

Fuel up your spreadsheets with GAS

or, an excuse for Robert to open source something...

Robert Tomb
@bikeonastick

Two Gamechangers

or... how how spreadsheets
gave Robert an excuse to
program again

Google App Script

The =QUERY macro

Spreadsheets, can't beat 'em?

Bend 'em...

- macros
<https://developers.google.com/apps-script/quickstart/macros>
- functions
<https://developers.google.com/apps-script/guides/sheets/functions>
- menus
<https://developers.google.com/apps-script/guides/menus>
- general
<https://developers.google.com/apps-script/guides/sheets>
- libraries
<https://developers.google.com/apps-script/guides/libraries>

Fire up your computer hacking skills



GAS_query_test ☆

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fx =QUERY(A1:C7,"SELECT B,C WHERE B < 10000")

	A	B	C
1	Name	Followers	TwitterHandle
2	Nate	2330000	@NateSilver538
3	Lauren	248000	@laurenduca
4	Tim	13400	@tpope
5	Half	723000	@HalfOnionInABag
6	Michael	38000	@rands
7	Robert	460	@bikeonastick
8			
9			
10			
11	Followers	TwitterHandle	
12		460	@bikeonastick

Tools menu options: Create a form, Script editor..., Spelling..., Enable autocomplete, Notification rules..., Protect sheet..., Personal dictionary...

MyGASPresentation

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Code.gs

```
1 function onOpen() {
2   var ui = SpreadsheetApp.getUi();
3   ui.createMenu('Contrived Example')
4     .addItem('First item', 'myFirstCall')
5     .addToUi();
6 }
7
8 function myFirstCall() {
9   var ui = SpreadsheetApp.getUi().alert("hello");
10 }
11
```



GAS_query_test ☆

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fx

	A	B	C	D	E	F
1	Name	Followers	TwitterHandle			
2	Nate	2330000	@NateSilver538			
3	Lauren	248000	@laurenduca			
4	Tim	13400	@tpope			
5	Half	723000	@HalfOnionInABag			
6	Michael	38000	@rands			
7	Robert	460	@bikeonastick			
8						

Contrived Example menu: First item

the =QUERY macro

Google sheets' best feature

=QUERY(A1:C7,"SELECT B,C WHERE B < 1000",1)				
	A	B	C	D
1	Name	Followers	TwitterHandle	
2	Nate	2330000	@NateSilver538	
3	Lauren	248000	@laurenduca	
4	Tim	13400	@tpope	
5	Half	723000	@HalfOnionInABag	
6	Michael	38000	@rands	
7	Robert	460	@bikeonastick	
8				
9				
10				
11	Followers	TwitterHandle		
12		460	@bikeonastick	
13				

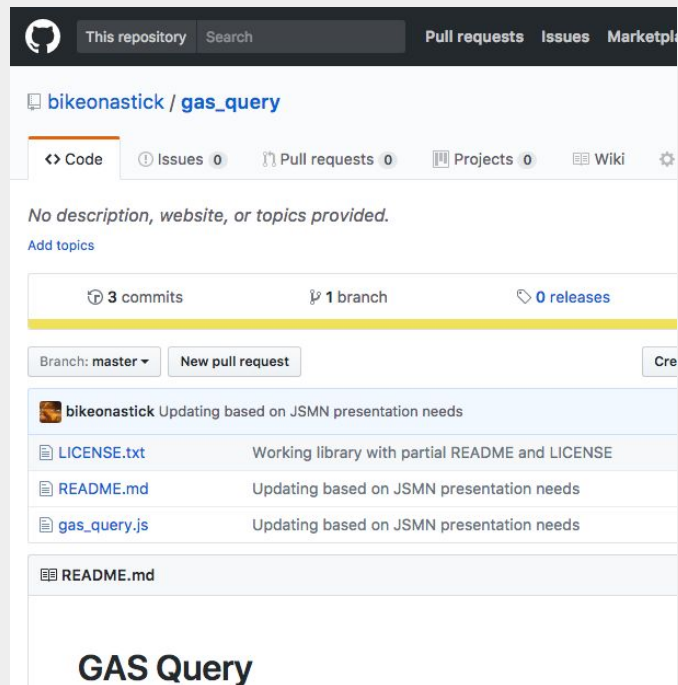
Problem

or... my favorite feature was
unavailable.



