

 免費電子書

學習

# google-apps-script

Free unaffiliated eBook created from  
**Stack Overflow contributors.**

#google-  
apps-script

.....	1
<b>1: google-apps-script</b> .....	<b>2</b>
.....	2
Examples.....	2
.....	2
.....	2
/.....	3
.....	3
Google Apps.....	3
<b>2: Apps Script Web Apps</b> .....	<b>5</b>
.....	5
Examples.....	5
Web App.....	5
<b>3: DriveApp</b> .....	<b>10</b>
Examples.....	10
Google.....	10
MimeGoogle.....	10
Google.....	10
blobGoogle.....	10
- -.....	11
- -.....	11
.....	12
.....	12
.....	13
<b>4: DriveApp - getFileById</b> .....	<b>14</b>
.....	14
Examples.....	14
IDGoogle.....	14
<b>5: DriveApp</b> .....	<b>15</b>
.....	15
Examples.....	15

Google.....	15
MimeGoogle.....	15
Google.....	15
blobGoogle.....	16
- - .....	16
- - .....	17
<b>6: DriveApp - .....</b>	<b>18</b>
.....	18
Examples.....	18
.....	18
<b>7: FirebaseAppScript.....</b>	<b>20</b>
.....	20
Examples.....	20
GASFirebaseGoogleFirebase.....	20
AppScriptFirebase.....	20
Firebase.....	22
firebaseURL.....	23
firebaseURLAppScript.....	24
.....	24
1.....	24
2.....	24
3.....	24
4.....	24
<b>8: GmailApp.....</b>	<b>26</b>
.....	26
Examples.....	26
CSV.....	26
<b>9: Google Web AppGoogle.....</b>	<b>27</b>
.....	27
.....	27
Examples.....	27

forms.html.....	27
code.gs.....	28
.....	29
<b>10: GoogleMailApp.....</b>	<b>30</b>
.....	30
Examples.....	30
MailApp.....	30
.....	30
.....	31
HTML.....	32
<b>11: SpreadsheetApp.....</b>	<b>35</b>
.....	35
Examples.....	35
getActive - .....	35
<b>12: Google.....</b>	<b>36</b>
.....	36
Examples.....	36
Google.....	36
<b>13: Google.....</b>	<b>37</b>
.....	37
Examples.....	37
.....	37
.....	37
<b>14: .....</b>	<b>39</b>
.....	39
Examples.....	39
.....	39
.....	39
.....	40
.....	40
<b>15: .....</b>	<b>41</b>
.....	41

.....	41
.....	41
Examples.....	41
.....	41
.....	41
.....	<b>43</b>

---

You can share this PDF with anyone you feel could benefit from it, downloaded the latest version from: [google-apps-script](#)

It is an unofficial and free google-apps-script ebook created for educational purposes. All the content is extracted from [Stack Overflow Documentation](#), which is written by many hardworking individuals at Stack Overflow. It is neither affiliated with Stack Overflow nor official google-apps-script.

The content is released under Creative Commons BY-SA, and the list of contributors to each chapter are provided in the credits section at the end of this book. Images may be copyright of their respective owners unless otherwise specified. All trademarks and registered trademarks are the property of their respective company owners.

Use the content presented in this book at your own risk; it is not guaranteed to be correct nor accurate, please send your feedback and corrections to [info@zzzprojects.com](mailto:info@zzzprojects.com)

---

# 1: google-apps-script

Google Apps <http://www.google.com/script/start>

Google Apps JavaScript Google Web

[https://developers.google.com/apps-script/guides/services/#basic\\_javascript\\_features](https://developers.google.com/apps-script/guides/services/#basic_javascript_features)

Apps JavaScript 1.6 1.7.1.8 JavaScript Apps Google HTML DOM Window API

## Examples

Google Apps Google Gmail Google Apps for Work / Education / Government.  
<accounts.google.com> Google

<script.google.com> Google Apps tools -> Script editor... Google Apps Google Apps Connect  
more apps.. Google

<developers.google.com/apps-script/>

app-scripts code.gs code.gs doGet onOpen

app-script api app-script Google Play G Marketplace SDK

//Google

Google App

- 
- Google Apps
- 

Google <script.google.com> Google Google Web

## Google Apps

Google Apps; Google Google Docs Google Sheets Google Apps tools > Script editor Google

Google App Script Web Web App Google Apps Web Web

- doGet () doPost ()
- HTMLHtmlOutputContentTextOutput

In short doGet () doPost () http getpost

Web Apps

/

File Edit View Run Publish Resources Help



◦

File Edit View Run Publish Resources Help



ctrl + r ◦ ◦ ◦

view-> logs ◦

Hello ◦

```
function helloWorld()
{
  Browser.msgBox("Hello World");
}
```

▶Run - > helloWorld

## Google Apps

Google Apps JavaScript Google Apps ◦ Apps Script Google ◦ IDE Apps ◦ OAuth2 ◦

Apps HTML CSS JavaScript ◦ Node.js App Scripts ◦ ◦ ◦

Apps ◦ IO ◦

◦ ◦

```
// Create a new spreadsheet from a template
function createSpreadsheet() {
  var templateFileId = '1Azcz9GwCeHjG19TXf4aUh6g20Eqmgd1UMSdNVjzIZPk';
  var sheetName = 'Account Log for:' + new Date();
  SpreadsheetApp.openById(templateFileId).copy(sheetName);
}
```





## 2: Apps Script Web Apps

WebUX...

Apps Script. html.

Google.

Apps

- Code.gs
- index.html
- Stylesheet.html
- JavaScript.html

## Examples

### Web App

```
//Triggered when the page is navigated to, serves up HTML
function doGet(){
  var template = HtmlService.createTemplateFromFile('index');
  return template.evaluate()
    .setTitle('Example App')
    .setSandboxMode(HtmlService.SandboxMode.IFRAME);
}

//Called from the client with form data, basic validation for blank values
function formSubmit(formData){
  for(var field in formData){
    if(formData[field] == ''){
      return {success: false, message: field + ' Cannot be blank'}
    }
  }
  return {success: true, message: 'Sucessfully submitted!'};
}
```

### HTML

```
<!DOCTYPE html>
<html>

  <head>
    <base target="_top">
    <link href="https://ssl.gstatic.com/docs/script/css/add-ons1.css" rel="stylesheet">
    <script src="https://ajax.googleapis.com/ajax/libs/jquery/2.1.4/jquery.min.js"
type="text/javascript"></script>
  </head>

  <body>
    <div id="mainForm">
      <h1>Example Form</h1>
```

```

<form>
  <div>
    <div class="inline form-group">
      <label for="name">Name</label>
      <input id="nameInput" style="width: 150px;" type="text">
    </div>
  </div>
  <div>
    <div class="inline form-group">
      <label for="city">City</label>
      <input id="cityInput" style="width: 150px;" type="text">
    </div>
    <div class="inline form-group">
      <label for="state">State</label>
      <input id="stateInput" style="width: 40px;" type="text">
    </div>
    <div class="inline form-group">
      <label for="zip-code">Zip code</label>
      <input id="zip-codeInput" style="width: 65px;" type="number">
    </div>
  </div>
  <div class="block form-group">
    <label for="typeSelect">Type</label>
    <select id="typeSelect">
      <option value="">
        </option>
      <option value="Type 1 ">
        Type 1
      </option>
      <option value="Type 2 ">
        Type 2
      </option>
      <option value="Type 3 ">
        Type 3
      </option>
      <option value="Type 4 ">
        Type 4
      </option>
    </select>
  </div>
  <button class="action" id="submitButton" type="button">Submit</button>
  <button class="clear" id="clearFormButton" type="button">Clear Form</button>
</form>
<div class="hidden error message">
  <div class="title">Error:</div>
  <div class="message"></div>
</div>
<div class="hidden success message">
  <div class="title">Message:</div>
  <div class="message">Sucessfully submitted</div>
</div>
</div>
<?!= HtmlService.createHtmlOutputFromFile('JavaScript').getContent(); ?>
<?!= HtmlService.createHtmlOutputFromFile('Stylesheet').getContent(); ?>
</body>

</html>

