

EXCEL/Google sheet

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Agenda

1. Dos and don'ts before doing data analysis
2. Google sheet basic introduction
3. Basic - Useful functions
4. Advanced functions
5. Excel

1

Dos and don'ts
before doing data analysis

Before doing data analysis, you should understand...

- What are the goal of the analysis? You are doing this work for what?
- Who are you working for/with?
- What kind of data you are dealing with?
- What should the final work be like?
- How much time do you have?

Base on your goal and what kind of data you have, you can choose the tools which fit your needs.

- R
- Python
- SAS
- Excel/Google sheet

Download Excel

• iNCCU

景雲的頁面1 × **景雲的頁面2** 新增頁面 | 新增工具 | 佈景主題 | 回復初始設定

校園新聞

- 比令·亞布、馬躍·比吼暢談實驗教育 盼找回原住民教育主體性 [推](#)
- 選研中心講座 尹麗喬解析民調當中平衡及扈從概念之應用 [推](#)
- 【政大校友】億萬流量金牌製作人陳芷涵 打造臺灣戲劇王國 [推](#)
- 社科院職涯講座 解析疫情衝擊與就業出路抉擇 [推](#)
- 【政大校友】戴瑞宏：正確的事情重複做離成功就不遠 [推](#)

行事曆

學校 校園活動 全校行事曆 前月 本月 次月

2020 年 10 月

日期	事項
1(四)~2(五)	中秋節/調整放假
5(一)~14(三)	碩博士班集中網路申報論文題目
7(三)	行政會議
9(五)~10(六)	補假/國慶日
19(一)	第 1 次教務會議
23(五)	學期 1/3 退費基準日

我的校務資訊服務

教師 學生 行政 全部

- 成績查詢
- 入帳明細查詢
- 宿舍郵局包裹信件查詢
- 獎助學金查詢
- 個人獎助學金查詢
- 工讀申請登錄及工讀機會查詢
- 全校課程查詢

其他更多系統...

校園公告

- 10/17(六) 民族系碩博研究生論文大綱暨部分章節及田野成果發表會 [推](#)
- 109學年度全校史學論文獎 徵文公告 [推](#)
- 圖書資訊學研究回顧與前瞻學術研討會 [推](#)
- 10/20(二)12:30語言學/英語教學學術工作坊 [推](#)
- 選舉研究中心109年10月第1波電訪案 [推](#)

NCCU郵件信箱

基於資安考量及系統改版，即日起進入本校電子郵件系統需重新輸入帳號密碼後登入使用。

...進入nccu郵件信箱

個人訊息

您有 1 個新訊息，共 1 個訊息
 提醒您參加 109/09/29 的「【E享學集成網平台教育訓練】」活動/課程。

...瀏覽所有訊息

校園資訊系統

隱藏圖示 | 排序



 圖書館

 WM5數位學習

 校務系統 Web入口

 校園授權軟體

 全校課程查

 VPN

Download Office

English | 電算中心 | 政大直頁

校園授權軟體
NCCU Campus-Authorized Softwares

下載軟體及序號限校內IP哦!
(校外請用VPN)

搜尋軟體 GO

歡迎! 莊景雲 | 登出
IP來源: 140.119.96.163

下 載 軟 體 軟體清單 常見問題 授權宣告

作業系統
防毒軟體
文書處理軟體
統計軟體
影像編輯軟體
多媒體編輯軟體
字型及輸入法
網頁編輯軟體
學習輔助軟體
其它軟體

免費小工具]
文書工具
[OpenOffice](#)
[LibreOffice](#)
燒錄軟體
[ImageBurn](#)
[CDBurnerXP](#)
虛擬光碟
[Virtual Clone](#)
Drive
FTP傳輸
[FileZilla](#)
PDF轉檔

文書處理軟體 更多文書處理軟體

此類軟體共12筆

Office 2019 Pro Plus(繁體中文版)

學生授權使用地點 家中 宿舍 教室 | 序號: [啟用程式](#)

微軟 20190417

下載軟體 檔案01 檔案02
安裝注意 如有安裝解壓縮軟體，開啟方式請參照此篇

下載哪個檔案？
Microsoft 建議使用 32 位元 (x86) 版的 Office 2019 應用程式做為所有平台的預設選項。
檔案01為32位元(檔案大小為1.74 GB)
檔案02為64位元(檔案大小為1.94 GB)。

安裝和啟用
如您的電腦有Office Starter、試用版等其他版本，務必先移除，再安裝本軟體。
1. 安裝：在所下載的iso檔點兩下、開啟 Office2019 ProPlus 資料夾，執行 `install_Office2019.bat` 以開始自動安裝程序，詳見[示範影片](#)。
2. 啟用：安裝過程中不需輸入序號，安裝後需執行「啟用程式」，否則30天後功能受限制，詳見[示範影片](#)。

