

# Queryable Google Form Data

## INTRODUCTION

When it comes to Google forms and the typical survey data that is collected via the platform. The analysis is hard to review with sporadic information received based on a simple queue. The main issue is dealing with a massive number of records that needs to be filtered. In order to find a solution to easily navigate through the database, we can incorporate formulas and tools to reduce the navigational strain. The aim of this post is to introduce varying types of automated assets and simplistic scripts.

A preliminary insight to what we're dealing with, the "Form Response" tab is the typical default name when Google form automatically takes it into Google sheets. All the responses from the Google form will be on this page.

The screenshot shows a Google Sheet spreadsheet with the following data:

A1	A	B	C	D	E	F	G	H
1	Color Key	Notes	Timestamp	What is your email adres Name (Last, First)	Male or Female?	School?	AS Year?	
2	Complete	Fleece sizng, 34R dress coat oos	1/15/2020 15:32:04	liberty.edu	Male	LU	AS200	
3	Need Size	belt buckle oos, flight cap size oos	1/15/2020 15:33:43	virginia.edu	Male	UVA	AS100	
4	Missing Uniform Items		1/15/2020 15:33:43	liberty.edu	Female	LU	AS400	
5	Need Ranks		1/15/2020 15:47:05	irginia.edu	Female	UVA	AS300	
6			1/15/2020 15:48:53	liberty.edu	Male	LU	AS300	
7			1/15/2020 15:51:12	lukes.jmu.edu	Female	JMU	AS300	
8			1/15/2020 16:08:37	irginia.edu	Male	UVA	AS300	
9			1/15/2020 17:14:27	nn@liberty.edu	Male	LU	AS100	
10			1/15/2020 17:37:18	irginia.edu	Male	UVA	AS400	
11			1/15/2020 17:39:45	berly.edu	Female	LU	AS400	
12		need to be sized for service coat	1/15/2020 18:03:48	lukes.jmu.edu	Male	JMU	AS200	
13		service coat, belt buckle, and flight cap oos	1/15/2020 18:12:57	@dukes.jmu.edu	Male	JMU	AS200	
14		Flight cap 7 3/8 oos	1/16/2020 8:41:41	liberty.edu	Male	LU	AS100	
15			1/16/2020 8:58:04	liberty.edu	Female	LU	AS400	
16			1/16/2020 9:30:08	berly.edu	Female	LU	AS400	
17		Pt jacket small/small-short oos	1/16/2020 11:06:29	irginia.edu	Female	UVA	AS100	
18			1/16/2020 12:03:20	@dukes.jmu.edu	Female	JMU	AS300	
19		Dress blues sizing	1/16/2020 12:11:09	kes.jmu.edu	Female	JMU	AS200	
20			1/16/2020 12:14:09	gmail.com	Female	PVCC	AS100	
21			1/16/2020 12:34:06	gmail.com	Female	PVCC	AS100	
22		Tie oos, dress coat sizing	1/17/2020 0:58:58	@liberty.edu	Male	LU	AS200	
23			1/17/2020 12:29:13	@liberty.edu	Male	LU	AS200	



## DYANAMIC QUERY

In exchange of using multiple sheets, a singular tab can be used to easily query the specific type of data you are searching for. With a drop-down selection, you can return the row with the following keyword in a specific column.

Timestamp	What is your email address?	Name (Last, First)	Male or Female?	School?	AS Year?	Requesting, Return/Exchange	I need ABU...	I need Service Dress...	Requested Item	I do not know
1/15/2020 15:32	@liberty.edu	Nigita, Nathan	Male	LU	AS200	Requesting	ABU fleece	Service dress coat	Service Coat 34	no
1/15/2020 15:32	@virginia.edu	Richmond, Ryan	Male	UVA	AS100	Requesting		Service dress belt	Service dress belt 35, flight cap	
1/15/2020 15:33	@liberty.edu	Yogurt, Michael	Female	LU	AS400	Requesting				yes
1/15/2020 15:47	@virginia.edu	Corinda, Grace	Female	LU	AS300	Requesting	Cold weather jacket		Medium	no
1/15/2020 17:39	@liberty.edu	Yves, Anthony	Female	LU	AS400	Requesting			30 or 32 R	
1/15/2020 18:03	@dukes.jmu.edu	Reed, Jordan	Male	JMU	AS200	Requesting		Service dress coat		yes
1/15/2020 18:12	@dukes.jmu.edu	Salmon, Spencer	Male	JMU	AS200	Requesting		Service dress coat	7 1/2 hat size, 3 1/2	no
1/16/2020 8:41:4	@liberty.edu	Lizette, Jacob	Male	LU	AS100	Requesting			7 3/8	no
1/16/2020 12:03	@dukes.jmu.edu	Adams, Catherine	Female	JMU	AS300	Requesting				
1/16/2020 12:11	@dukes.jmu.edu	Bliss, Gloria	Female	JMU	AS200	Requesting		Service dress socks, Service dress belt, Service dress coat		I do not know
1/16/2020 12:14	@gmail.com	Duffy, Phoebe	Female	PVCC	AS100	Requesting				
1/16/2020 12:34	@gmail.com	Duffy, Phoebe	Female	PVCC	AS100	Requesting				
1/17/2020 0:58:5	@liberty.edu	Alvord, Sabrina	Male	LU	AS200	Requesting	ABU fleece	Service dress tie, Service Lightweight jacket		yes
1/17/2020 12:29	@liberty.edu	Chen, Lauren	Female	LU	AS200	Requesting			small/short	
1/17/2020 16:50	@dukes.jmu.edu	Wynn, Adam	Male	JMU	AS200	Requesting		Service dress coat	lightweight jacket	yes
1/18/2020 13:39	@liberty.edu	Reynolds, Cody	Male	LU	AS200	Requesting		Service dress belt, Service Flight Cap 7 1/2, Service Dress coat		
1/18/2020 17:34	@virginia.edu	Holt, Jeffrey	Male	UVA	AS100	Requesting		Service dress tie, Service dress coat, US I am unsure of		
1/18/2020 21:20	@virginia.edu	Deppach, Jim	Male	UVA	AS100	Requesting		Service dress coat	Service Dress coat	no
1/18/2020 22:12	@virginia.edu	Reidman, Jessica	Female	UVA	AS100	Requesting		Service dress coat		yes