```

## CSS

```
<style>
.hidden {
    display: none;
}

.form-group {
    margin: 2px 0px;
}

#submitButton {
    margin: 4px 0px;
}

body {
    margin-left: 50px;
}

.message {
    padding: 2px;
    width: 50%;
}

.message > * {
    display: inline-block;
}

.message .title {
    font-weight: 700;
    font-size: 1.1em;
}

.success.message {
    border: 1px solid #5c9a18;
    background: #e4ffe4;
    color: #2a8e2a;
}

.error.message {
    background: #f9cece;
    border: 1px solid #7d2929;
}

.error.message .title {
    color: #863030;
}

button.clear {
    background: -moz-linear-gradient(top, #dd6e39, #d17636);
    background: -ms-linear-gradient(top, #dd6e39, #d17636);
    background: -o-linear-gradient(top, #dd6e39, #d17636);
    background: -webkit-linear-gradient(top, #dd6e39, #d17636);
    background: linear-gradient(top, #dd6e39, #d17636);
    border: 1px solid transparent;
    color: #fff;
    text-shadow: 0 1px rgba(0, 0, 0, .1);
}

button.clear:hover {
    background: -moz-linear-gradient(top, #ca602e, #bd6527);
    background: -ms-linear-gradient(top, #ca602e, #bd6527);
    background: -o-linear-gradient(top, #ca602e, #bd6527);
```

```
background: -webkit-linear-gradient(top, #ca602e, #bd6527);
background: linear-gradient(top, #ca602e, #bd6527);
border: 1px solid transparent;
color: #fff;
text-shadow: 0 1px rgba(0, 0, 0, .1);
}
</style>
```

## JavaScript

```
<script>
var inputs = [
  'nameInput',
  'cityInput',
  'stateInput',
  'zip-codeInput',
  'typeSelect'
];

$(function(){
  var pageApp = new formApp();
  $('#submitButton').on('click', pageApp.submitForm);
  $('#clearFormButton').on('click', pageApp.clearForm);
});

var formApp = function(){
  var self = this;

  //Clears form input fields, removes message, enables submit
  self.clearForm = function(){
    for(var i = 0; i < inputs.length; i++){
      $('#'+inputs[i]).val('');
    }
    toggleSubmitButton(false);
    setErrorMessage(false);
    setSuccessMessage(false);
  }

  //Submits the form to apps script
  self.submitForm = function(){
    toggleSubmitButton(true);
    setSuccessMessage(false);
    setErrorMessage(false);

    google.script.run
      .withSuccessHandler(self.sucessfullySubmitted)
      .withFailureHandler(self.failedToSubmit)
      .formSubmit(self.getFormData());
  };

  //Retrieves the form data absed on the input fields
  self.getFormData = function(){
    var output = {};
    for(var i = 0; i < inputs.length; i++){
      output[inputs[i]] = $('#'+inputs[i]).val();
    }
    console.log(output)
    return output;
  }
}
```

```

//When the apps script sucessfully returns
self.successfullySubmitted = function(value){
  if(value.success){
    setSuccessMessage(true, value.message);
  } else {
    setErrorMessage(true, value.message);
    toggleSubmitButton(false);
  }
}

//When the apps script threw an error
self.failedToSubmit = function(value){
  toggleSubmitButton(false);
  setErrorMessage(true, value.message);
}

//Disables/enables the submit button
function toggleSubmitButton(disabled){
  $('#submitButton').prop('disabled', disabled);
}

//Sets the general message box's message and enables or disabled the error box
function setSuccessMessage(show, message){
  if(show){
    $('.success.message').removeClass('hidden');
    $('.success.message .message').text(message);
  } else {
    $('.success.message').addClass('hidden');
    $('.success.message .message').text('');
  }
}

//Sets the error message box's message and enables or disabled the error box
function setErrorMessage(show, message){
  if(show){
    $('.error.message').removeClass('hidden');
    $('.error.message .message').text(message);
  } else {
    $('.error.message').addClass('hidden');
    $('.error.message .message').text('');
  }
}

function getFormData(){
  var output = {};
  for(var i = 0; i < inputs.length; i++){
    output[inputs[i]] = $('#'+inputs[i]).val();
  }
  return output;
}
</script>

```

Apps Script Web Apps <https://riptutorial.com/zh-TW/google-apps-script/topic/4874/apps-script-web-apps>

# 3: DriveApp

## Examples

### Google

```
function createNewFolderInGoogleDrive(folderName) {  
  return DriveApp.createFolder(folderName);  
}
```

createNewFolderInGoogleDrive GoogleTest folderTest folder

```
var newFolder = createNewFolderInGoogleDrive('Test folder');
```

newFolder

```
// output id of new folder to log  
Logger.log(newFolder.getId());
```

### MimeGoogle

```
function createGoogleDriveFileOfMimeType() {  
  var content, fileName, newFile; //Declare variable names  
  
  fileName = "Test File " + new Date().toString().slice(0,15); //Create a new file name with  
  date on end  
  content = "This is the file Content";  
  
  newFile = DriveApp.createFile(fileName, content, MimeType.JAVASCRIPT); //Create a new file in  
  the root folder  
};
```

### Google

```
function createGoogleDriveTextFile() {  
  var content, fileName, newFile; //Declare variable names  
  
  fileName = "Test Doc " + new Date().toString().slice(0,15); //Create a new file name with  
  date on end  
  content = "This is the file Content";  
  
  newFile = DriveApp.createFile(fileName, content); //Create a new text file in the root folder  
};
```

### blobGoogle

```
function createGoogleDriveFileWithBlob() {  
  var blob, character, data, fileName, i, L, max, min, newFile, randomNmbr; //Declare variable names
```

```

fileName = "Test Blob " + new Date().toString().slice(0,15);//Create a new file name with
date on end

L = 500;//Define how many times to loop
data = "";
max = 126;
min = 55;

for (i=0;i<L;i+=1) { //Loop to create data
    randomNmbr = Math.floor(Math.random()*(max-min+1)+min);//Create a random number
    //Logger.log('randomNmbr: ' + randomNmbr);
    character = String.fromCharCode(randomNmbr);

    //Logger.log('character: ' + character);//Print the character to the Logs
    data = data + character;
};

blob = Utilities.newBlob(data, MimeType.PLAIN_TEXT, fileName);//Create a blob with random
characters

newFile = DriveApp.createFile(blob);//Create a new file from a blob

newFile.setName(fileName);//Set the file name of the new file
};

```

- -

```

function processGoogleDriveFolders() {
    var arrayAllFolderNames,continuationToken,folders,foldersFromToken,thisFolder;//Declare
variable names

    arrayAllFolderNames = [];//Create an empty array and assign it to this variable name

    folders = DriveApp.getFolders();//Get all folders from Google Drive in this account
    continuationToken = folders.getContinuationToken();//Get the continuation token

    Utilities.sleep(18000);//Pause the code for 3 seconds

    foldersFromToken = DriveApp.continueFolderIterator(continuationToken);//Get the original
folders stored in the token
    folders = null;//Delete the folders that were stored in the original variable, to prove that
the continuation token is working

    while (foldersFromToken.hasNext()) { //If there is a next folder, then continue looping
        thisFolder = foldersFromToken.next();//Get the next folder
        arrayAllFolderNames.push(thisFolder.getName());//Get the name of the next folder
    };

    Logger.log(arrayAllFolderNames);//print the folder names to the Logs
};

```

- -

```

function processGoogleDriveFiles() {
    var arrayAllFileNames,continuationToken,files,filesFromToken,fileIterator,thisFile;//Declare
variable names