*如要登入mail3帳號，請先啟用授權，再行登入

重大公告
給本站打分數
虛擬光碟軟體讀ISO檔
校外需透過VPN下載軟體
線上提問(FB Messenger)

新增軟體
 EverCam 8.1
 Avira授權更新

熱門下載

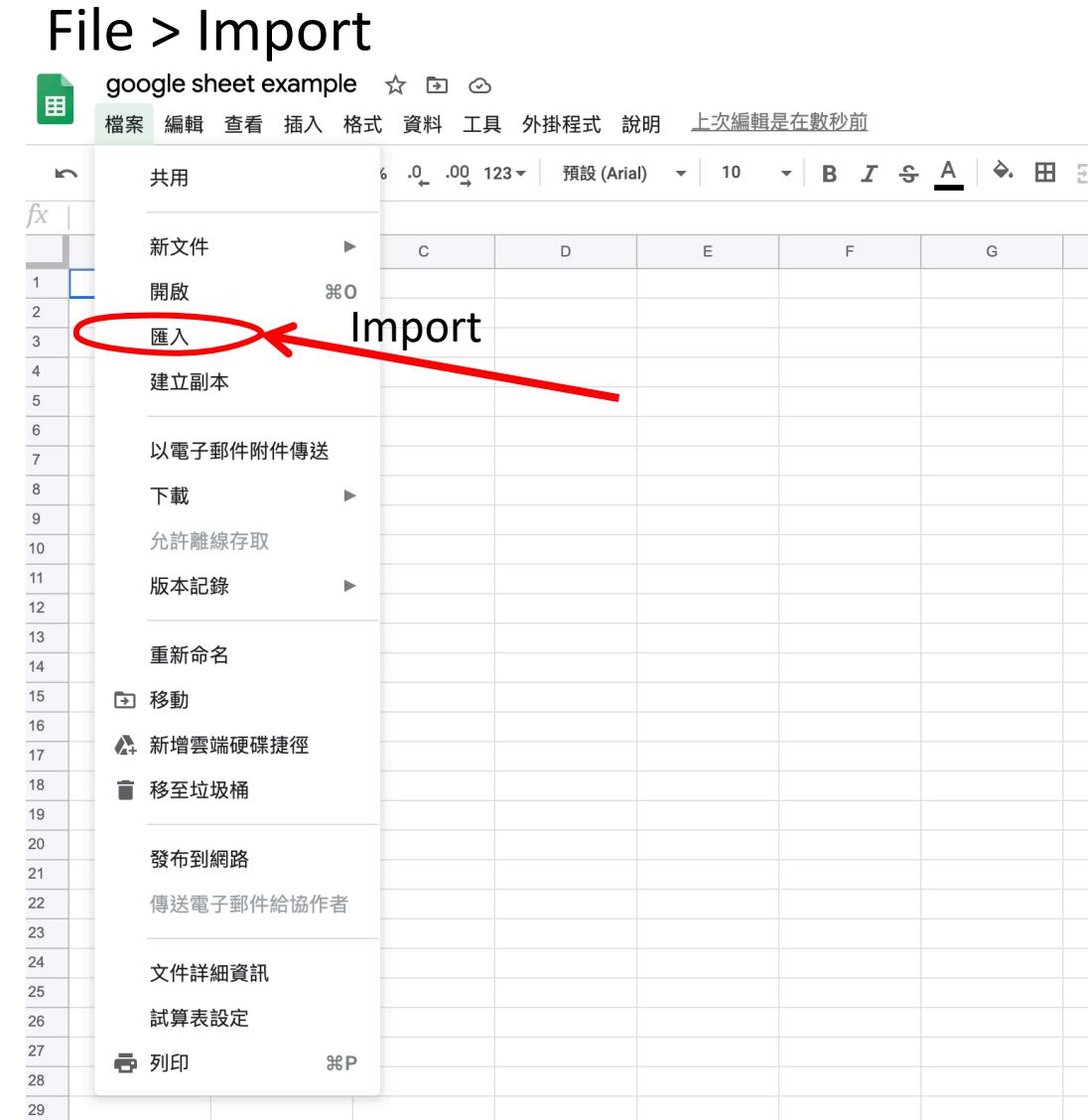
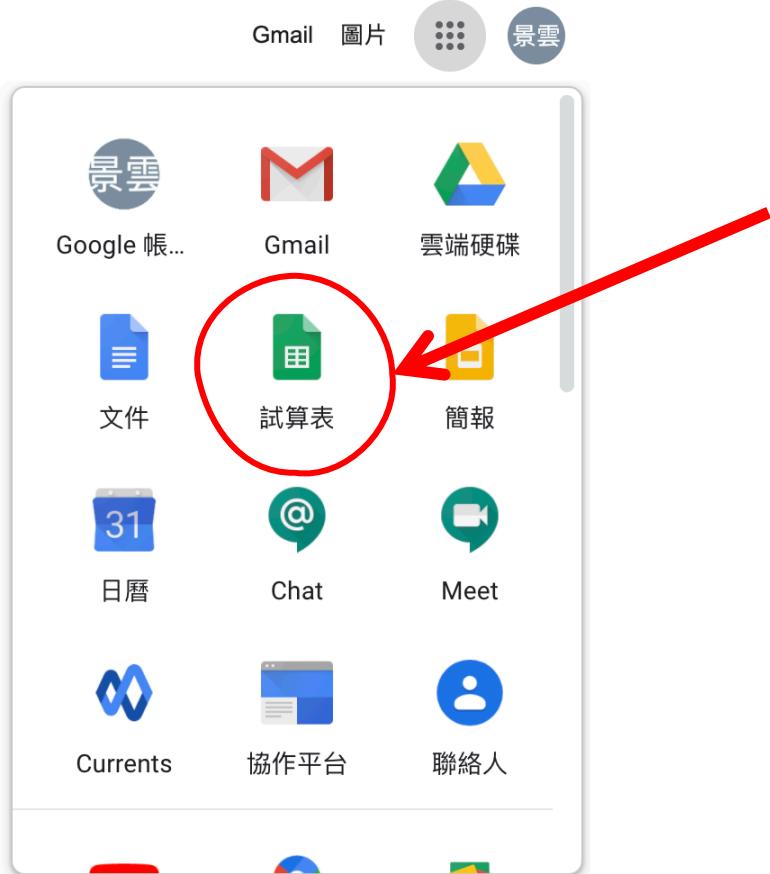
1. Office 2016 Pro Plus
2. 譯典通Dr. eye 7.0
3. Office 2016 for MAC
4. Office 2019 Pro Plus
5. SAS 9.4

