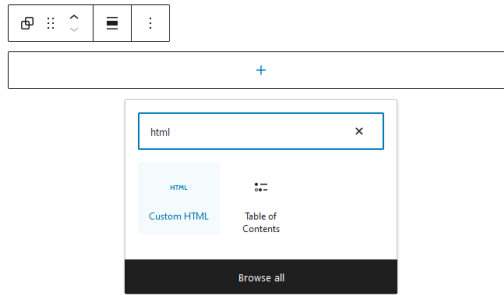


Ultimate Social Media – Define which pictures & texts will get shared

Page 3 Group

Fig 11: WordPress Container

Application



Ultimate Social Media – Define which pictures & texts will get shared

Fig 12: WordPress HTML

Application

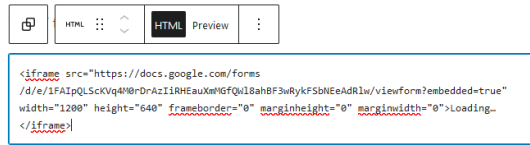


Fig 13: WordPress embedded

Application

RCESask Award Application

[Sign in to Google](#) to save your progress. [Learn more](#)

* Indicates required question

Email *

Your email

Project Name *

Your answer

Was this project pursued by an individual, a group of individuals or an organization? *

☐ Individual

☐ A group of individuals

Fig 14: WordPress form

Next we need the wpDatatable plugin to be able to create a table

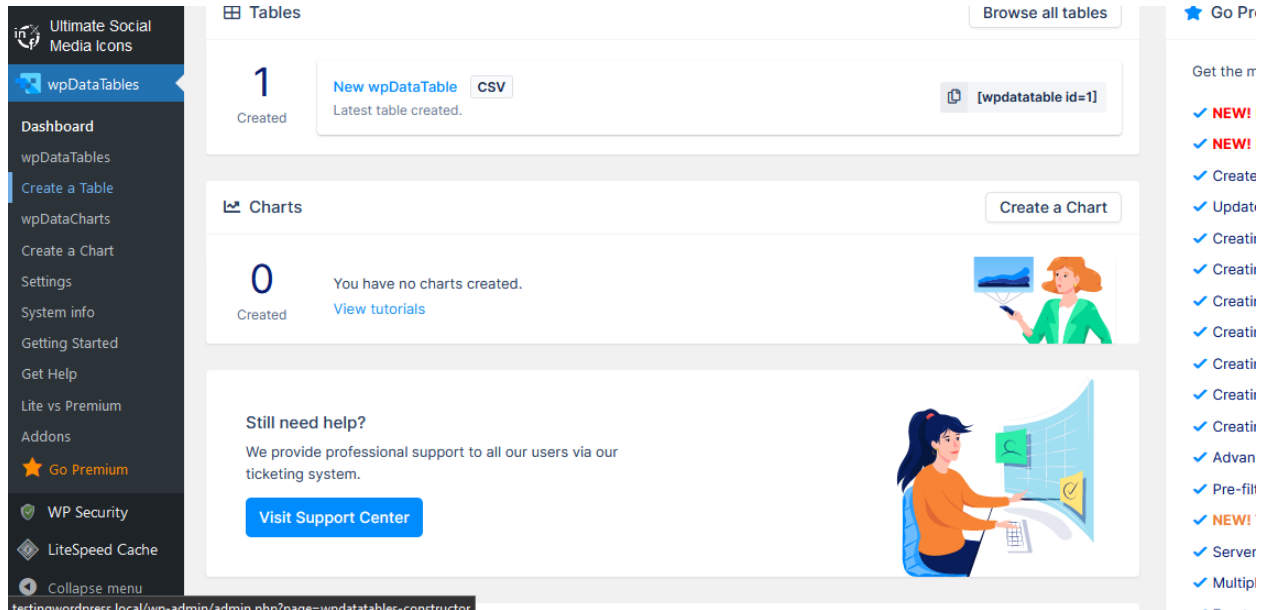


Fig 15: WordPress add table

We can add a table based on the table source , make it a csv that we can browse and upload to the wordpress website, clicking save loads the data into the wordpress table.

