

SDG Counties Customer Service Program

Technical Information

Limitations of Using Google Apps Script

For up-to-date limitations you should get the information directly from google:

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

The main limitations that were considered to impact decisions were:

- Script time limit of 6 mins
 - o Scripts that run longer than 6minutes are stopped. This puts a limit on the scale that the system can be used for. If enough cases are added to the system then a script that loops through all cases will eventually exceed 6mins. It is not expected that this will be a problem in the foreseeable future. It is more likely that users will be frustrated that the web app takes too long to load before the timeout becomes an issue.
 - o When updating Forms IT is possible that the script that updates the Case Links or the Action Links does not complete everything. It may be necessary to run these steps multiple times in order for all the cases and actions to be properly updated.
- Number of emails per day
 - o There is a limit of 100 email addresses used in a day.

Spreadsheets Sheets

This is a listing of the sheets and what they are used for. Green sheets are user editable. Yellow sheets are also user editable, but they require some extra care while editing. Red sheets should not be edited by users, unless they are prepared to make programming changes.

listAssignCase – used to hold the list of people that can have a case assigned to them. The program uses this list when

- Update Forms uses this to populate the assign case options in the Case form
- populates the Assigned to drop down list in the web app
- when the “Email Customer Service Links” button is used to send out

listActionTaken – used to populate the list of action takes options for the add action.

listCaseType - used to populate the case type options for the Case form.

questionAction – used to hold the questions for the Action Form. The program uses this sheet to add questions to the action form

- Page – this determines which page the question will show up on
- Section – this is the Name of the section that the question will be added to
- Title – this is the questions title
- HelpText – this is the help text for a question
- TypeOfControl – this is the type of question such as
 - o MultipelChoiceltem (which needs to have a choicelist)
 - o TextItem
 - o Dateltem

- Choicelist – only used for MultipleChoiceItems. This tells the program what sheet holds the options for the question.
- URL Prefill Part – this holds the questions unique id. This id is used when editing a form, the program uses it to prepopulate the forms information. This should not be edited by the user. This id is automatically updated by the program whenever the Update Form steps are run.
- Default Value – this is used to put in a default value. New+ID is used for ID column, just to help the user know that they do not need to enter a value

questionCase - used to hold the questions for the Case Form. The program uses this sheet to add questions to the case form

- Page – this determines which page the question will show up on
- Section – this is the Name of the section that the question will be added to
- Title – this is the questions title
- HelpText – this is the help text for a question
- TypeOfControl – this is the type of question such as
 - o MultipleChoiceItem (which needs to have a choicelist)
 - o TextItem
 - o DateItem
- Choicelist – only used for MultipleChoiceItems. This tells the program what sheet holds the options for the question.
- URL Prefill Part – this holds the questions unique id. This id is used when editing a form, the program uses it to prepopulate the forms information. This should not be edited by the user. This id is automatically updated by the program whenever the Update Form steps are run.
- Default Value – this is used to put in a default value. New+ID is used for ID column, just to help the user know that they do not need to enter a value

detailCase – used to hold the data that the program capture from a submitted case form

- Case Id – holds the ID, which is autogenerated by the program, if it is not submitted
- Stats – either Open or Closed
- Name – the name field from the Case Form
- Location – the location field from the Case Form
- Assigned To – the assigned to field from the Case Form
- Edit Case Link – this holds the case's edit link
 - o This link will open the case form and prepopulate it with the Case's information
- Delete Case Link – holds the delete case link
 - o This link will open the delete case form and prepopulate the case id
- Add Action - holds the add action link
 - o This link will open the Action form and prepopulate the case id
- Isdeleted – holds if the case is deleted
- Last Updated – provides the date that the case was last updated on
- Form Data Start – since the program does not know how many questions a form will have and the possibility that the form questions can change in number and order the program stores the submitted case information in cells in the format "name of question= answer to question". Each question is put in a separate cell. The Form Data Start

column is the first column, which gets the first question, The other questions are placed in subsequent cells

detailAction – used to hold the data that the program captures from a submitted action form

- Action ID – holds the ID, which is autogenerated by the program, if it is not submitted
- Case ID – holds the Case ID
- Edit Action Link - this holds the action's edit link
 - o This link will open the edit form and prepopulate it with the action's information
- Delete Action Link – holds the delete action link
 - o This link will open the delete action form and prepopulate the action id
- Last Updated – provides the date that the action was last updated on
- Isdeleted – holds if the action is deleted
- Case Resolved – holds the value from the Case Resolved question.
 - o The program uses this value to close a case.
 - o The program uses the last action submitted to determine if a case is opened or closed. Therefore you can open and close cases by submitting an action
- From Data Start - since the program does not know how many questions a form will have and the possibility that the form questions can change in number and order the program stores the submitted case information in cells in the format "name of question= answer to question". Each question is put in a separate cell. The Form Data Start column is the first column, which gets the first question, The other questions are placed in subsequent cells

indexLink – used to hold link references. The program uses this sheet to look up the urls

logDataCase – This sheet is used to log all of the data that is submitted by the Case from. This sheet is the first thing that the program populates when the form is submitted