```



```

arrayAllFileNames = []; //Create an empty array and assign it to this variable name

files = DriveApp.getFiles(); //Get all files from Google Drive in this account
continuationToken = files.getContinuationToken(); //Get the continuation token

Utilities.sleep(18000); //Pause the code for 3 seconds

filesFromToken = DriveApp.continueFileIterator(continuationToken); //Get the original files
stored in the token
files = null; //Delete the files that were stored in the original variable, to prove that the
continuation token is working

while (filesFromToken.hasNext()) { //If there is a next file, then continue looping
  thisFile = filesFromToken.next(); //Get the next file
  arrayAllFileNames.push(thisFile.getName()); //Get the name of the next file
};

Logger.log(arrayAllFileNames);
};

```

```

function DriveAppAddFolder(child) { //Adds file to the root drive in Google Drive
  var body, returnedFolder; //Declare variable names

  if (!child) {
    body = "There is no folder";
    MailApp.sendEmail(Session.getEffectiveUser().getEmail(), "", "Error Adding Folder!", body)
    return;
  };

  returnedFolder = DriveApp.addFolder(child); //Add a folder to the root drive

  Logger.log('returnedFolder: ' + returnedFolder); //Print the folder results to the Logs
};

function createNewFolderInGoogleDrive() {
  var folder, newFolderName, timeStamp, dateTimeAsString;

  timeStamp = new Date(); //Create a new date
  dateTimeAsString = timeStamp.toString().slice(0,15);

  newFolderName = 'Test Folder Name ' + dateTimeAsString; //Create new folder name with
date/time appended to name

  folder = DriveApp.createFolder(newFolderName); //Create a new folder
  DriveAppAddFolder(folder); //Call a function and pass a folder to the function
};

```

```

function DriveAppAddFile(child) { //Adds file to the root drive in Google Drive
  var body, returnedFolder; //Declare variable names

  if (!child) {
    body = "There is no file";
    MailApp.sendEmail(Session.getEffectiveUser().getEmail(), "", "Error Adding File!", body)
    return;
  };

  returnedFolder = DriveApp.addFile(child);

```

```

    Logger.log('returnedFolder: ' + returnedFolder);
};

function createNewFileInGoogleDrive() {
    var content, file, newFileName, timeStamp, dateTimeAsString;

    timeStamp = new Date();//Create a new date
    dateTimeAsString = timeStamp.toString().slice(0,15);

    content = "This is test file content, created at: " + dateTimeAsString;//Create content for
new file
    newFileName = 'Test File ' + dateTimeAsString;//Create new file name with date/time appended
to name

    file = DriveApp.createFile(newFileName, content);//Create a new file
    DriveAppAddFile(file);//Call a function and pass a file to the function
};

```

```

function onOpen() {

    // Add a custom menu to run the script
    var ss = SpreadsheetApp.getActiveSpreadsheet();
    var searchMenuEntries = [ {name: "Run", functionName: "search"}];
    ss.addMenu("Get Files", searchMenuEntries);
}

function getFiles() {

    // Get the active spreadsheet and the active sheet
    var ss = SpreadsheetApp.getActiveSpreadsheet();
    var ssid = ss.getId();

    // Look in the same folder the sheet exists in. For example, if this template is in
// My Drive, it will return all of the files in My Drive.
    var ssparents = DriveApp.getFileById(ssid).getParents();
    var sheet = ss.getActiveSheet();

    // Set up the spreadsheet to display the results
    var headers = [ ["Last Updated", "File Owner", "File Name", "File URL"]];
    sheet.getRange("A1:D").clear();
    sheet.getRange("A1:D1").setValues(headers);

    // Loop through all the files and add the values to the spreadsheet.
    var folder = ssparents.next();
    var files = folder.getFiles();
    var i=1;
    while(files.hasNext()) {
        var file = files.next();
        if(ss.getId() == file.getId()){
            continue;
        }
        sheet.getRange(i+1, 1, 1,
4).setValues([[file.getLastUpdated(),file.getOwner().getName(),file.getName(),
file.getUrl()]]);
        i++;
    }
}

```

---

## 4: DriveApp - getFileById

URL。 IDURLIDURL。 URLID。

### Examples

#### IDGoogle

```
function getGoogleDriveFileById(id) {
  var file;

  file = DriveApp.getFileById(id); //Returns a file - The "id" must be a string

  //One way to manually get a file ID
  // - Open the file from Google Drive
  // - The file ID is in the URL in the browsers address bar
  //https://docs.google.com/spreadsheets/d/File_ID_is_here/edit#gid=0
};
```

DriveApp - getFileById <https://riptutorial.com/zh-TW/google-apps-script/topic/6087/driveapp-----getFileById-id->

## 5: DriveApp

Google MimeMime。 Google Mime Type

“DriveApp.createFile”Google MIME。

MimeType.GOOGLE\_APPS\_SCRIPT

MimeType.GOOGLE\_DOCS

MimeType.GOOGLE\_DRAWINGS

MimeType.GOOGLE\_FORMS

MimeType.GOOGLE\_SHEETS

MimeType.GOOGLE\_SLIDES

## Examples

### Google

```
function createNewFolderInGoogleDrive() {
  var folderName,newFolder;//Declare variable names

  folderName = "Test Folder " + new Date().toString().slice(0,15);//Create a new folder name
with date on end
  newFolder = DriveApp.createFolder(folderName);//Create a new folder in the root drive
};
```

### MimeGoogle

```
function createGoogleDriveFileOfMimeType() {
  var content,fileName,newFile;//Declare variable names

  fileName = "Test File " + new Date().toString().slice(0,15);//Create a new file name with
date on end
  content = "This is the file Content";

  newFile = DriveApp.createFile(fileName,content,MimeType.JAVASCRIPT);//Create a new file in
the root folder
};
```

### Google

```
function createGoogleDriveTextFile() {
  var content,fileName,newFile;//Declare variable names

  fileName = "Test Doc " + new Date().toString().slice(0,15);//Create a new file name with
date on end
```

```

content = "This is the file Content";

newFile = DriveApp.createFile(fileName,content);//Create a new text file in the root folder
};

```

## blobGoogle

```

function createGoogleDriveFileWithBlob() {
    var blob,character,data,fileName,i,L,max,min,newFile,randomNmbr;//Declare variable names

    fileName = "Test Blob " + new Date().toString().slice(0,15);//Create a new file name with
date on end

    L = 500;//Define how many times to loop
    data = "";
    max = 126;
    min = 55;

    for (i=0;i<L;i+=1) { //Loop to create data
        randomNmbr = Math.floor(Math.random()*(max-min+1)+min);//Create a random number
        //Logger.log('randomNmbr: ' + randomNmbr);
        character = String.fromCharCode(randomNmbr);

        //Logger.log('character: ' + character);//Print the character to the Logs
        data = data + character;
    };

    blob = Utilities.newBlob(data, MimeType.PLAIN_TEXT, fileName);//Create a blob with random
characters

    newFile = DriveApp.createFile(blob);//Create a new file from a blob

    newFile.setName(fileName);//Set the file name of the new file
};

```

- -

```

function processGoogleDriveFolders() {
    var arrayAllFolderNames,continuationToken,folders,foldersFromToken,thisFolder;//Declare
variable names

    arrayAllFolderNames = [];//Create an empty array and assign it to this variable name

    folders = DriveApp.getFolders();//Get all folders from Google Drive in this account
    continuationToken = folders.getContinuationToken();//Get the continuation token

    Utilities.sleep(18000);//Pause the code for 3 seconds

    foldersFromToken = DriveApp.continueFolderIterator(continuationToken);//Get the original
folders stored in the token
    folders = null;//Delete the folders that were stored in the original variable, to prove that
the continuation token is working

    while (foldersFromToken.hasNext()) { //If there is a next folder, then continue looping
        thisFolder = foldersFromToken.next();//Get the next folder
        arrayAllFolderNames.push(thisFolder.getName());//Get the name of the next folder
    };
};