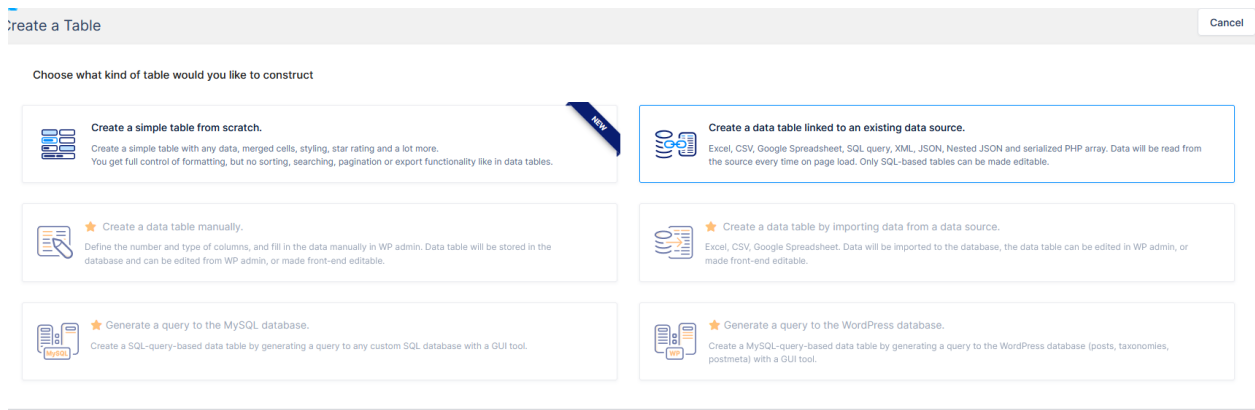
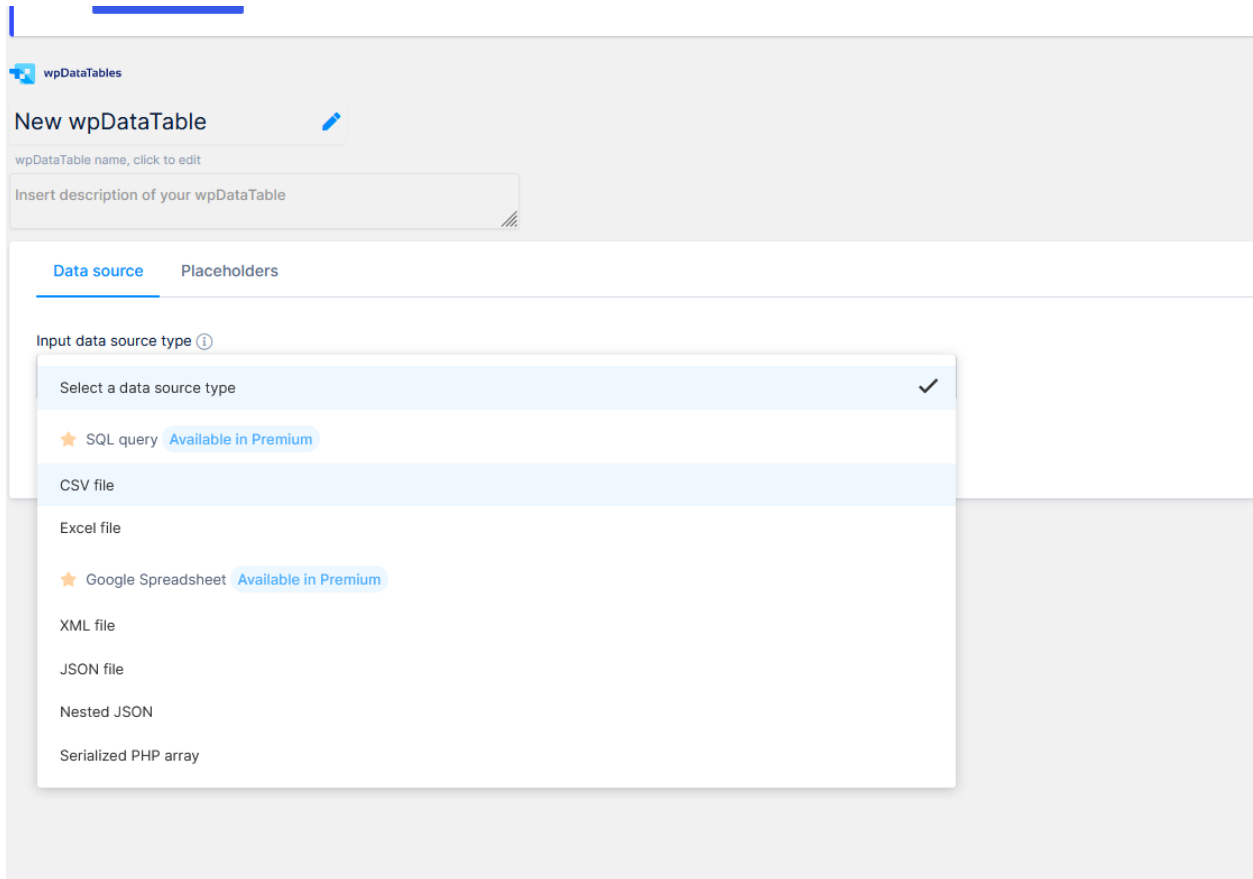


