April 02, 2022

How to Send SMS Messages with Google Sheets and Android Phone

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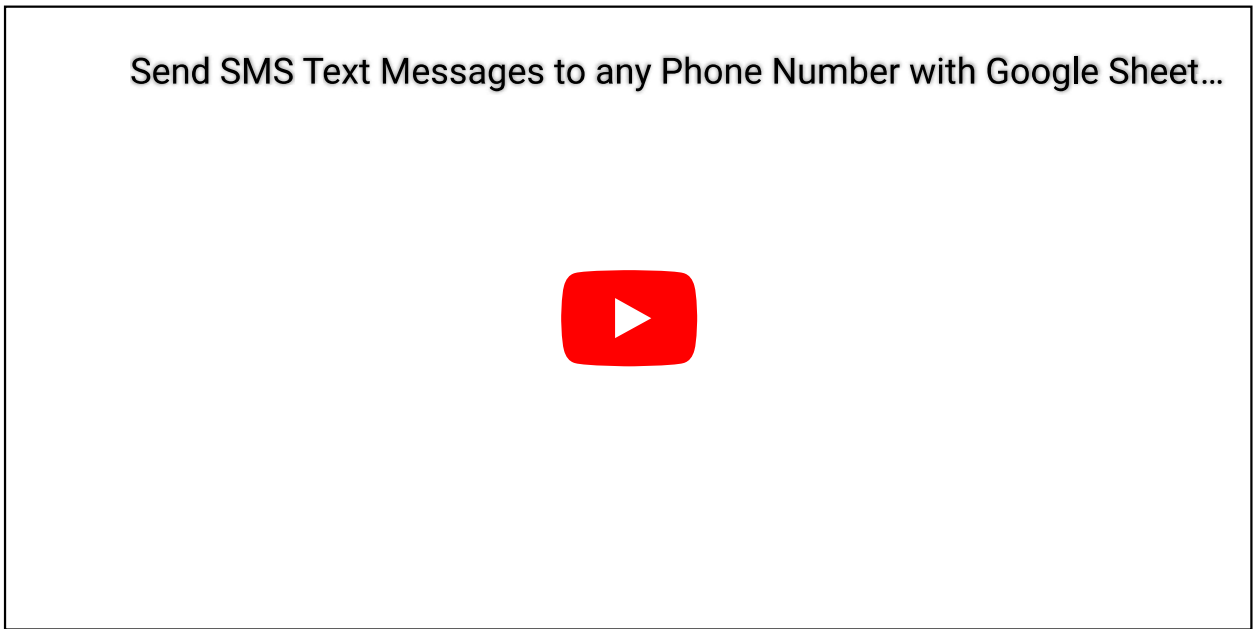
> *Send personalized text messages to your contacts with the help of Google Sheets and Android phone. The SMS messages go directly from your phone SIM, no third-party SMS service is required.*

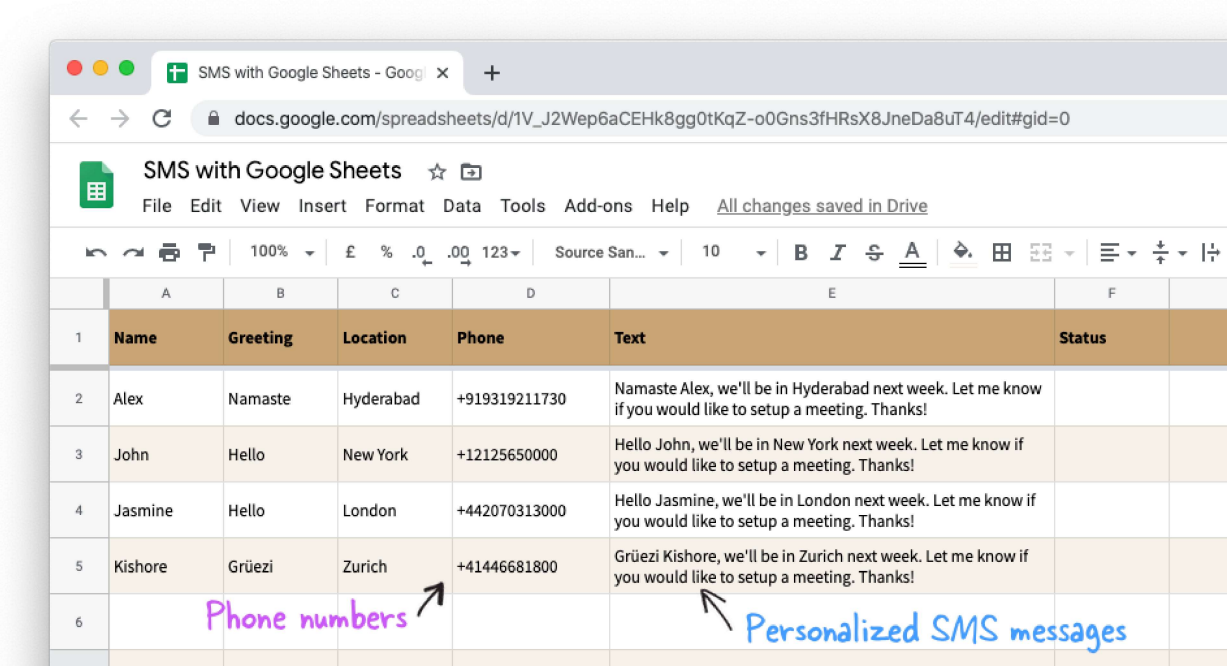
The Mail Merge for Gmail add-on lets you send personalized emails via Gmail but wouldn't it be nice if a similar solution existed for sending personalized SMS to your contacts directly from your mobile phone?