```

```
Logger.log(arrayAllFolderNames);//print the folder names to the Logs  
};
```

- -

```
function processGoogleDriveFiles() {  
  var arrayAllFileNames, continuationToken, files, filesFromToken, fileIterator, thisFile; //Declare  
  variable names  
  
  arrayAllFileNames = []; //Create an empty array and assign it to this variable name  
  
  files = DriveApp.getFiles(); //Get all files from Google Drive in this account  
  continuationToken = files.getContinuationToken(); //Get the continuation token  
  
  Utilities.sleep(18000); //Pause the code for 3 seconds  
  
  filesFromToken = DriveApp.continueFileIterator(continuationToken); //Get the original files  
  stored in the token  
  files = null; //Delete the files that were stored in the original variable, to prove that the  
  continuation token is working  
  
  while (filesFromToken.hasNext()) { //If there is a next file, then continue looping  
    thisFile = filesFromToken.next(); //Get the next file  
    arrayAllFileNames.push(thisFile.getName()); //Get the name of the next file  
  };  
  
  Logger.log(arrayAllFileNames);  
};
```

DriveApp <https://riptutorial.com/zh-TW/google-apps-script/topic/6395/driveapp>

# 6: DriveApp -



## Examples

“Google.

```
function mainSearchFunction(searchStr) {
  var fileInfo,arrayFileIDs,arrayFileNames,arrayOfIndexNumbers,
    allFileIDsWithStringInName,i,searchStr,thisID;//Declare variables

  if (!searchStr) {
    searchStr = "Untitled";//Assign a string value to the variable
  };

  fileInfo = getFilesOfType();//Run a function that returns files information
  arrayFileNames = fileInfo[1];//Get the array of file names
  arrayOfIndexNumbers = searchFileNamesForString(arrayFileNames,searchStr);

  //Logger.log('searchStr: ' + searchStr)
  //Logger.log(arrayOfIndexNumbers)

  allFileIDsWithStringInName = [];
  arrayFileIDs = fileInfo[0];

  for (i=0;i<arrayOfIndexNumbers.length;i+=1) {
    thisID = arrayFileIDs[arrayOfIndexNumbers[i]];
    allFileIDsWithStringInName.push(thisID);
  };

  Logger.log(allFileIDsWithStringInName)
};

function getFilesOfType() {
  var allFormFiles,arrFileName,arrFileID,arrFileUrls,thisFile;

  allFormFiles = DriveApp.getFilesByType(MimeType.GOOGLE_FORMS);
  arrFileName = [];
  arrFileID = [];
  arrFileUrls = [];

  while (allFormFiles.hasNext()) {
    thisFile=allFormFiles.next();
    arrFileName.push(thisFile.getName());
    arrFileID.push(thisFile.getId());
    arrFileUrls.push(thisFile.getUrl());
  };

  //Logger.log(arrFileName)
  return [arrFileID,arrFileName];
};

function searchFileNamesForString(arrayFileNames,searchStr) {
  var arrayIndexNumbers,i,L,thisName;
```

```
arrayIndexNumbers = [];  
  
L = arrayFileNames.length;  
  
for (i=0;i<L;i+=1){  
    thisName = arrayFileNames[i];  
    Logger.log(thisName);  
    Logger.log('thisName.indexOf(searchStr): ' + thisName.indexOf(searchStr));  
  
    if (thisName.indexOf(searchStr) !== -1) {  
        arrayIndexNumbers.push(i);  
    };  
};  
  
return arrayIndexNumbers;  
};
```

DriveApp - <https://riptutorial.com/zh-TW/google-apps-script/topic/4049/driveapp--->