個人下載記錄

2

Google sheet basic introduction

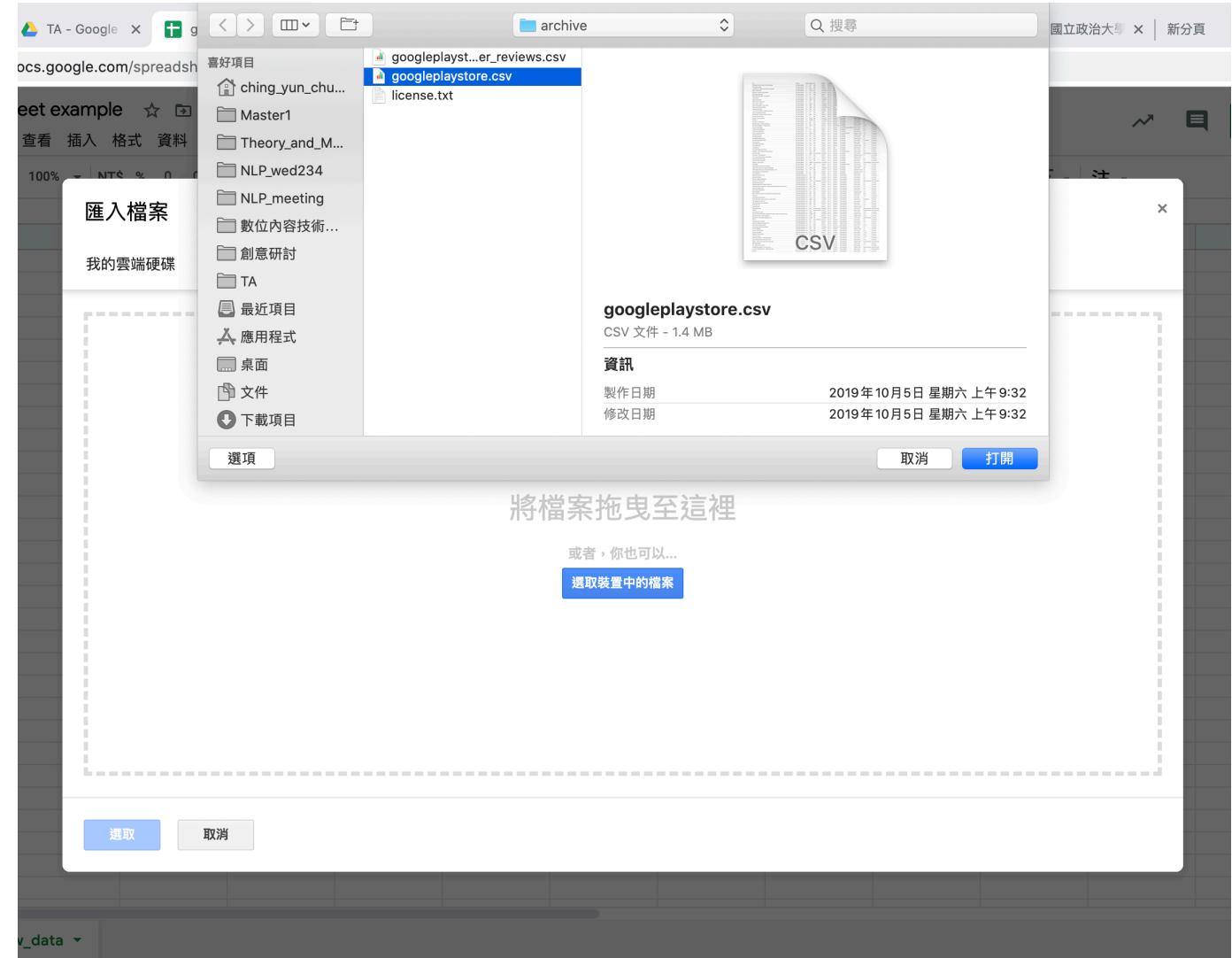
Import data into Google sheet



Import data into Google sheet

Choose the dataset you need