There are services, Twilio SMS for example, that let you send text messages programmatically to any phone number in the world. You can either build an SMS solution on top of these messaging APIs or you can take a simpler and less expensive route - build your own text-sending app with Google Sheets and MIT's App Inventor.



Before getting the implementation, let me give you a quick demo of our text-messaging app for sending SMS from any Android phone. You can send texts to any number in your country as well as global phone numbers if international texting is enabled on your phone. You'll pay the standard text messaging rates as per your cellular plan.

Here's my Google Sheet with the source data.



The Google Sheet can have multiple columns for SMS personalisation but the three essential columns that should be present in the sheet are Phone (for your contact's phone number), Status (whether the SMS was sent to that phone) and Text (the personalized text message).

You can use ArrayForumula with simple concatenation to build the text messages string from different columns as shown below:

```
=ArrayFormula(
    IF(NOT(ISBLANK(A2:A)),
      A2:A & " " & B2:B & " - I will see you in " & C2:C,
    )
)
```

Now that your source data is ready in the sheets, we will use Google Apps Script to convert our Google sheets data into an API. This would enable our Android app to read the sheets' data with a simple HTTPS request.

Inside the sheets, go to Tools, Script Editor and paste this code.

```
const SHEET_URL = 'YOUR_GOOGLE_SHEET_URL';
const SHEET_NAME = 'SMS';

const doGet = () => {
  const sheet = SpreadsheetApp.openByUrl(SHEET_URL).getSheetByName(SHEET_
  const [header, ...data] = sheet.getDataRange().getDisplayValues();

  const PHONE = header.indexOf('Phone');
  const TEXT = header.indexOf('Text');
  const STATUS = header.indexOf('Status');

  const output = [];

  data.forEach((row, index) => {
    if (row[STATUS] === '') {
      output.push([index + 1, row[PHONE], row[TEXT]]);
    }
  });

  const json = JSON.stringify(output);

  return ContentService.createTextOutput(json).setMimeType(ContentServic
};

const doPost = (e) => {
  const sheet = SpreadsheetApp.openByUrl(SHEET_URL).getSheetByName(SHEET_
  const [header] = sheet.getRange('A1:1').getValues();
  const STATUS = header.indexOf('Status');
  var rowId = Number(e.parameter.row);
  sheet.getRange(rowId + 1, STATUS + 1).setValue('SMS Sent');
  return ContentService.createTextOutput('').setMimeType(ContentService.M
};
```

Next, go to the Publish menu in the Google Script Editor, choose `Deploy as web app` . Choose “Me” under “Execute the App” setting and “Anyone, even anonymous” under the “Who has access” setting.