# 7: FirebaseAppScript

FirebaseGoogle AppScriptFirebase

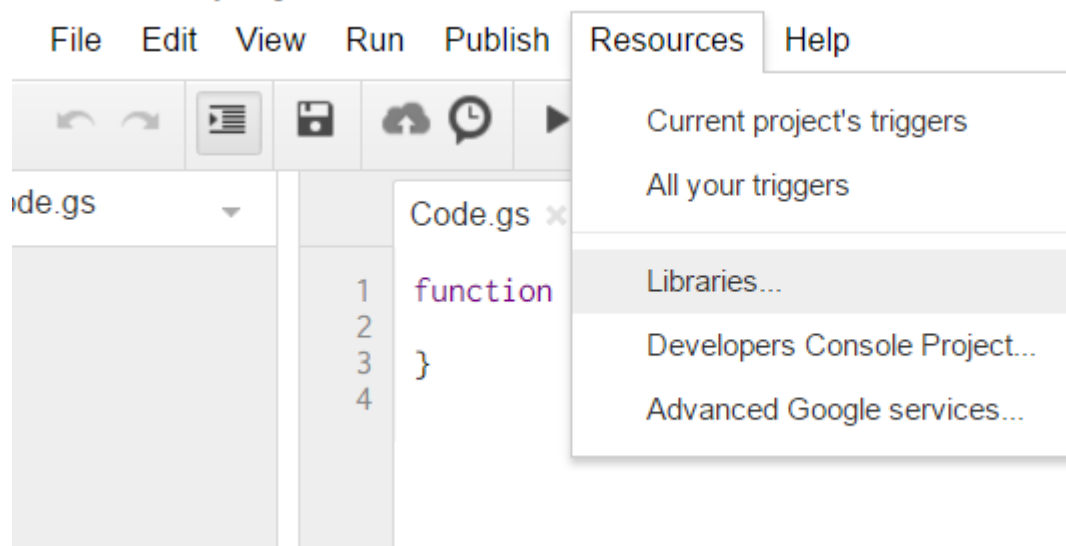
FirebaseGoogleNoSQL NoSQLJSON

## Examples

GASFirebaseGoogleFirebase

## AppScriptFirebase

- ""
- FirebaseAppScript



- . . . MYeP8ZEEt1yIVDxS7uyg9pIDOcoke7-2IFirebase

## Included Libraries

Title	Version	Identifier	Development Mode
FirebaseApp	...	FirebaseApp	off

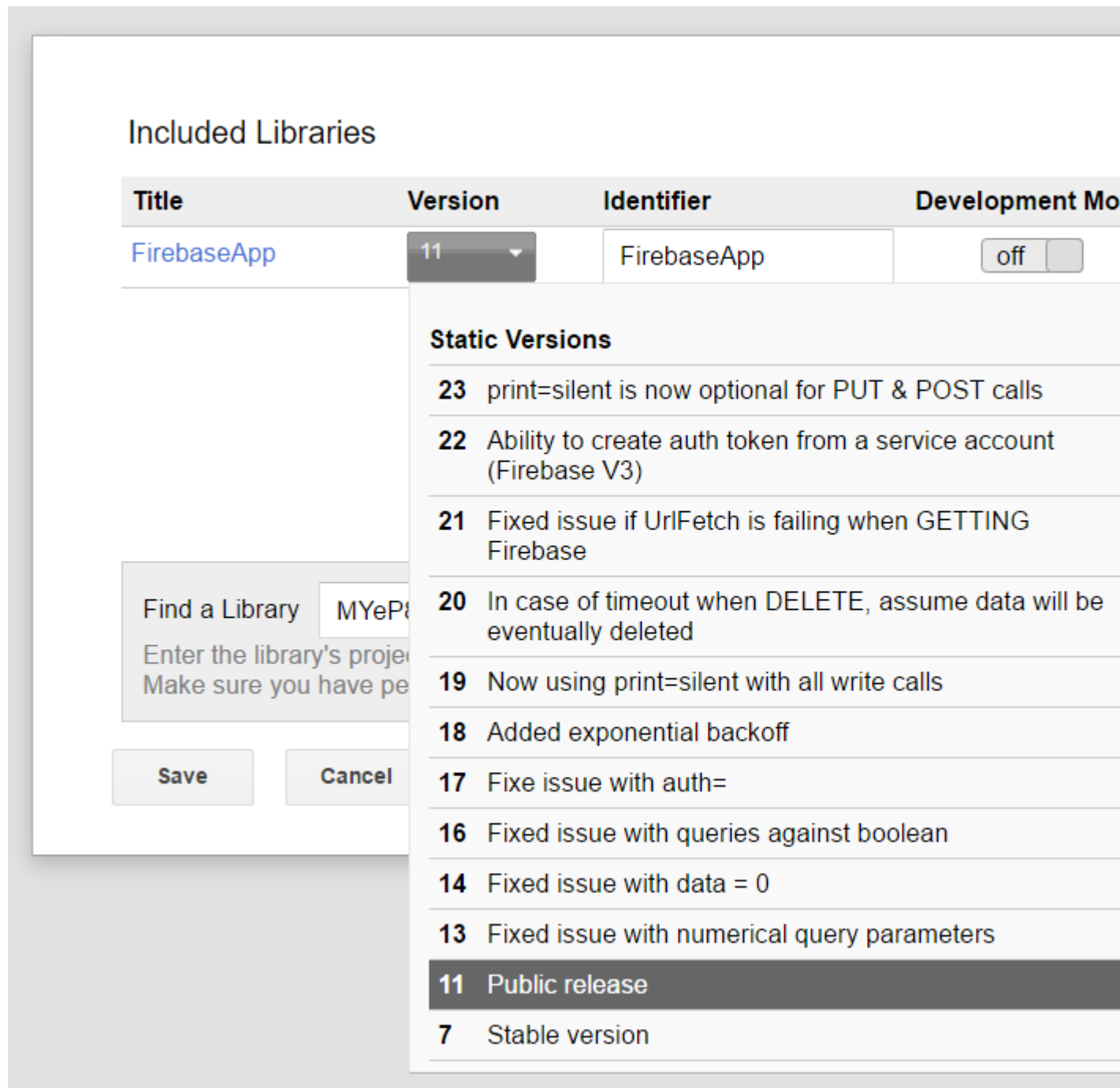
Find a Library

Select

Enter the library's project key (found under File > Project Properties).  
Make sure you have permissions to access the library or its containing spreadsheet.

Save

Cancel



- FirebaseAppScript.

## Firestore

- Google.

A	B	C	D	E	
First Name	Last Name	Email Address	Phone Number	Semester	Departn
Vishal	vishwakarma	vishal.vishwakar	9594852468		7 INFT
Yash	Udasi		75395185246		7 INFT

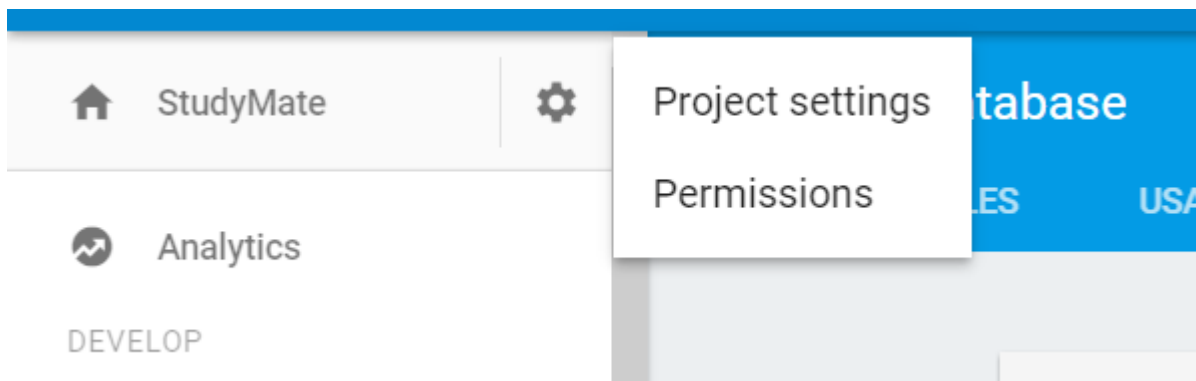
- Firebase. AppScript.

```
function writeToFirebase() {
  var ss = SpreadsheetApp.openById("1LACsj0s3syAa9gvORdRWBhJ_YcXHybjQfHPgw3TLQ6g");
  var sheet = ss.getSheets()[0];
  var data = sheet.getDataRange().getValues();
  var dataToImport = {};
  for(var i = 1; i < data.length; i++) {
    var firstName = data[i][0];
    var lastName = data[i][1];
    dataToImport[firstName + '-' + lastName] = {
      firstName:firstName,
      lastName:lastName,
      emailAddress:data[i][2],
      semester:data[i][4],
      department:data[i][5],
    };
  }
  var firebaseUrl = "https://example-app.firebaseio.com/";
  var secret = "secret-key";
  var base = FirebaseApp.getDatabaseByUrl(firebaseUrl, secret);
  base.setData("", dataToImport);
}
```

IDfirebaseURL.

## firebaseURL

- Firebase. "".



- ""databaseURL. firebaseURL.
- Database Secrets.

## firebaseURL。 。 AppScript。

- 。
- “”””。
- Firebase。

### Firestore。

。

## 1。

```
function myFunction() {
  var firebaseUrl = "https://example-app.firebaseio.com/";
  var secret = "secret-key";
  var base = FirebaseApp.getDatabaseByUrl(firebaseUrl, secret);
  base.setData("test", "Hello Firestore");
}
```

## 2。

```
function getAllData() {
  var firebaseUrl = "https://example-app.firebaseio.com/";
  var secret = "secret-key";
  var base = FirebaseApp.getDatabaseByUrl(firebaseUrl, secret);
  var data = base.getData();
  for(var i in data) {
    Logger.log(data[i].firstName + ' ' + data[i].lastName);
  }
}
```

。 “” → “””” **Control + Enter**”。

## 3。

```
function getContact() {
  var firebaseUrl = "https://example-app.firebaseio.com/";
  var secret = "secret-key";
  var base = FirebaseApp.getDatabaseByUrl(firebaseUrl, secret);
  var contact = base.getData("Yash-Udasi");
  Logger.log(contact);
}
```

。 “” → “””” **Control + Enter**”。

## 4。

```
function updateData() {  
  var firebaseUrl = "https://example-app.firebaseio.com/";  
  var secret = "secret-key";  
  var base = FirebaseApp.getDatabaseByUrl(firebaseUrl, secret);  
  base.updateData("Yash-Udasi/emailAddress", "yash.udasi@fyuff.com");  
}
```

Firestore <https://riptutorial.com/zh-TW/google-apps-script/topic/9417/firebaseappscript->

---

# 8: GmailApp

GmailAppAPI ◦

## Examples

### CSV

CSV◦

```
function getCsvFromGmail() {
  // Get the newest Gmail thread based on sender and subject
  var gmailThread = GmailApp.search("from:noreply@example.com subject:\"My daily report\"", 0,
  1)[0];

  // Get the attachments of the latest mail in the thread.
  var attachments = gmailThread.getMessages()[gmailThread.getMessageCount() -
  1].getAttachments();

  // Get and parse the CSV from the first attachment
  var csv = Utilities.parseCsv(attachments[0].getDataAsString());
  return csv;
}
```