Fig 16: WordPress data select



wpDataTables

New wpDataTable

wpDataTable name, click to edit

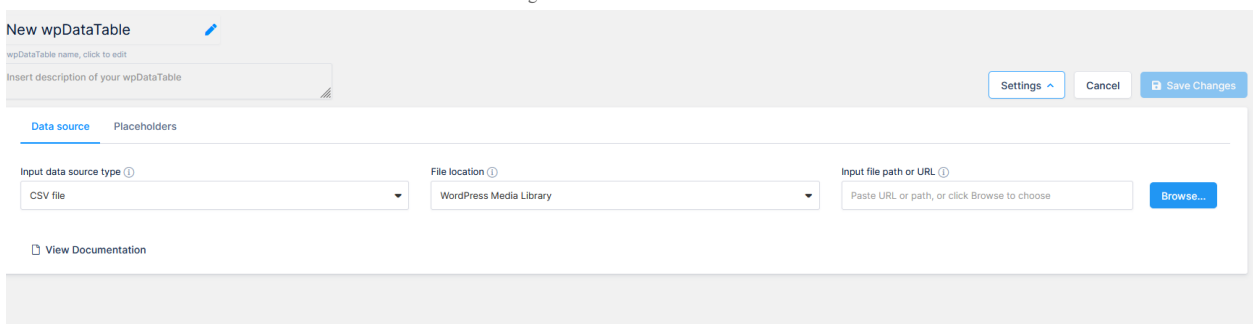
Insert description of your wpDataTable

Data source Placeholders

Input data source type ⓘ

- Select a data source type ✓
- ★ SQL query Available in Premium
- CSV file
- Excel file
- ★ Google Spreadsheet Available in Premium
- XML file
- JSON file
- Nested JSON
- Serialized PHP array

Fig 17: WordPress CSV select



New wpDataTable

wpDataTable name, click to edit

Insert description of your wpDataTable

Data source Placeholders

Input data source type ⓘ

File location ⓘ

Input file path or URL ⓘ

CSV file

WordPress Media Library

Paste URL or path, or click Browse to choose

Browse...

Settings ^ Cancel Save Changes

View Documentation

Fig 18: WordPress browse select

Select an Excel or CSV file

Upload files

Media Library

DROP FILES TO UPLOAD

or

Select Files

Maximum upload file size: 300 MB.

Fig 19: WordPress upload CSV

New wpDataTable

wpDataTable name, click to edit

Insert description of your wpDataTable

Settings ^

Cancel

Save Changes

Save Changes

Data source

Display

Sorting and filtering

Table Tools

Placeholders

NEW! Customize

NEW! Advanced

Input data source type ⓘ

File location ⓘ

Input file path or URL ⓘ

CSV file

WordPress Media Library

http://testingwordpress.local/wp-content/uploads/2023/10/Ri

Browse...

View Documentation

Fig 20: WordPress save CSV

We can do a few things to edit the table , such as making the project name column width 10% , make the About column width 10% and the project link column 5%.

Table preview and columns setup

★ f() Add a Formula Column

Show 10 entries

Project Name	1	2	3	4
SPOT is an AI assisted medical diary that focuses on analyzing and classifying skin spots.	TRUE	TRUE	TRUE	TRUE
URSUS Cares is a program that provides sustainable food and clothing options to low income and marginal students and youth as well as	TRUE	TRUE	TRUE	

Column settings: Project Name

Display Data Sorting Global Filtering Conditional formatting

Displayed header (1)

Project Name

Cell content prefix (1)

Hide on mobiles (1)

Collapse column on mobile devices

CSS classes (1)

Column header alignment (1)

Default

Column width (1)

10%

Group column (1)

Toggle column grouping

Column position (1)

0

Cell content suffix (1)

Hide on tablets (1)

Collapse column on tablet devices

Visible on front-end (1)

Show column in front-end

Column cells alignment (1)

Default

Column color (1)

Column header text rotation (1)

Default

View Documentation

Cancel Save Changes

Fig 21: WordPress Project Name

The screenshot shows the WordPress Table Editor interface. On the left is a sidebar with navigation links: 'Get Help', 'Life vs Premium Addons', 'Go Premium', 'WP Security', 'LiteSpeed Cache', and 'Collapse menu'. The main area displays a table with columns: 'Project Name', 'About Project', 'Project links', and a numeric column '1'. The 'About Project' column is selected, and its settings are shown on the right in the 'Column settings: About Project' panel. The 'Display' tab is active, showing options for 'Displayed header' (set to 'About Project'), 'Cell content prefix', 'Hide on mobiles' (checked), 'Collapse column on mobile devices' (unchecked), 'CSS class(es)', 'Column header alignment' (Default), 'Column width' (10%), 'Group column' (unchecked), 'Toggle column grouping' (unchecked), 'Column position' (1), 'Cell content suffix', 'Hide on tablets' (checked), 'Collapse column on tablet devices' (unchecked), 'Visible on front-end' (checked), 'Column cells alignment' (Default), 'Column color' (white), and 'Column header text rotation' (Default). Buttons for 'View Documentation', 'Cancel', and 'Save Changes' are at the bottom.

Fig 22: WordPress About

The screenshot shows the WordPress Table Editor interface with the 'Project links' column selected. The settings panel on the right, titled 'Column settings: Project links', shows the 'Display' tab. The 'Displayed header' is set to 'Project links', and the 'Column position' is 2. The 'Visible on front-end' option is checked. Other settings like 'Hide on mobiles', 'Collapse column on mobile devices', 'CSS class(es)', 'Column header alignment' (Default), 'Column width' (5%), 'Group column' (unchecked), 'Toggle column grouping' (unchecked), 'Cell content prefix', 'Cell content suffix', 'Hide on tablets', 'Collapse column on tablet devices', 'Column cells alignment' (Default), 'Column color' (white), and 'Column header text rotation' (Default) are also visible. Buttons for 'View Documentation', 'Cancel', and 'Save Changes' are at the bottom.