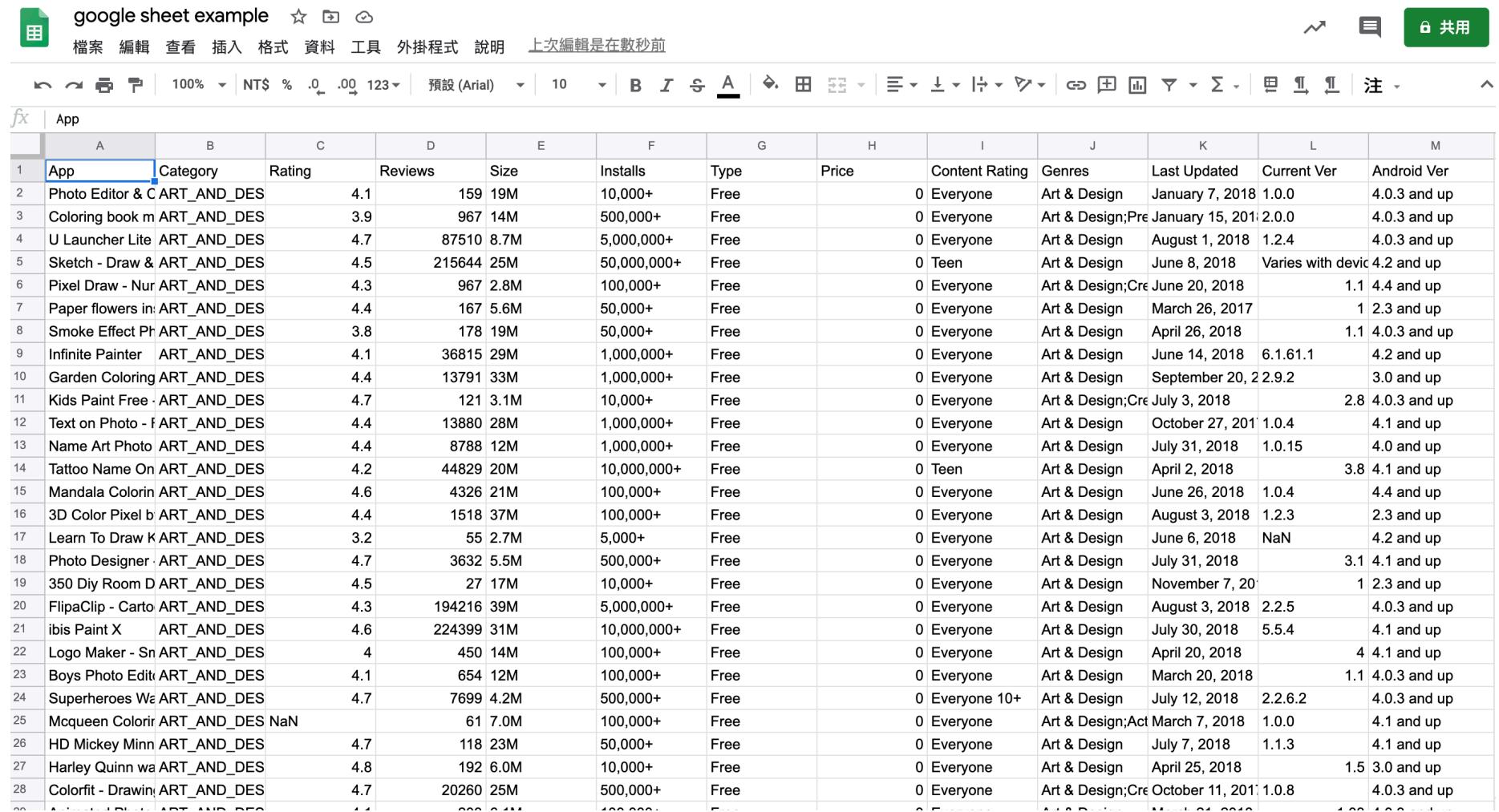
- <https://www.kaggle.com/lava18/google-play-store-apps>
- googleplaystore.csv
- google sheet example
- google sheet practice
- googleplaystore