GmailApp <https://riptutorial.com/zh-TW/google-apps-script/topic/5899/gmailapp>

# 9: Google Web AppGoogle

Google App WebGoogle DrivePC。 1。 2。 。 “”。

Web。

<https://script.google.com>

## Examples

### forms.html

```
<!DOCTYPE html>
<html>
  <head>
    <base target="_top">
    <script>

      setInterval(
        function ()
        {
          document.getElementById('messages').innerHTML = 'Event Timer Fetching';
          google.script.run
            .withSuccessHandler(onSuccess)
            .withFailureHandler(onFailure)
            .fetchFromGoogleDrive();
        }, 60000);

      function callFetchGoogleDrive() {
        document.getElementById('messages').innerHTML = 'Fetching';
        google.script.run
          .withSuccessHandler(onSuccess)
          .withFailureHandler(onFailure)
          .fetchFromGoogleDrive();
      }

      function onSuccess(sHref)
      {
        if(new String(sHref).valueOf() == new String("").valueOf())
        {
          document.getElementById('messages').innerHTML = 'Nothing to download';
        }
        else
        {
          document.getElementById('messages').innerHTML = 'Success';
          document.getElementById('HiddenClick').href = sHref;
          document.getElementById('HiddenClick').click(); // Must enable Pop Ups for
https://script.google.com
        }
      }

      function onFailure(error)
      {
        document.getElementById('messages').innerHTML = error.message;
      }
    }
  }

```



```

    </script>
</head>
<body>
  <div id="messages">Waiting to DownLoad!</div>
  <div>
    <a id="HiddenClick" href="" target="_blank" onclick="google.script.host.close"
style="visibility: hidden;">Hidden Click</a>
  </div>
  <div>
    <button type="button" onclick='callFetchGoogleDrive();' id="Fetch">Fetch Now!</button>
  </div>
</body>
</html>

```

## code.gs

```

function doGet(e) {
  var serveFile = e.parameter.servefile;
  var id = e.parameter.id;

  if(serveFile)
  {
    return downloadFile(id); // and Hyde
  }

  return HtmlService.createHtmlOutputFromFile('form.html'); // Jekyll
}

function fetchFromGoogleDrive() { // Jekyll
  var fileslist = DriveApp.searchFiles("your search criteria goes here + and trashed =
false"); // the 'and trashed = false' prevents the same file being download more than once

  if (fileslist.hasNext()) {
    var afile = fileslist.next();
    var html = ScriptApp.getService().getUrl()+"?servefile=true&id="+afile.getId();
    return html;
  }
  else
  {
    return '';
  }
}

function downloadFile(id){ // and Hyde
  try
  {
    var afile = DriveApp.getFileById(id);

    var aname = afile.getName();
    var acontent = afile.getAs('text/plain').getDataAsString();

    var output = ContentService.createTextOutput();
    output.setMimeType(ContentService.MimeType.CSV);
    output.setContent(acontent);
    output.downloadAsFile(aname);
    afile.setTrashed(true);
    return output;
  }
}

```

```
catch (e) {
  return ContentService.createTextOutput('Nothing To Download')
}
}
```

Google DriveWebDrivePC。

DriveApp。 Google Apps/。

DriveAppPC。

。 。 PC。 。

urlDriveurl。 DriveURL。 URL。

。 url。

ContentService createTextOutputdoGet / doPostDriveGoogle。 doGet / doPostUI。

。 UI。

UIWeb App。

Dr. JekyllMr Hyde。

GETdoGet。 。 。

servefile = trueDrive。

javascriptsetInterval。

Drive\*url

servefile = TRUEID = the\_id\_of\_the\_google\_drive\_file

\*。 。

withSuccessHandler。

javaHREF。

app / script。 doGetservefile。 ID。

ID。

/。

。 。

Google Web AppGoogle <https://riptutorial.com/zh-TW/google-apps-script/topic/8212/google-web-appgoogle>

---

# 10: GoogleMailApp

- GmailAppMailApp ◦ MailAppGmail ◦

GmailAppMailApp ◦

## Examples

### MailApp

#### MailAppGoogle App Scriptapi

```
function sendEmails() {  
  
    var subject = "A subject for your new app!";  
    var message = "And this is the very first message"  
    var recipientEmail = "abc@example.com";  
  
    MailApp.sendEmail(recipientEmail, subject, message);  
}
```

#### MailAppGoogle

- Gmail100
- Google Apps100
- GSuite////1500

MailApp

```
function checkQuota() {  
    Logger.log(MailApp.getRemainingDailyQuota());  
}
```

```
function getSheetData() {  
  
    var sheet = SpreadsheetApp.getActiveSheet();  
  
    var startRow = 2; // First row of data to process  
    var numRows = 100; // Number of rows to process  
    var startCol = 1; //First column of data to process  
    var numCols = 15; // Number of columns to process  
  
    var dataRange = sheet.getRange(startRow, startCol, numRows, numCols);  
  
    // Fetch values for each row in the Range.  
    var data = dataRange.getValues();  
  
    return data;  
}
```

```
function getDataSheet() {
```

```

sheet = SpreadsheetApp.getActiveSheet();

//Get data range based on content
var dataRange = sheet.getDataRange();

// Fetch values for each row in the Range.
var data = dataRange.getValues();

return data;
}

```

- A.

-

A	B	C
Name	Email Address	Reimberseme amount
Ramesh	ramesh@sample.com	200
Vidhita	vidhita@sample.com	50
Jhanvi	jhanvi@sample.com	30

```

function getDataSheet() {

    sheet = SpreadsheetApp.getActiveSheet();

    startRow = 2; // First row of data to process
    numRows = 100; // Number of rows to process
    startCol = 1; //First column of data to process
    numCols = 15; // Number of columns to process

    var dataRange = sheet.getRange(startRow, startCol, numRows, numCols);

    // Fetch values for each row in the Range.
    var data = dataRange.getValues();

    return data;
}

function getMessage(name, amount) {
    return "Hello " + name + ", Your reimbursement for amount " + amount + " is processed successfully";
}

function sendEmail() {

    var emailSent = "Yes";
    var reimbursed = "Yes";
}

```

```

var emailCol = 5;

var data = getDataSheet();

for (var i = 0; i < data.length; i++) {

    var row = data[i];

    var isReimbursed = row[3];
    var isEmailSent = row[4];
    var name = row[0];
    var amount = row[2];

    if(isReimbursed == reimbursed && isEmailSent != emailSent) {

        var subject = "Reimbursement details";
        var message = getMessage(name, amount);

        var recipientEmail = row[1];

        MailApp.sendEmail(recipientEmail, subject, message);

        //Sheet range starts from index 1 and data range starts from index 0
        sheet.getRange(1 + i, emailCol).setValue(emailSent);
    }
}
}

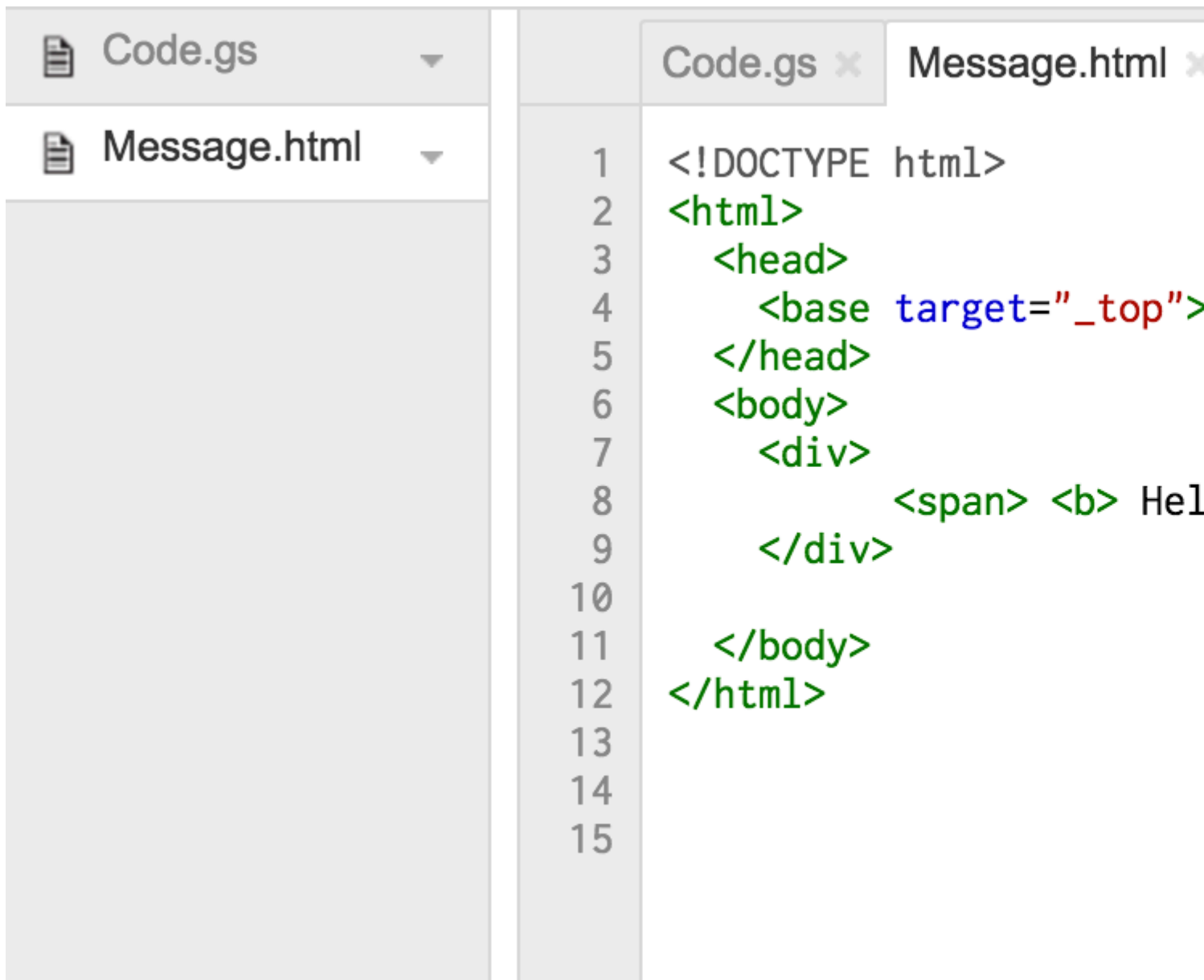
```