Fig 23: WordPress project links

Next clicking on the ‘Column List’ button , scroll to the bottom of the list of columns and make ‘SGD Search Block’ invisible. Next we can go into the display tab , unclick “show table title on page” then click “ limit page width to page” now a new selection “wrap words to newlines” which we can select. And save all changes

Table preview and columns setup





★ f(x) Add a Formula Column
Complete column list
Column List

Print
Excel
CSV
Copy

Show 10 entries Search:

Project Name	About Project	Project links	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	SGD Search Block
																				1. No Poverty – end poverty in all its forms everywhere... by 2030, 2. Zero Hunger – end hunger, improve food

Fig 24: WordPress column list button

6		      	
7		      	
8		      	
9		      	
10		      	
11		      	
12		      	
13		      	
14		      	
15		      	
16		      	
17		      	
SGD Search Block		      	

Close

Save

Fig 25: WordPress Column list

insert description on your wpDataTable

Settings ^ Cancel Save Changes

Data source Display Sorting and filtering Table Tools Placeholders NEW! Customize NEW! Advanced

Table title ⓘ Show table title on the page ☐

Table description ⓘ Show table description on the page ☐

Responsiveness ⓘ Allow collapsing on mobiles and tablets ☒

Responsive action ⓘ Icon ▼

Hide until loaded ⓘ Hide the table before it is fully loaded ☒

Default rows per page ⓘ 10 ▼

Rows per page ⓘ Show "Show X entries" dropdown ☒

Info block ⓘ Show information block below the table ☐

Limit table width ⓘ Limit table width to page width ☒

Word wrap ⓘ Wrap words to newlines ☒

Pagination ⓘ Show pagination block below the table ☒

Pagination Alignment ⓘ Right ▼

Pagination Layout ⓘ "First", "Previous", "Next" and "Last" buttons, plus page numbers ▼

View Documentation

Fig 26: WordPress display settings

Finally we can copy the short code for this table. Now in a new page we can add a new shortcode element , transform it into a column and set the width of the column to full width. We then add the short code to the text box and update it. This is the full extent of implementing this solution.

Please complete your Redirection setup to activate the plugin.

Start selling tickets to your Events
Sell tickets, collect RSVPs, and manage attendees for free with Event Tickets.
Install Event Tickets