- CaseID – the case ID
- From Data Start - - since the program does not know how many questions a form will have and the possibility that the form questions can change in number and order the program stores the submitted case information in cells in the format "name of question= answer to question". Each question is put in a separate cell. The Form Data Start column is the first column, which gets the first question, The other questions are placed in subsequent cells

logDataAction – This sheet is used to log all of the data that is submitted by the Action from. This sheet is the first thing that the program populates when the form is submitted

- CaseID – the case ID
- ActionID – the action ID
- From Data Start - - since the program does not know how many questions a form will have and the possibility that the form questions can change in number and order the program stores the submitted case information in cells in the format "name of question= answer to question". Each question is put in a separate cell. The Form Data Start column is the first column, which gets the first question, The other questions are placed in subsequent cells

logCaseForm – This sheet is used to log when the Case form is edited. When the Update Forms Steps are run it will get logged here

- Date
- User – the user that completed the action
- Description of Changes – what action was done
- ID – this is the ID of the Form

logActionForm – This sheet is used to log when the Action form is edited. When the Update Forms Steps are run it will get logged here

- Date
- User – the user that completed the action
- Description of Changes – what action was done
- ID – this is the ID of the Form

logDeleteCaseForm – This sheet is used to log when the Delete Case form is edited. When the Update Forms Steps are run it will get logged here

- Date
- User – the user that completed the action
- Description of Changes – what action was done
- ID – this is the ID of the Form

logDeleteActionForm – This sheet is used to log when the Delete Action form is edited. When the Update Forms Steps are run it will get logged here

- Date
- User – the user that completed the action
- Description of Changes – what action was done
- ID – this is the ID of the Form

questionDeleteCase - used to hold the questions for the Delete Case Form. The program uses this sheet to add questions to the delete case form. It is not recommend to change this sheet.

- Page – this determines which page the question will show up on
- Section – this is the Name of the section that the question will be added to
- Title – this is the questions title
- HelpText – this is the help text for a question
- TypeOfControl – this is the type of question such as
 - o MultipelChoiceltem (which needs to have a choicelist)
 - o TextItem
 - o Dateltem
- Choicelist – only used fro MultipleChoiceltems. This tells the program what sheet holds the options for the question.
- URL Prefill Part – this holds the questions unique id. This id is used when editing a form, the program uses it to prepopulate the forms information. This is should not be edited by the user. This id is automatically updated by the program whenever the Update Form steps are run.

- Default Value – this is used to put in a default value. New+ID is used for ID column, just to help the user know that they do not need to enter a value

questionDeleteAction - used to hold the questions for the Delete Action Form. The program uses this sheet to add questions to the delete case form. It is not recommend to change this sheet.

- Page – this determines which page the question will show up on
- Section – this is the Name of the section that the question will be added to
- Title – this is the questions title
- HelpText – this is the help text for a question
- TypeOfControl – this is the type of question such as
 - o MultipelChoiceItem (which needs to have a choicelist)
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- Choicelist – only used fro MultipleChoiceItems. This tells the program what sheet holds the options for the question.
- URL Prefill Part – this holds the questions unique id. This id is used when editing a form, the program uses it to prepopulate the forms information. This is should not be edited by the user. This id is automatically updated by the program whenever the Update Form steps are run.
- Default Value – this is used to put in a default value. New+ID is used for ID column, just to help the user know that they do not need to enter a value

listDeleteConfirm - used to populate the Delete confirm options for the Delete Case and Delete Action forms.

listDeleteConfirm - used to populate the Case Resolved options for the Action form

Scripts

The scripts are all held inside the spreadsheet.

Open the Scripts:

- 1) Open the customer service spreadsheet
- 2) Tools>>Script Editor

Listing Of Script Files

Code.gs – this holds all the functions that bind everything together. There are three parts

- a) Setup Functions – holds the code used to setup and install the program such as
 - a. Code to add the Customer Service Button onto the spreadsheet
 - b. Code to Create Folders
 - c. Code to Update the Forms
 - d. Email out the Customer Service Program links
- b) Trigger Functions – these functions are the ones that get called when a form is submitted
- c) Web app Functions – these functions are used when a user opens the Web app

SDGFroms.gs – this holds the form specific functions

SDGErrors.gs – this holds the error handling code. The administratorEmail is hard coded on line 4 in this file. This is the email address where error messages are sent

SDGSettings.gs – this holds code that is common to several different parts of the program. This is where the sheet names and columns are identified.

SDGData.gs – this holds the functions that are used to manage the data such as creating links to specific cases or getting row data.

SDGNotification.gs – this holds the functions used to send out emails

Javascript.html – this holds the javascript code for the web app. It is intentionally named with a .html so that it can be embedded into the Index.html file.

Index.html – this is the web app html file.

- Note that on line 4 is where the url parameters are placed into the urlparameters variable (which happens on the server).