HMB

or... please allow
@bikeonastick's seething rage
scorch a path for you

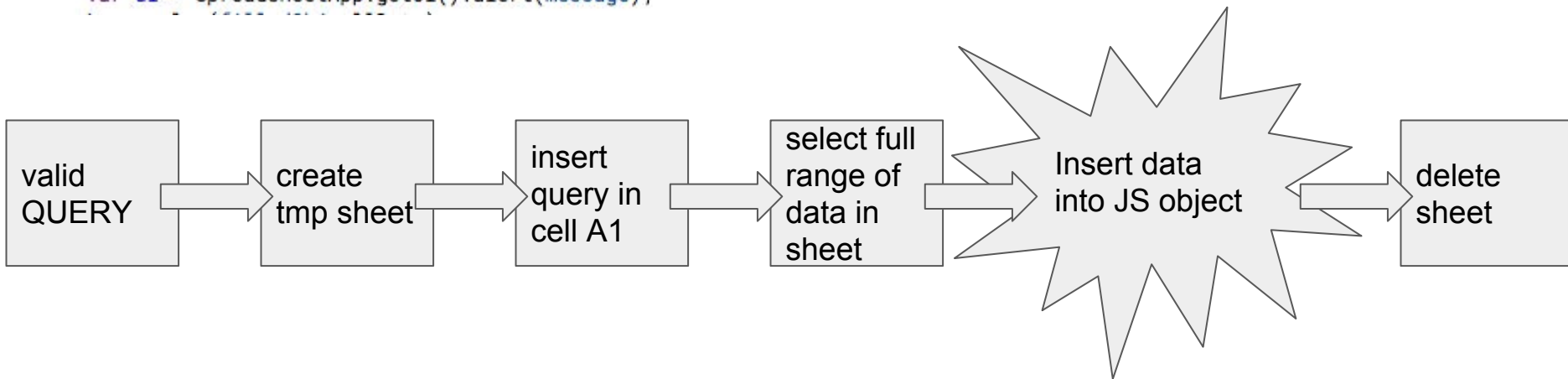


https://github.com/bikeonastick/gas_query

GAS_query

```
// query to run
var myQuery = '=QUERY(demo_data!A1:C7,"SELECT B,C WHERE B < 1000",1)';
// object
var filledObj = runQuery(myQuery);

var message = "User:" + filledObj.getRowObj(0).get('TwitterHandle') + " has less than 1000 followers."
var ui = SpreadsheetApp.getUi().alert(message);
```



How to use gas_query

or... follow the smell of smoke

Copy the entire javascript file into
yours and ref like this:

```
var myQuery = '=QUERY(demo_data!A1:C7,"SELECT B,C WHERE B < 1000",1)';  
// object  
var filledObj = runQuery(myQuery);
```

Add gas_query.js as a library, save
a version, and refer to it in your
project.

```
var myQuery = '=QUERY(demo_data!A1:C7,"SELECT B,C WHERE B < 1000",1)';  
// object  
var filledObj = GASQuery.runQuery(myQuery);
```

The object

or... Robert finally writes
documentation

`numRows ()` **number of rows in the
returned set**

`numColumns ()` **number of columns in
the returned set**

`getHeadingIndex (heading)`
discover a heading's column index

`getRowArr (ix)` **get row data as array**

`getRowObj (ix)` **get row data as obj**

`rowObj.get (field)` **syntactic
sugar to get item from row by heading
name**

Resources

extend <https://developers.google.com/apps-script/quickstart/macros>

macros <https://developers.google.com/apps-script/guides/sheets/functions>

menus <https://developers.google.com/apps-script/guides/menus>

general <https://developers.google.com/apps-script/guides/sheets>

libraries <https://developers.google.com/apps-script/guides/libraries>

my library https://github.com/bikeonastick/gas_query

my spreadsheet

https://docs.google.com/spreadsheets/d/1VHYCetyFLiOfOB9NALdY_OeebYuAJXILEc7PtIFXJO4/edit?usp=sharing

=QUERY Resources - QUERY

<https://support.google.com/docs/answer/3093343?hl=en>

<https://docs.google.com/document/d/1BV94ZVI1b1AkM0xOx503mfo01Yj9CVtdFXdQZzeIGNk/edit>

<https://developers.google.com/chart/interactive/docs/querylanguage>