wpDataTables

New wpDataTable

wpDataTable name, click to edit

Insert description of your wpDataTable

[wpdatatable id=2]
Click to copy shortcode

Settings ^ Cancel Save Changes

Fig 27: WordPress shortcode copy

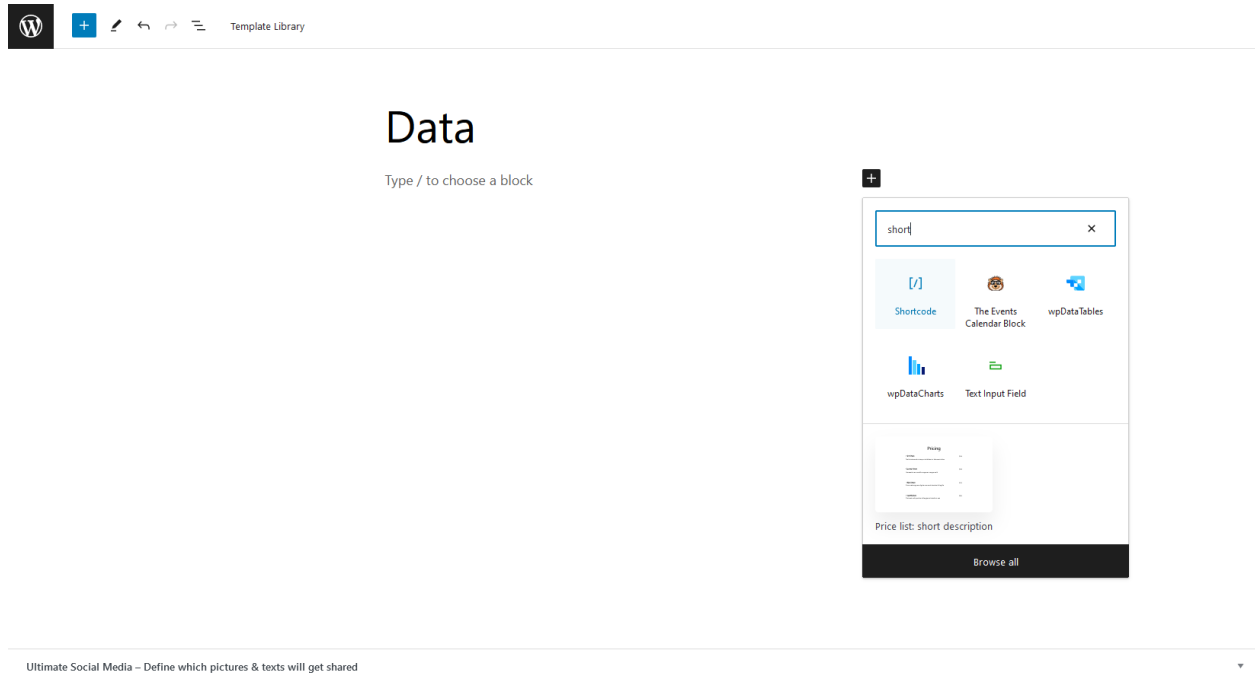


Fig 28: WordPress shortcode block

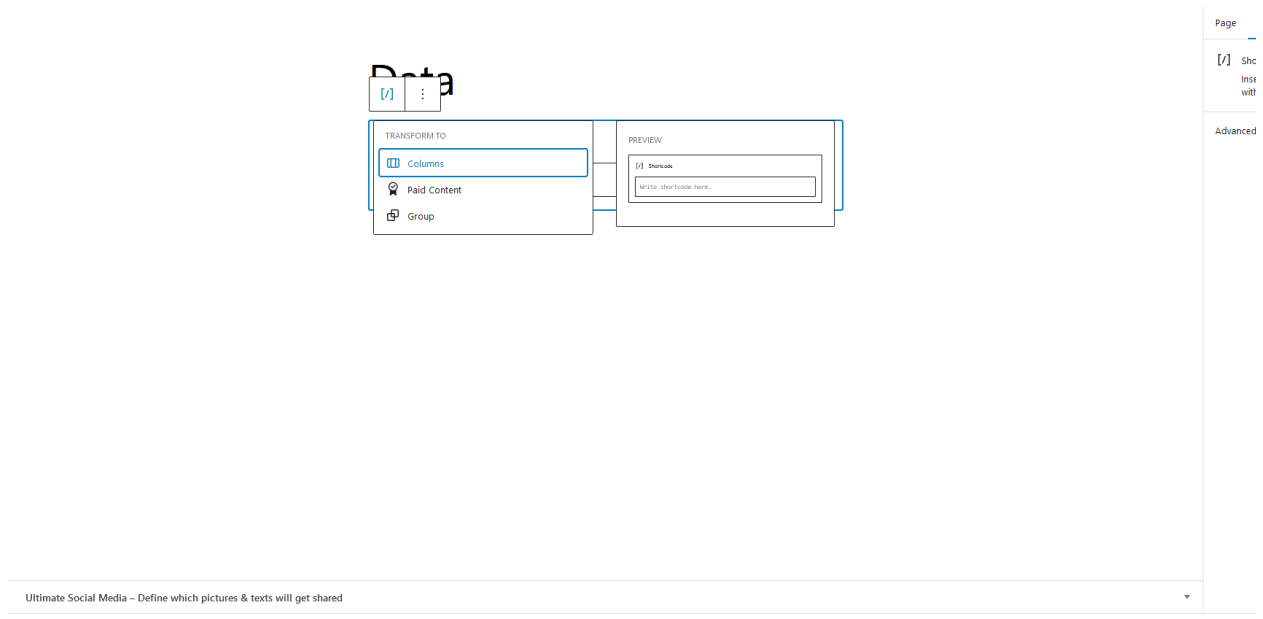


Fig 29: WordPress shortcode column transform

Data

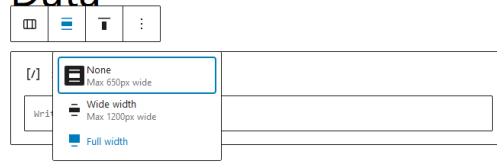


Fig 30: WordPress full width

Data

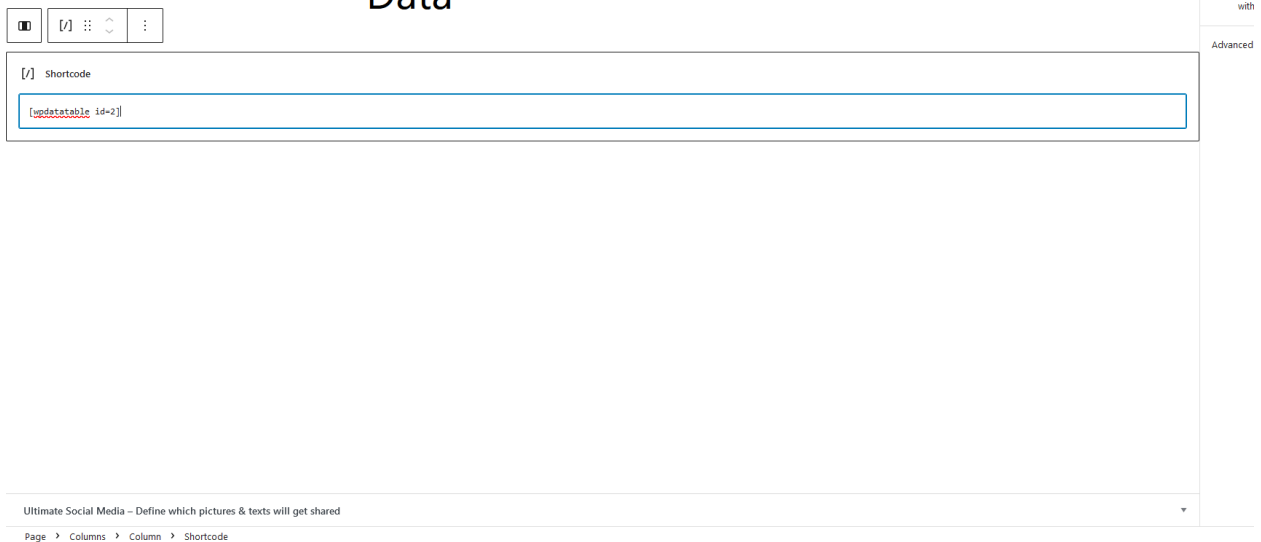


Fig 31: WordPress shortcode add

Data

Print Excel CSV Copy

Show 10 entries

Search:

Project Name	About Project	Project links	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
kjkgkjg	hklhhlkklhl		TRUE	TRUE	TRUE	TRUE					TRUE	TRUE	TRUE						
SPOT	SPOT is an AI assisted medical diary that focuses on analyzing and classifying skin spots.	https://github.com/ericchar-tier4/Capstone-2022-Team-Crab			TRUE														
URSU cares	URSU Cares is a program that provides sustainable food and clothing options to low income and marginalized.		TRUE	TRUE	TRUE				TRUE			TRUE		TRUE					

Do the social media icons show like you want to?
 If not, ask us in the forum, we're happy to help - quickly & for free!
 We can also consult you how to place them for maximum effect & assist with anything else.
[Ask in forum](#)
 Trouble logging in?
 This widget is only visible to you as admin. You can [hide it forever](#).
 By UltimateSocial

Fig 32: WordPress table display

Spreadsheet Formulas

This section of the solution guide is to try to explain all of the formulas used in the google spreadsheets. Formulas are made up of a combination of formulas. A full list of which can be found here:

<https://support.google.com/docs/table/25273?hl=en>

Along with cell references that help formulas interact with the data cells. A list of the reference types can be found here: <https://edu.gcfglobal.org/en/googlespreadsheets/types-of-cell-references/1/#>

=QUERY('Form Responses 1'!A1:AH,"SELECT D,V,Z,O,P,Q,R where A = TRUE AND A IS NOT NULL",1)

This formula from cell A1 of “Refine Responses” is a query to a separate data set, in this case from a sheet called “Form Responses 1”. And it includes data from cells A1:AH this will include all rows of A to AH including new rows added to the “Form Responses 1” as long as that data is in columns A1:AH. From there we can select specific column of data to include and from those selected we can further filter them out, in this case, include entries from the form where column A is =TRUE(). And column A is not empty.