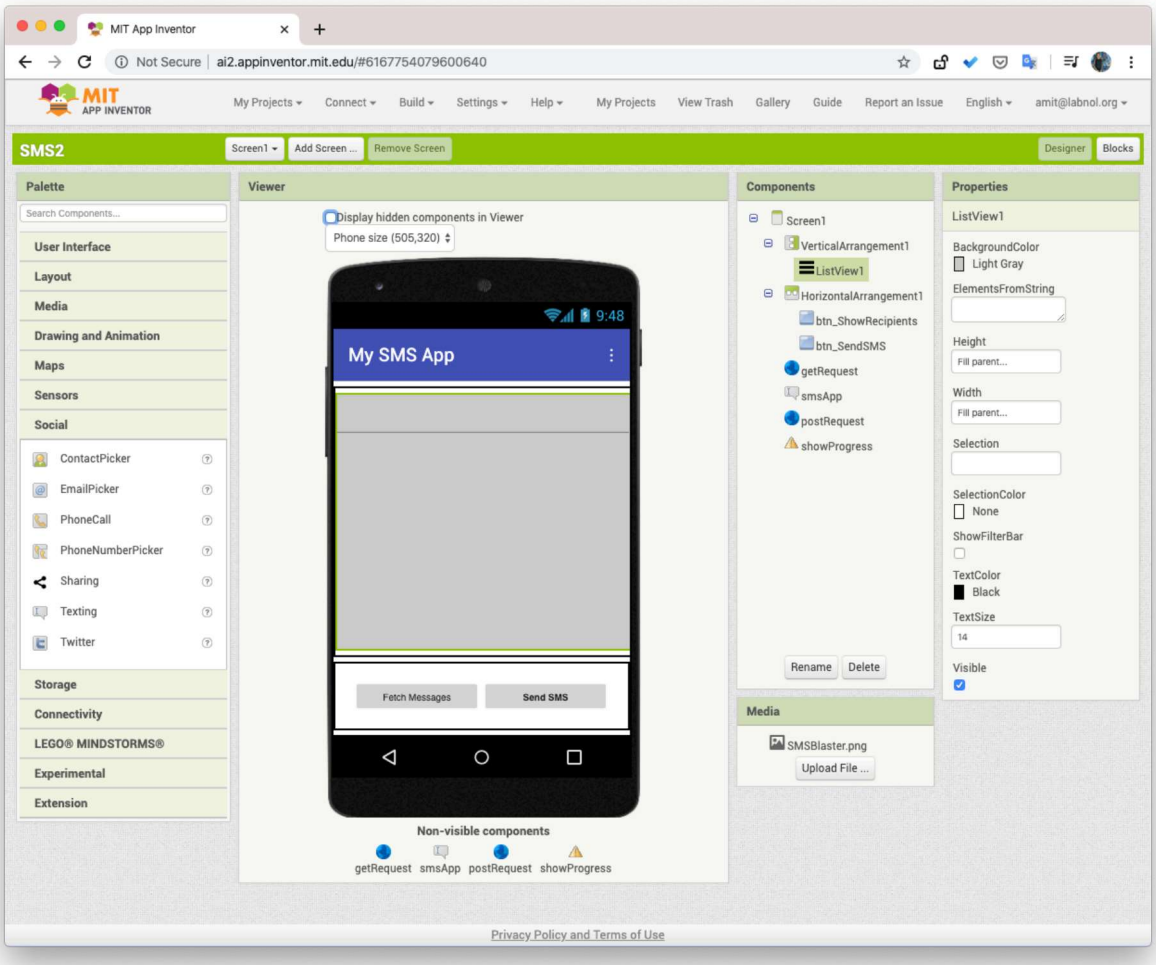
Click the Deploy button and you’ll be presented with a secret API URL that we’ll require in the next step. Do **NOT** share this API URL with anyone.

Now that our sheets API is ready, we’ll build an Android app that will read the list of text messages and phone numbers from our Google Sheets and send the SMS

messages. The texts go directly from your phone SIM instead of using any third-party SMS gateway service.

Build SMS App for Android without Coding

You'd normally need to know programming languages like Flutter or Java to build Android apps but in this tutorial, we'll use MIT's App Inventor, a simple way to develop fully functional apps with drag-n-drop.