A	B	C
<b>Name</b>	<b>Email Address</b>	<b>Reimberseme amount</b>
Ramesh	ramesh@sample.com	20
Vidhita	vidhita@sample.com	5
Jhanvi	jhanvi@sample.com	3

HTML

HTML -> -> HTMLHTML

gsHTML



```
Code.gs x Message.html x
Code.gs
Message.html
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <base target="_top">
5   </head>
6   <body>
7     <div>
8       <span> <b> Hel
9     </div>
10
11   </body>
12 </html>
13
14
15
```

### *getMessage*

```
function getMessage(name, amount) {
  var htmlOutput = HtmlService.createHtmlOutputFromFile('Message'); // Message is the name of
  the HTML file

  var message = htmlOutput.getContent()
  message = message.replace("%name", name);
  message = message.replace("%amount", amount);

  return message;
}
```

### *MailApp api*

```
MailApp.sendEmail(recipientEmail, subject, message, {htmlBody : message});
```

```
function getDataSheet() {
```

```

sheet = SpreadsheetApp.getActiveSheet();

startRow = 2; // First row of data to process
numRows = 100; // Number of rows to process
startCol = 1; //First column of data to process
numCols = 15; // Number of columns to process

var dataRange = sheet.getRange(startRow, startCol, numRows, numCols);

// Fetch values for each row in the Range.
var data = dataRange.getValues();

return data;
}

function getMessage(name, amount) {
  var htmlOutput = HtmlService.createHtmlOutputFromFile('Message');

  var message = htmlOutput.getContent()
  message = message.replace("%name", name);
  message = message.replace("%amount", amount);

  return message;
}

function sendEmail() {

  var emailSent = "Yes";
  var reimbursed = "Yes";
  var emailCol = 5;

  var data = getDataSheet();

  for (var i = 0; i < data.length; i++) {

    var row = data[i];

    var isReimbursed = row[3];
    var isEmailSent = row[4];
    var name = row[0];
    var amount = row[2];

    if(isReimbursed == reimbursed && isEmailSent != emailSent) {

      var subject = "Reimbursement details";
      var message = getMessage(name, amount);

      var recipientEmail = row[1];

      MailApp.sendEmail(recipientEmail, subject, message, {htmlBody : message});

      sheet.getRange(startRow + i, emailCol).setValue(emailSent);
    }
  }
}

```

GoogleMailApp <https://riptutorial.com/zh-TW/google-apps-script/topic/5298/googlemailapp>

---

# 11: SpreadsheetApp

getActive

## Examples

getActive -

null.

```
var currentSheet = SpreadsheetApp.getActive();  
var url = currentSheet.getUrl();  
Logger.log( url );
```

SpreadsheetApp <https://riptutorial.com/zh-TW/google-apps-script/topic/5861/spreadsheetapp>



---

# 12: Google

Google appsriptGoogle。 Google。

GoogleGoogle。

## Examples

### Google

```
<script src="https://apis.google.com/js/api.js"></script>
<script>
function start() {
  // 2. Initialize the JavaScript client library.
  gapi.client.init({
    'apiKey': 'YOUR_API_KEY',
    // clientId and scope are optional if auth is not required.
    'clientId': 'YOUR_WEB_CLIENT_ID.apps.googleusercontent.com',
    'scope': 'profile',
  }).then(function() {
    // 3. Initialize and make the API request.
    return gapi.client.request({
      'path': 'https://people.googleapis.com/v1/people/me',
    })
  }).then(function(response) {
    console.log(response.result);
  }, function(reason) {
    console.log('Error: ' + reason.result.error.message);
  });
};
// 1. Load the JavaScript client library.
gapi.load('client', start);
</script>
```

Google <https://riptutorial.com/zh-TW/google-apps-script/topic/8875/google>

# 13: Google

Google

-> .

## Examples

1cm /s<sup>2</sup>, 2ft /s<sup>2</sup>, 3m /s<sup>2</sup>

```
/**
 * Returns the standard gravity constant in the specified acceleration units
 * Values taken from https://en.wikipedia.org/wiki/Standard_gravity on July 24, 2016.
 *
 * @param {number} input 1 for cm/s2, 2 for ft/s2, 3 for m/s2
 *
 * @customfunction
 */
function sg(units_key) {
  var value;
  switch(units_key) {
    case 1:
      value = 980.665;
      break;
    case 2:
      value = 32.1740;
      break;
    case 3:
      value = 9.80665;
      break;
    default:
      throw new Error('Must to specify 1, 2 or 3');
  }
  return value;
}
```

->... Google

. JSDocJavadoc . @customfunction .