```
=ARRAYFORMULA((IF(ISERR(SEARCH(LEFT(H$1,4),$C2:$C)), "",  
TRUE()))))
```

This formula , from cell H2 of the “Refine Responses” sheet helps separate out the SGDs a project deals with into their own column. The outer formula is an ARRAYFORMULA(formula) meaning this formula is applied to every row of this column. Next we have an IF(expression,if_true,if_false) that will fill in the cell based on if the expression is true or not. The expression we are evaluating ISERR(expression). Which will return true if there is something wrong with trying to evaluate the expression and the evaluation return #ERR. In this case we are doing a SEARCH(value1.value2). This will return TRUE() if value1 is found in value2. For this example we are looking at the first 4 characters of the title of the column using the LEFT(Cell_Number,Number_of_characters) to see if it is in the cell we are searching in , in this case it is cell C2, contains 4 characters of the title of the column. The way this formula is structured in terms of how it references cells helps to add this formula quickly to all 17 columns of the SGD using the method mentioned above for implementing the google sheet.

```
=ARRAYFORMULA(IF(G2:G="Yes",  
IF(D2:D<>"", $D2:D, IF(E2:E<>"", E2:E, IF(F2:F<>"", F2:F, ""))), ""))’.
```

This next formula from cell Y2 of “Refine Responses” sheet is for getting one of the project links to display, only one link can be displayed at one time while maintaining the ability to be clicked on, what this does is finds the first non blank link of the submission and adds it to this cell

```
=QUERY('Refine Responses'!A2:Y,"SELECT  
A,B,X,G,H,I,J,K,L,M,N,O,P,Q,R,S,T,U,V,W,C WHERE A IS NOT  
NULL",1)
```

This query formula is from A2 of the “Project Display” Sheet, like the last Query formula , except this formula leaves row 1 blank so as to add our own column titles.

Tips and Tricks

Tip for mass emailing award recipients.

Collection of emails can be very quick using the Spreadsheet, first you need to create a filter on the “Form Recipient 1” Sheet this can be done by pressing the funnel icon at the top right of the program.