Google sheet practice

Take a look at your data

- App
- Category
- Rating
- Reviews
- Size
- Installs
- Type
- Price
- Content
- Rating
- Genres
- Last Updated
- Current Ver
- Android Ver



The screenshot shows a Google Sheets document with the title "google sheet example". The spreadsheet contains a table with 28 rows of data, each representing an app. The columns are labeled A through M. Column A is "App", B is "Category", C is "Rating", D is "Reviews", E is "Size", F is "Installs", G is "Type", H is "Price", I is "Content Rating", J is "Genres", K is "Last Updated", L is "Current Ver", and M is "Android Ver". The data includes various app names like "Photo Editor & C", "Coloring book m", "U Launcher Lite", etc., along with their respective details such as category (ART_AND_DES), rating (e.g., 4.1, 3.9, 4.7), reviews (e.g., 159, 967, 87510), size (e.g., 19M, 14M, 8.7M), installs (e.g., 10,000+, 500,000+, 5,000,000+), type (Free), price (0), content rating (Everyone, Teen, etc.), genres (Art & Design, etc.), last updated (e.g., January 7, 2018, August 1, 2018), current version (e.g., 1.0.0, 1.2.4), and Android version (e.g., 4.0.3 and up, 4.2 and up).

A	B	C	D	E	F	G	H	I	J	K	L	M		
1	App	Category	Rating	Reviews	Size	Installs	Type	Price	Content Rating	Genres	Last Updated	Current Ver	Android Ver	
2	Photo Editor & C	ART_AND_DES	4.1	159	19M	10,000+	Free	0	Everyone	Art & Design	January 7, 2018	1.0.0	4.0.3 and up	
3	Coloring book m	ART_AND_DES	3.9	967	14M	500,000+	Free	0	Everyone	Art & Design;Pre	January 15, 201	2.0.0	4.0.3 and up	
4	U Launcher Lite	ART_AND_DES	4.7	87510	8.7M	5,000,000+	Free	0	Everyone	Art & Design	August 1, 2018	1.2.4	4.0.3 and up	
5	Sketch - Draw & ART_AND_DES	ART_AND_DES	4.5	215644	25M	50,000,000+	Free	0	Teen	Art & Design	June 8, 2018	Varies with devic	4.2 and up	
6	Pixel Draw - Nur	ART_AND_DES	4.3	967	2.8M	100,000+	Free	0	Everyone	Art & Design;Cre	June 20, 2018	1.1	4.4 and up	
7	Paper flowers in:	ART_AND_DES	4.4	167	5.6M	50,000+	Free	0	Everyone	Art & Design	March 26, 2017	1	2.3 and up	
8	Smoke Effect Ph	ART_AND_DES	3.8	178	19M	50,000+	Free	0	Everyone	Art & Design	April 26, 2018	1.1	4.0.3 and up	
9	Infinite Painter	ART_AND_DES	4.1	36815	29M	1,000,000+	Free	0	Everyone	Art & Design	June 14, 2018	6.1.61.1	4.2 and up	
10	Garden Coloring	ART_AND_DES	4.4	13791	33M	1,000,000+	Free	0	Everyone	Art & Design	September 20, 201	2.9.2	3.0 and up	
11	Kids Paint Free - ART_AND_DES	ART_AND_DES	4.7	121	3.1M	10,000+	Free	0	Everyone	Art & Design;Cre	July 3, 2018	2.8	4.0.3 and up	
12	Text on Photo - F	ART_AND_DES	4.4	13880	28M	1,000,000+	Free	0	Everyone	Art & Design	October 27, 201	1.0.4	4.1 and up	
13	Name Art Photo	ART_AND_DES	4.4	8788	12M	1,000,000+	Free	0	Everyone	Art & Design	July 31, 2018	1.0.15	4.0 and up	
14	Tattoo Name On	ART_AND_DES	4.2	44829	20M	10,000,000+	Free	0	Teen	Art & Design	April 2, 2018	3.8	4.1 and up	
15	Mandala Colorin	ART_AND_DES	4.6	4326	21M	100,000+	Free	0	Everyone	Art & Design	June 26, 2018	1.0.4	4.4 and up	
16	3D Color Pixel b	ART_AND_DES	4.4	1518	37M	100,000+	Free	0	Everyone	Art & Design	August 3, 2018	1.2.3	2.3 and up	
17	Learn To Draw K	ART_AND_DES	3.2	55	2.7M	5,000+	Free	0	Everyone	Art & Design	June 6, 2018	NaN	4.2 and up	
18	Photo Designer .	ART_AND_DES	4.7	3632	5.5M	500,000+	Free	0	Everyone	Art & Design	July 31, 2018	3.1	4.1 and up	
19	350 Diy Room D	ART_AND_DES	4.5	27	17M	10,000+	Free	0	Everyone	Art & Design	November 7, 20	1	2.3 and up	