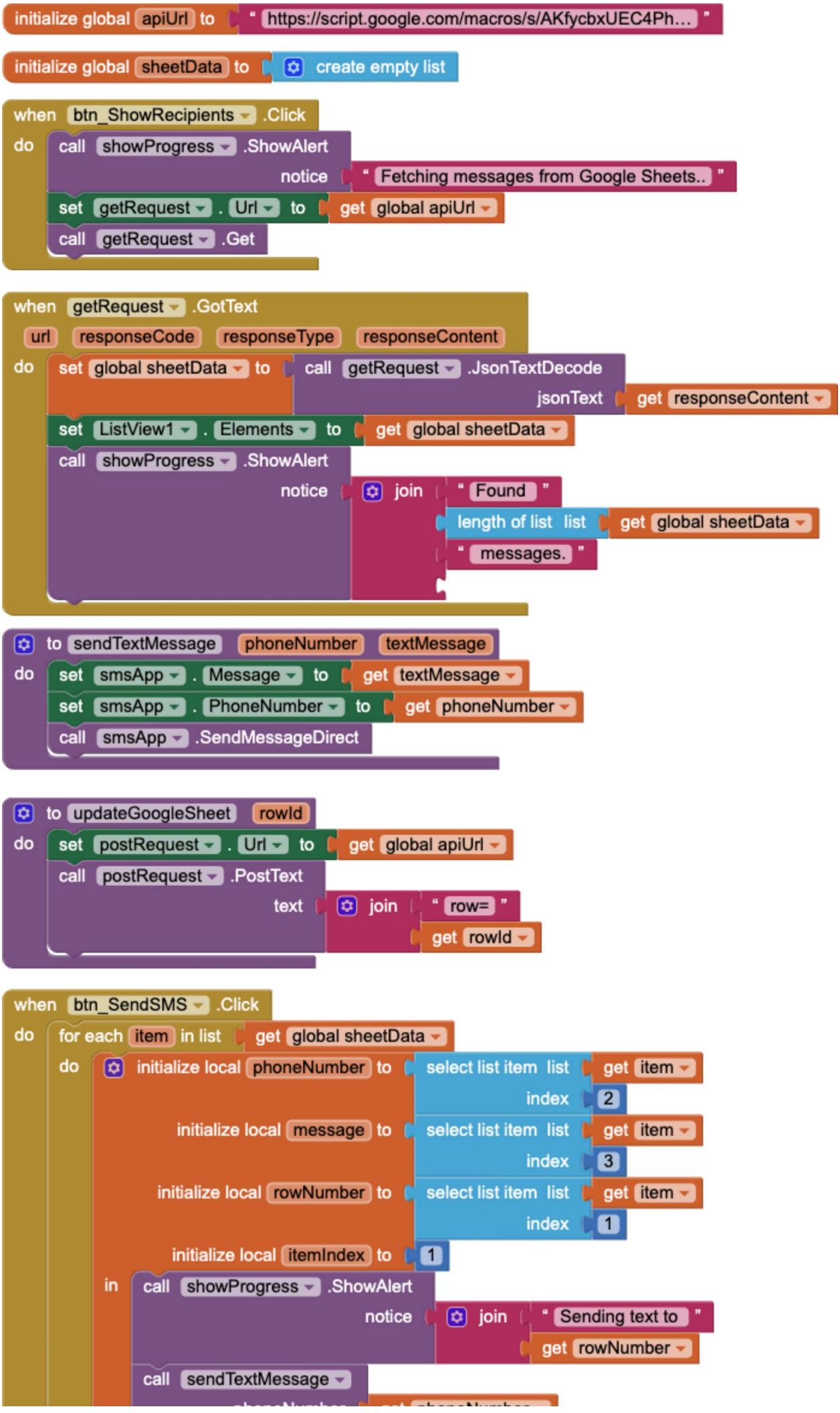


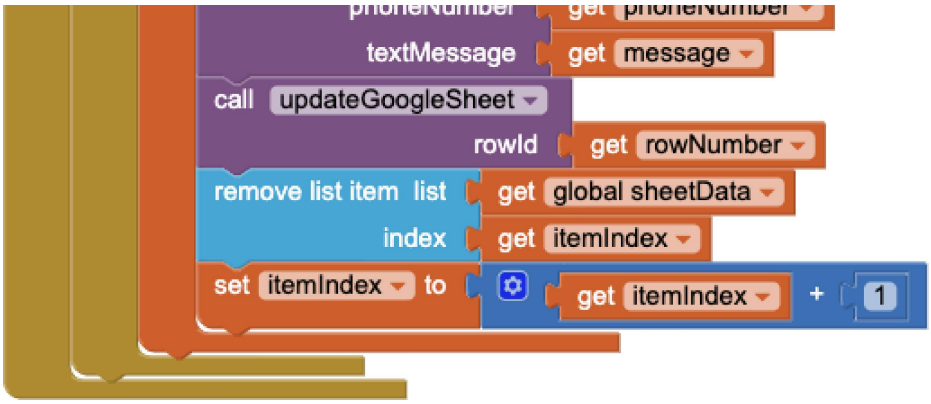
Sign-in to the appinventor.mit.edu website with your Google account and create a new App. While you are in the design mode, drag the following components on to your app:

- User Interface, ListView → For displaying the message list fetched from Google Sheets.
- User Interface, Button → For fetching messages from Google Sheets and for sending SMS messages from the Android app.