	A	B	C	D	E	F	G	H	I	J
	Accepted	Timestamp	Email Address	Project Name	Was this project pursued by an individual, a group of individuals or an organization?	Applicant Name (Individual or Organization)	Main Contact Person (First Name Last Name)	Phone Number	Mailing Address	Project Team Member (applicable)
1	TRUE	10/27/2023 15:17:53	elc475@uregina.ca	SPOT	a group of individuals	Team Spot	Eric Chartier			Eric Chartier
2										
3		10/30/2023 13:28:54	elc475@uregina.ca	kjljk	an organization	j,pjk;l;l	;k';k;k'		lkjl;k;kl	
4		10/31/2023 15:08:43	elc475@uregina.ca	kjkjgkjg	individual	jhlkhkhkhkhkh		7889	khkjgkgkgkj	
5		11/10/2023 19:25:18	elc475@uregina.ca	afdaf	a group of individuals	lkklh	lj;;lj;		j;;jkh	
6		11/10/2023 19:33:42	elc475@uregina.ca	uyru	a group of individuals	kjkjhkhkhkh	klhlhkh		kjhlhkhkh	
7		11/11/2023 17:22:48	elc475@uregina.ca	gkgkgjg	a group of individuals	hkhkhkhkhkhkh	gkgkgkgkj		hkgkgkgkgkj	
	TRUE	11/1/2023		Utilizing Biocementation t	a group of individuals	University of Regina-ENE\ Duha Abdullah				Zhihao Zhao

Fig 33: Sheets create filter

Next we can apply two filters one on the “Acceptance Column” A, this is done by clicking the three horizontal lines at the top of each column name. And we can select that we only want to filter for those that are TRUE() and not (Blank)

	A	B	C	D	E	F	G
	Accepted	Timestamp	Email Address	Project Name	Was this project pursued by an individual, a group of individuals or an organization?	Applicant Name (Individual or Organization)	Main Contact Person (First Name Last Name)
1	TRUE			SPOT	a group of individuals	Team Spot	Eric Chartier
2							
3				kjljk	an organization	j,pjk;l;l	;k';k;k'
4				kjkjgkjg	individual	jhlkhkhkhkhkh	jhlkhkhkhkh
5				afdaf	a group of individuals	lkklh	lj;;lj;
6				uyru	a group of individuals	kjkjhkhkhkh	klhlhkhkh
7				gkgkgjg	a group of individuals	hkhkhkhkhkhkh	gkgkgkgkj
	TRUE			Utilizing Biocementation t	a group of individuals	University of Regina-ENE\ Duha Abdullah	

Fig 34: Sheets Acceptance

Next we can set another filter on the “Timestamp” Column B. We can filter the condition, and have it be all submissions between two dates. For example, if we wanted the 2023 recipients we would look at every submission submitted between the 2022 deadline, which I assumed to be March 3, 2022, or 3/31/2022, and the 2023 application deadline 3/31/2023 as well as leave off all (blank) cells. What we should have left is our accepted submissions for 2023. We can copy the emails by clicking the top of the email column, Column C in this case, and press ctrl+c, to copy all email addresses which we can paste into our email

**** NOTE**** For entries we have to migrate into the data sheet, we can set the timestamp as January 1 of the year they submitted/ won the award such as 1/1/2023 for 2023 award recipients or 1/1/2022 for 2022 recipients.

RCESask Award Application (Responses)

File Edit View Insert Format Data Tools Extensions Help

100% 123 Default... 10 + B I A

B1 Timestamp

Accepted Timestamp Email Address Project Name Was this project pursued by an individual, a group of individuals or an organization? Applicant Name (Individual or Organization) Main Contact Person (First Name Last Name) Phone Number Mailing Address Project Team Member (if applicable)

Filter by color

Filter by condition

Is between

3/31/2022

and

3/31/2023

Filter by values

Select all - Clear

(Blanks)