In order to create a dynamic drop-down selection to narrow the search, the first step is creating a cell that allows you to select from a range. The process is done through Google sheets, built in **Data Validation**.

The screenshot shows the Google Sheets interface with the 'Data' menu open. The 'Data Validation' dialog box is displayed, showing the following configuration:

- Cell range:** Search Request/Return/Exchange
- Criteria:** List from a range (with formula: =Form Responses 1!\$J\$1:\$J\$1000)
- Tip:** Use absolute references (e.g. =\$A\$1:\$B\$1) to lock rows & columns.
- Show dropdown list in cell:**
- On invalid data:**  Show warning  Reject input
- Appearance:**  Show validation help text:

Buttons at the bottom of the dialog include 'Cancel', 'Remove validation', and 'Save'.

Select the cell that you would like the rest of the data to follow and input a similar formula of

**=QUERY('Form Responses'!C:AA, "SELECT \* WHERE COLUMN = ""&THE CELL YOU CREATED THE DROP DOWN&""", 1)**

	A	B	C	D	E	F
1	Search Here:	Requesting				
2						
3						
4	Status	Timestamp	What is your email Name (Last, First Male or I School?			

## GOOGLE SCRIPTS

We can clear redundant records by using the Google apps scripts that will allow for a simple integration into the Google sheet. The ability to customize the code to your needs. To start you can navigate to toolbar via “**Extensions**” and select “**Apps Script**”. You should be brought into the editor. The script in this demonstration removes completed records based on the columns highlight color.

```
1  function deleteComplete(column,color) {
2
3      var column = (typeof(column)!='undefined')?column:5;
4      var color = (typeof(color)!='undefined')?color:'#00ff00';
5      var ss = SpreadsheetApp.getActiveSpreadsheet();
6      var sheet = ss.getActiveSheet();
7      var range = ss.getDataRange();
8      var rangeA = range.getBackgrounds()
9
10     for(var i=rangeA.length-1; i>-1 ; i--) {
11         if(rangeA[i][column-1]==color) {
12             sheet.deleteRow(i+1);
13         }
14     }
15 }
```

### Execution log

9:19:59 PM	Notice	Execution started
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9:20:04 PM	Notice	Execution completed
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The script to remove the completed row is set to run every time at midnight. To configure when the deployment of this automated task would be located under the same page of the script configuration trigger tab.

## Add Trigger for DeleteComplete

deleteComplete

Choose which deployment should run

Head

Select event source

Time-driven

Select type of time based trigger

Day timer

Select time of day

Midnight to 1am

Me

-

Head

Time-based

deleteComplete

-



A basic sheet principle is conditional formatting. The script that was introduced earlier is built off the premise that a status of a cell would be automatically highlighted to a certain color if the end user inputs a status acronym. The conditional formatting tool is under the highlight cell tool.

C	D	E	F	G
Status	Timestamp	What is your email address	Name (Last, First)	Male or Female?
C	1/15/2020 15:32:04	...	...	Male
M	1/15/2020 15:32:09	...	...	Male
C	1/15/2020 15:33:43	...	...	Female
C	1/15/2020 15:47:05	...	...	Female
C	1/15/2020 15:48:53	...	...	Male
C	1/15/2020 15:51:12	...	...	Female
C	1/15/2020 16:08:37	...	...	Male
C	1/15/2020 17:14:27	...	...	Male
R	1/15/2020 17:37:18	...	...	Male
C	1/15/2020 17:39:45	...	...	Female
S	1/15/2020 18:03:48	...	...	Male
M	1/15/2020 18:12:57	...	...	Male
M	1/16/2020 8:41:41	...	...	Male
R	1/16/2020 8:58:04	...	...	Female
C	1/16/2020 9:30:08	...	...	Female
M	1/16/2020 11:06:29	...	...	Female
R	1/16/2020 12:03:20	...	...	Female
S	1/16/2020 12:11:09	...	...	Female
R	1/16/2020 12:14:09	...	...	Female
R	1/16/2020 12:34:06	...	...	Female
S	1/17/2020 0:58:58	...	...	Male
C	1/17/2020 12:29:13	...	...	Male
M	1/17/2020 12:30:20	...	...	Female

123 Text contains "C" C2:C145

123 Text contains "S" C2:C145

123 Text contains "M" C2:C145

123 Text contains "R" C2:C145

+ Add another rule

est/Return/Exchange ▾ PTG ▾ ABU ▾ Service Dress ▾ Uniform Items ▾

Count: 33 Explore