20	FlipaClip - Carto	ART_AND_DES	4.3	194216	39M	5,000,000+	Free	0	Everyone	Art & Design	August 3, 2018	2.2.5	4.0.3 and up	
21	ibis Paint X	ART_AND_DES	4.6	224399	31M	10,000,000+	Free	0	Everyone	Art & Design	July 30, 2018	5.5.4	4.1 and up	
22	Logo Maker - Sn	ART_AND_DES	4	450	14M	100,000+	Free	0	Everyone	Art & Design	April 20, 2018	4	4.1 and up	
23	Boys Photo Edit	ART_AND_DES	4.1	654	12M	100,000+	Free	0	Everyone	Art & Design	March 20, 2018	1.1	4.0.3 and up	
24	Superheroes Wz	ART_AND_DES	4.7	7699	4.2M	500,000+	Free	0	Everyone	10+	Art & Design	July 12, 2018	2.2.6.2	4.0.3 and up
25	Mcqueen Colorir	ART_AND_DES	NaN		61	7.0M	100,000+	Free	0	Everyone	Art & Design;Act	March 7, 2018	1.0.0	4.1 and up
26	HD Mickey Minn	ART_AND_DES	4.7	118	23M	50,000+	Free	0	Everyone	Art & Design	July 7, 2018	1.1.3	4.1 and up	
27	Harley Quinn wa	ART_AND_DES	4.8	192	6.0M	10,000+	Free	0	Everyone	Art & Design	April 25, 2018	1.5	3.0 and up	
28	Colorfit - Drawing	ART_AND_DES	4.7	20260	25M	500,000+	Free	0	Everyone	Art & Design;Cre	October 11, 201	1.0.8	4.0.3 and up	

Create a filter

Screenshot of a spreadsheet application showing a list of apps. The 'Category' column is selected. A red circle highlights the filter icon in the toolbar.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	App	Category	Rating	Reviews	Size	Installs	Type	Price	Content Rating	Genres	Last Updated	Current Ver	Android Ver
2	Photo Editor & C	ART_AND_DES	4.1	159	19M	10,000+	Free		0 Everyone	Art & Design	January 7, 2018	1.0.0	4.0.3 and up
3	Coloring book m	ART_AND_DES	3.9	967	14M	500,000+	Free		0 Everyone	Art & Design;Pre	January 15, 201	2.0.0	4.0.3 and up
4	U Launcher Lite	ART_AND_DES	4.7	87510	8.7M	5,000,000+	Free		0 Everyone	Art & Design	August 1, 2018	1.2.4	4.0.3 and up
5	Sketch - Draw & ART_AND_DES		4.5	215644	25M	50,000,000+	Free		0 Teen	Art & Design	June 8, 2018	Varies with devic	4.2 and up
6	Pixel Draw - Nur	ART_AND_DES	4.3	967	2.8M	100,000+	Free		0 Everyone	Art & Design;Cre	June 20, 2018		1.1 4.4 and up
7	Paper flowers in:	ART_AND_DES	4.4	167	5.6M	50,000+	Free		0 Everyone	Art & Design	March 26, 2017		1 2.3 and up
8	Smoke Effect Ph	ART_AND_DES	3.8	178	19M	50,000+	Free		0 Everyone	Art & Design	April 26, 2018		1.1 4.0.3 and up
9	Infinite Painter	ART_AND_DES	4.1	36815	29M	1,000,000+	Free		0 Everyone	Art & Design	June 14, 2018	6.1.61.1	4.2 and up
0	Garden Coloring	ART_AND_DES	4.4	13791	33M	1,000,000+	Free		0 Everyone	Art & Design	September 20, 2017	2.9.2	3.0 and up
1	Kids Paint Free - ART_AND_DES		4.7	121	3.1M	10,000+	Free		0 Everyone	Art & Design;Cre	July 3, 2018		2.8 4.0.3 and up
2	Text on Photo - F	ART_AND_DES	4.4	13880	28M	1,000,000+	Free		0 Everyone	Art & Design	October 27, 2017	1.0.4	4.1 and up
3	Name Art Photo	ART_AND_DES	4.4	8788	12M	1,000,000+	Free		0 Everyone	Art & Design	July 31, 2018	1.0.15	4.0 and up
4	Tattoo Name On	ART_AND_DES	4.2	44829	20M	10,000,000+	Free		0 Teen	Art & Design	April 2, 2018		3.8 4.1 and up
5	Mandala Colorin	ART_AND_DES	4.6	4326	21M	100,000+	Free		0 Everyone	Art & Design	June 26, 2018	1.0.4	4.4 and up
6	3D Color Pixel b	ART_AND_DES	4.4	1518	37M	100,000+	Free		0 Everyone	Art & Design	August 3, 2018	1.2.3	2.3 and up
7	Learn To Draw K	ART_AND_DES	3.2	55	2.7M	5,000+	Free		0 Everyone	Art & Design	June 6, 2018	NaN	4.2 and up
8	Photo Designer	ART_AND_DES	4.7	3632	5.5M	500,000+	Free		0 Everyone	Art & Design	July 31, 2018		3.1 4.1 and up