✓ 1/1/2023

✓ 10/27/2023 15:17:53

Define Responses Project Display

3 of 8 rows displayed

Fig 35: Sheets Timestamp

C:C Email Address

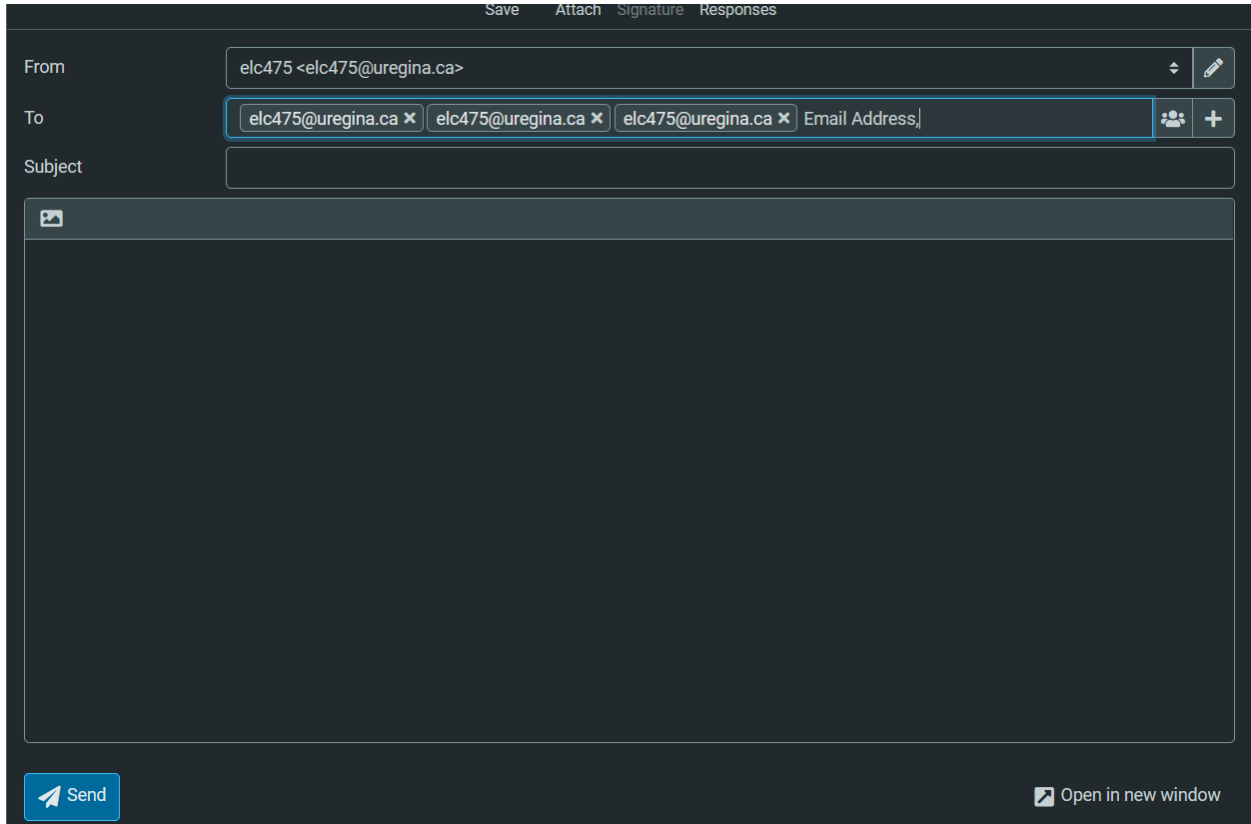
Name: Filter 2 Range: A1:A19

Accepted Timestamp Email Address Project Name Was this project pursued by an individual, a group of individuals or an organization? Applicant Name (Individual or Organization) Main Contact Person (First Name Last Name) Phone Number Mailing Address Project Team Member (if applicable)

1 TRUE 1/1/2023 elc475@uregina.ca SPOT a group of individuals Team Spot Eric Chartier

2 TRUE 1/1/2023 elc475@uregina.ca Utilizing Biocementation t a group of individuals Mitigate Calcite Formation University of Regina-ENE\ Duha Abdullah capstone Zhishao Zhao

Fig 36: Sheets Copy Email



The screenshot shows an email composition interface. At the top, there are tabs for 'Save', 'Attach', 'Signature', and 'Responses'. The 'From' field is set to 'elc475 <elc475@uregina.ca>'. The 'To' field contains three email addresses: 'elc475@uregina.ca', 'elc475@uregina.ca', and 'elc475@uregina.ca', followed by a text input field labeled 'Email Address'. The 'Subject' field is empty. Below the 'To' field is a large text area for the email body. At the bottom left is a 'Send' button, and at the bottom right is a link that says 'Open in new window'.

Fig 37: Sheets Email Paste

About Adding New Questions to the Form

Recently I was asked about adding more questions to the form, and it got me thinking about how adding questions to the form will affect the google sheets spreadsheet, to my delight adding a question to the form adds the answer column to the end of the google sheet, meaning the formulas that are currently embedded in the google sheets cells will stay active as the new questions will not affect the pre-existing spreadsheet cells.

RCESask Award Application

Questions Responses 7 Settings

Phone Number
Short answer text

City/Town *
Short answer text

Mailing Address *
Short answer text

After section 2 Continue to next section

Fig 38: new question City/Town

RCESask Award Application (Responses)

File Edit View Insert Format Data Tools Extensions Help

100% 123 Default... 10 + B I A

	AF	AG	AH	AI	AJ	AK	AL	AM	AN
1	Did your project generate any spin-offs, such as innovations or related projects?	What else do you expect to accomplish as you move forward with this project?	Do you have additional information that you wish to share?	City/Town					
2	learned during our project models due to incompatibility testing before we	though this a student project , if we did continue on in this project , we would want to add in the ability to share a users diary directly with their selected medcoial professional while maintaining a users confidential information							
3									
4									
5									
6									
7	The project was analyzed strictly from mathematical	The expectation is to emphasize an eco-friendly	The project emphasizes that the successful theoretical	Regina					

Fig 39: new column City/Town