- Connectivity, Web → For making GET and POST requests to Apps Script.
- User Interface, Notifier → For displaying progress bars and alerts
- Social, Texting → For sending the SMS messages.

Next switch to the Blocks section inside App Inventor and design the blocks as explained in the video tutorial.


initialize global apiUrl to " https://script.google.com/macros/s/AKfycbxUEC4Ph... "
initialize global sheetData to create empty list
when btn_ShowRecipients .Click
do call showProgress .ShowAlert
notice " Fetching messages from Google Sheets.. "
set getRequest . Url to get global apiUrl
call getRequest .Get
when getRequest .GotText
url responseCode responseType responseContent
do set global sheetData to call getRequest .JsonTextDecode
jsonText get responseContent
set ListView1 . Elements to get global sheetData
call showProgress .ShowAlert
notice join " Found "
length of list list get global sheetData
" messages. "
to sendTextMessage phoneNumber textMessage
do set smsApp . Message to get textMessage
set smsApp . PhoneNumber to get phoneNumber
call smsApp .SendMessageDirect
to updateGoogleSheet rowId
do set postRequest . Url to get global apiUrl
call postRequest .PostText
text join " row= "
get rowId
when btn_SendSMS .Click
do for each item in list get global sheetData
do initialize local phoneNumber to select list item list get item
index 2
initialize local message to select list item list get item
index 3
initialize local rowNumber to select list item list get item
index 1
initialize local itemIndex to 1
in call showProgress .ShowAlert
notice join " Sending text to "
get rowNumber
call sendTextMessage



We are almost done.

Go to the Build menu inside App Inventor, choose `App (provide QR code for .apk)` and scan the QR code with your phone. It will download an APK file on the phone, install the APK and you are ready to send text messages.

Android SMS Google Sheets

Amit Agarwal

Google Developer Expert, Google Cloud Champion

Amit Agarwal is a Google Developer Expert in Google Workspace and Google Apps Script. He holds an engineering degree in Computer Science (I.I.T.) and is the first professional blogger in India.

Amit has developed several popular Google add-ons including Mail Merge for Gmail and Document Studio. Read more on Lifehacker and YourStory

Awards & Titles

Digital Inspiration has won several awards since it's launch in 2004.

Google Developer Expert

Google awarded us the Google Developer Expert award recogizing our work in Google Workspace.

ProductHunt Golden Kitty

Our Gmail tool won the Lifehack of the Year award at ProductHunt Golden Kitty Awards in 2017.

Microsoft MVP Alumni

Microsoft awarded us the Most Valuable Professional (MVP) title for 5 years in a row.

Google Cloud Champion

Google awarded us the Champion Innovator title recognizing our technical skill and expertise.

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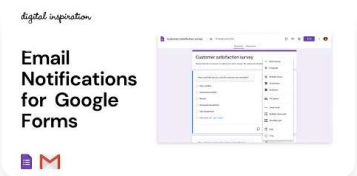
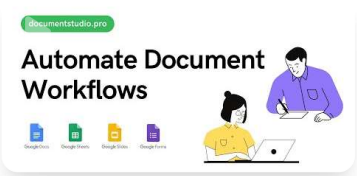


Send Confirmation Emails with Google Forms

Create Mail Merge with Gmail and Google Sheets

Create PDF Files from Google Form Responses



Automate Document Workflow with Google Forms and Sheets

Request e-Signatures with Google Forms

Save Gmail Emails to Google Drive

Email Google Sheets Automatically

Create Photo Badges with Google Slides

Send Stripe Invoices with Google Forms

How to Sell Digital Goods with PayPal and Google Sheets

Google Apps Script - A Developer's Guide

Rename File uploads in Google Forms

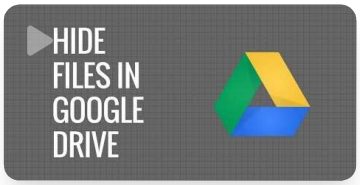
File Upload Forms for Google Drive

Dictation - Type with your Voice

YouTube Video Uploader for Teams

Limit Google Form Responses Automatically

Convert Google Slides to Video and Animated GIFs



How to Hide Files inside Google Drive

Create Merge Documents with Google Sheets or

Create PDF Documents with Images and QR

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Google Forms

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