Create a filter

Select all

The screenshot shows a Google Sheets interface with the title "google sheet example". The menu bar includes "檔案", "編輯", "查看", "插入", "格式", "資料", "工具", "外掛程式", and "說明". The toolbar above the sheet includes various icons for file operations, zoom, and font styles. A red circle highlights the top-left corner cell (A1) which contains the text "這是在 7 分鐘前". A tooltip "Change the format" is displayed over the toolbar. The main sheet area has columns labeled A through M and rows labeled 1 through 29. The cells in row 1 are highlighted with blue borders. The bottom toolbar shows standard spreadsheet icons for bold, italic, underline, etc., and a dropdown menu for cell style.

google sheet example

檔案 編輯 查看 插入 格式 資料 工具 外掛程式 說明 上次編輯是在數秒前

100% NT\$.0 .00 123 預設 (Arial) 10 B I U A Jx

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

這是在 7 分鐘前

Change the format

F G J K L M

Create your dashboard

Merge cells

The screenshot shows a Microsoft Excel interface. At the top, there's a toolbar with font and size options (e.g., Arial, 10), and a red circle highlights the 'Merge & Wrap' icon in the ribbon. Below the toolbar is a row of columns labeled C through G. A color palette is open over the sheet area, showing various colors. A context menu is displayed for the '工作表3' (Sheet3) tab at the bottom, listing options like '刪除' (Delete), '複製' (Copy), '複製到' (Copy to), '重新命名' (Rename), '變更顏色' (Change Color), '受保護的工作表' (Protected Worksheet), '隱藏工作表' (Hide Worksheet), '查看評論' (View Comments), '向右移' (Move Right), and '向左移' (Move Left). The main area displays a table with three columns of data.

1972	1339	365
463	266	64
295	224	32
260	207	29
335	264	42
384	265	49
258	165	55
843	505	185

Change color and name of the sheet

Category	Basic overview				
	Number	Rating > 4	Rating > 3	Rating > 2	Rating < 2
ART_AND DESIGN					
AUTO_AND_VEHICLES					
BEAUTY					
BOOKS_AND_REFERENCE					
BUSINESS					
COMICS					
COMMUNICATION					
DATING					
EDUCATION					
ENTERTAINMENT					
EVENTS					
FINANCE					
FOOD_AND_DRINK					
HEALTH_AND_FITNESS					
HOUSE_AND_HOME					
LIBRARIES_AND_DEMO					
LIFESTYLE					
GAME					
FAMILY					
MEDICAL					
SOCIAL					
SHOPPING					
PHOTOGRAPHY					
SPORTS					
TRAVEL_AND_LOCAL					
TOOLS					

3

Basic - Useful functions

Function list

- Google sheet function list

Functions and formulas > Google Sheets function list

The screenshot shows the 'Google Sheets function list' page. At the top, there's a search bar with placeholder text 'Filter with a few keywords ...' and a 'Narrow by ...' dropdown menu. Below this is a table with four columns: 'Type', 'Name', 'Syntax', and 'Description'. The table contains three rows of data:

Type	Name	Syntax	Description
Array	ARRAY_CONSTRAIN	<code>ARRAY_CONSTRAIN(input_range, num_rows, num_cols)</code>	Constrains an array result to a specified size. Learn more
Array	FREQUENCY	<code>FREQUENCY(data, classes)</code>	Calculates the frequency distribution of a one-column array into specified classes. Learn more
Array	GROWTH	<code>GROWTH(known_data_y, [known_data_x], [new_data_x], [b])</code>	Given partial data about an exponential growth trend, fits an ideal exponential growth trend and/or predicts further

Functions and formulas

- Add formulas & functions
- See the sum & average
- Reference data from other sheets
- Google Sheets function list

UNIQUE

- How to see all of Category in google play store?