#DIV/0 .

```
/**
 * Divides n by d unless d is zero, in which case, it returns
 * the given symbol.
 *
 * @param {n} number The numerator
 * @param {d} number The divisor
 * @param {symbol} string The symbol to display if `d == 0`
 * @return {number or string} The result of division or the given symbol
 *
 * @customfunction
 */
function zeroSafeDivide(n, d, symbol) {
```

```
if (d == 0)
  return symbol;
else
  return n / d;
}
```

->... ◦ Google ◦

<i>fx</i>	=zeroSafeDivide(5,0,"-")	
	A	B
1	-	
2		

◦ JSDocJavadoc ◦ @customfunction ◦

Google <https://riptutorial.com/zh-TW/google-apps-script/topic/5572/google>

# 14:

API <https://developers.google.com/apps-script/reference/spreadsheet/> ◦

## Examples

```
var spread_sheet = SpreadsheetApp.getActiveSpreadsheet(); // Get active spreadsheet
var sheet_with_name_a = spread_sheet.getSheetByName("sheet_tab_name");
```

```
var spread_sheet = SpreadsheetApp.getActiveSpreadsheet();
var active_sheet = spread_sheet.getActiveSheet();
```

```
var spread_sheet = SpreadsheetApp.getActiveSpreadsheet();
var active_sheet = spread_sheet.getActiveSheet();
active_sheet.insertColumnAfter(1); // This inserts a column after the first column position
active_sheet.insertColumnBefore(1); // This inserts a column in the first column position
active_sheet.insertColumns(1); // Shifts all columns by one
active_sheet.insertColumns(1, 3); // Shifts all columns by three
active_sheet.insertColumnsAfter(1); // This inserts a column in the second column position
active_sheet.insertColumnsBefore(1, 5); // This inserts five columns before the first column
```

```
var spread_sheet = SpreadsheetApp.getActiveSpreadsheet();
var active_sheet = spread_sheet.getActiveSheet();
active_sheet.insertRowAfter(1); // This inserts a row after the first row position
active_sheet.insertRowBefore(1); // This inserts a row in the first row position
active_sheet.insertRows(1); // Shifts all rows by one
active_sheet.insertRows(1, 3); // Shifts all rows by three
active_sheet.insertRowsAfter(1); // This inserts a row in the second row position
active_sheet.insertRowsBefore(1, 5); // This inserts five rows before the first row
```

```
var spread_sheet = SpreadsheetApp.getActiveSpreadsheet();
var active_sheet = spread_sheet.getActiveSheet();
var cell = range.getCell(1, 1);
var cell_value = cell.getValue();
cell.setValue(100);
```

```
var spread_sheet = SpreadsheetApp.getActiveSpreadsheet();
var active_sheet = spread_sheet.getActiveSheet();
var range_to_copy = active_sheet.getRange(1, 1, sheet.getMaxRows(), 5);
range_to_copy.copyTo(sheet.getRange(1, 6));
```

```
var spread_sheet = SpreadsheetApp.getActiveSpreadsheet();
var active_sheet = spread_sheet.getActiveSheet();
var range = active_sheet.getRange("B5");
var formula = range.getFormula();
range.setFormula("=SUM(B3:B4)");
```

GoogleB2D5 ◦

```
function copyValueandPaste()
{
    var source = SpreadsheetApp.openById('spread sheet id is here'); //Separate spreadsheet
    book
    var sourcesheet = source.getSheetByName('Sheet1'); //Sheet tab with source data
    var sourceCellValue = sourcesheet.getRange('B2').getValue(); // get B2 cell value

    var thisBook = SpreadsheetApp.getActive(); // Active spreadsheet book
    var thisSheet = thisBook.getSheetByName('Sheet1'); // Target sheet
    thisSheet.getRange('D5').setValue(sourceCellValue); //Set value to target sheet D5 cell
}

```

ID.

```
function lastRowForColumn(sheet, column){
    // Get the last row with data for the whole sheet.
    var numRows = sheet.getLastRow();

    // Get all data for the given column
    var data = sheet.getRange(1, column, numRows).getValues();

    // Iterate backwards and find first non empty cell
    for(var i = data.length - 1 ; i >= 0 ; i--){
        if (data[i][0] != null && data[i][0] != ""){
            return i + 1;
        }
    }
}

```

```
var someSheet = SpreadsheetApp.getActiveSpreadsheet().getSheets()[0];
someSheet.appendRow(["Frodo", "Baggins", "Hobbit", "The Shire", 33]);

```

o

```
var someSheet = SpreadsheetApp.getActiveSpreadsheet().getSheets()[0];

var newRowIndex = 2;
var row = ["Gandalf", "?", "Wizard", "?", 2019];
someSheet.insertRowBefore(newRowIndex);
// getRange(row, col, numRows, numCols)
someSheet.getRange(newRowIndex, 1, 1, row.length).setValues([row]); // Note 2D array!

```

```
function insertRowBefore(sheet, rowIndex, rowData) {
    sheet.insertRowBefore(rowIndex);
    sheet.getRange(rowIndex, 1, 1, rowData.length).setValues([rowData]);
}

```

```
var someSheet = SpreadsheetApp.getActiveSpreadsheet().getSheets()[0];
insertRowBefore(someSheet, 2, ["Gandalf", "?", "Wizard", "?", 2019]);

```

<https://riptutorial.com/zh-TW/google-apps-script/topic/2688/>

# 15:

## 1. addMenuNamesubMenus



### onOpenaddMenu

```
// The onOpen function is executed automatically every time a Spreadsheet is loaded
function onOpen() {
  var activeSheet = SpreadsheetApp.getActiveSpreadsheet();
  var menuItems = [];
  // When the user clicks on "addMenuExample" then "Menu 1", the function Myfunction1 is
  executed.
  menuItems.push({name: "Menu 1", functionName: "Myfunction1"});
  menuItems.push(null); // adding line separator
  menuItems.push({name: "Menu 2", functionName: "Myfunction2"});

  activeSheet.addMenu("addMenuExample", menuEntries);
}
```

## Examples

### UI

```
var activeSheet = SpreadsheetApp.getActiveSpreadsheet();
var menuItems = [];
// When the user clicks on "addMenuExample" then "Menu 1", the function Myfunction1 is
executed.
menuItems.push({name: "Menu 1", functionName: "Myfunction1"});
menuItems.push(null); // adding line separator
menuItems.push({name: "Menu 2", functionName: "Myfunction2"});

activeSheet.addMenu("addMenuExample", menuEntries);
```

/\*

---

### App Loads

\*/

```
function onOpen() {
  var ui = SpreadsheetApp.getUi();
  // Or DocumentApp or FormApp.
  ui.createMenu('My HR')
    .addItem('Send Form to All', 'sendIDPForm_All')
    .addItem('Trigger IDP System', 'applyCategory')
```

```
.addToUi ();  
}
```

<https://riptutorial.com/zh-TW/google-apps-script/topic/4253/>

S. No		Contributors
1	google-apps-script	<a href="#">Albert Portnoy</a> , <a href="#">Community</a> , <a href="#">Douglas Gaskell</a> , <a href="#">iJay</a> , <a href="#">MShoaib91</a> , <a href="#">Rubén</a> , <a href="#">Saloni Vithalani</a> , <a href="#">Shyam Kansagra</a> , <a href="#">Spencer Easton</a> , <a href="#">sudo bangbang</a> , <a href="#">Supertopoz</a>
2	Apps Script Web Apps	<a href="#">Douglas Gaskell</a>
3	DriveApp	<a href="#">Brian</a> , <a href="#">Kos</a> , <a href="#">nibarius</a> , <a href="#">Sandy Good</a> , <a href="#">Wolfgang</a>
4	DriveApp - getFileById	<a href="#">Sandy Good</a>
5	DriveApp	<a href="#">Sandy Good</a>
6	DriveApp -	<a href="#">nibarius</a> , <a href="#">Sandy Good</a>
7	FirestoreAppScript	<a href="#">Joseba</a> , <a href="#">Vishal Vishwakarma</a>
8	GmailApp	<a href="#">nibarius</a>
9	Google Web App Google	<a href="#">Walter</a>
10	GoogleMailApp	<a href="#">Bhupendra Piprava</a> , <a href="#">Brian</a> , <a href="#">Jordan Rhea</a> , <a href="#">Kos</a> , <a href="#">nibarius</a> , <a href="#">Saloni Vithalani</a>
11	SpreadsheetApp	<a href="#">iJay</a>
12	Google	<a href="#">Supertopoz</a>
13	Google	<a href="#">Francky_V</a> , <a href="#">Joshua Dawson</a> , <a href="#">Pierre-Marie Richard</a> , <a href="#">Rubén</a>
14		<a href="#">cdrini</a> , <a href="#">iJay</a> , <a href="#">nibarius</a> , <a href="#">Sandy Good</a> , <a href="#">sudo bangbang</a>
15		<a href="#">Bishal</a> , <a href="#">iJay</a> , <a href="#">nibarius</a>