UNIQUE(B:B)

A	B	C	D	E	F	G	H	I	J	K	L
App	Category	Rating	Reviews	Size	Installs	Type	Price	Content Rating	Genres	Last Updated	Current Ver
Photo Editor & Candy Camera	ART_AND DESIGN	4.1	159	19M	10,000+	Free		0 Everyone	Art & Design	January 7, 2018	1.0.0
Coloring book moana	ART_AND DESIGN	3.9	967	14M	500,000+	Free		0 Everyone	Art & Design;Pre	January 15, 2011	2.0.0
U Launcher Lite – FREE Live C	ART_AND DESIGN	4.7	87510	8.7M	5,000,000+	Free		0 Everyone	Art & Design	August 1, 2018	1.2.4
Sketch - Draw & Paint	ART_AND DESIGN	4.5	215644	25M	50,000,000+	Free		0 Teen	Art & Design	June 8, 2018	Varies with de
Pixel Draw - Number Art Colori	ART_AND DESIGN	4.3	967	2.8M	100,000+	Free		0 Everyone	Art & Design;Cr	June 20, 2018	1
Paper flowers instructions	ART_AND DESIGN	4.4	167	5.6M	50,000+	Free		0 Everyone	Art & Design	March 26, 2017	
Smoke Effect Photo Maker - S	ART_AND DESIGN	3.8	178	19M	50,000+	Free		0 Everyone	Art & Design	April 26, 2018	1
Infinite Painter	ART_AND DESIGN	4.1	36815	29M	1,000,000+	Free		0 Everyone	Art & Design	June 14, 2018	6.1.61.1
Garden Coloring Book	ART_AND DESIGN	4.4	13791	33M	1,000,000+	Free		0 Everyone	Art & Design	September 20, 2018	2.2.9.2
Kids Paint Free - Drawing Fun	ART_AND DESIGN	4.7	121	3.1M	10,000+	Free		0 Everyone	Art & Design;Cr	July 3, 2018	2
Text on Photo - Fonteee	ART_AND DESIGN	4.4	13880	28M	1,000,000+	Free		0 Everyone	Art & Design	October 27, 2011	1.0.4
Name Art Photo Editor - Focus	ART_AND DESIGN	4.4	8788	12M	1,000,000+	Free		0 Everyone	Art & Design	July 31, 2018	1.0.15
Tattoo Name On My Photo Edit	ART_AND DESIGN	4.2	44829	20M	10,000,000+	Free		0 Teen	Art & Design	April 2, 2018	3
Mandala Coloring Book	ART_AND DESIGN	4.6	4326	21M	100,000+	Free		0 Everyone	Art & Design	June 26, 2018	1.0.4
3D Color Pixel by Number - Sa	ART_AND DESIGN	4.4	1518	37M	100,000+	Free		0 Everyone	Art & Design	August 3, 2018	1.2.3
Learn To Draw Kawaii Characte	ART_AND DESIGN	3.2	55	2.7M	5,000+	Free		0 Everyone	Art & Design	June 6, 2018	NaN
Photo Designer - Write your na	ART_AND DESIGN	4.7	3632	5.5M	500,000+	Free		0 Everyone	Art & Design	July 31, 2018	3
350 Diy Room Decor Ideas	ART_AND DESIGN	4.5	27	17M	10,000+	Free		0 Everyone	Art & Design	November 7, 2011	
FlipaClip - Cartoon animation	ART_AND DESIGN	4.3	194216	39M	5,000,000+	Free		0 Everyone	Art & Design	August 3, 2018	2.2.5
ibis Paint X	ART_AND DESIGN	4.6	224399	31M	10,000,000+	Free		0 Everyone	Art & Design	July 30, 2018	5.5.4
Logo Maker - Small Business	ART_AND DESIGN	4	450	14M	100,000+	Free		0 Everyone	Art & Design	April 20, 2018	
Boys Photo Editor - Six Pack &	ART_AND DESIGN	4.1	654	12M	100,000+	Free		0 Everyone	Art & Design	March 20, 2018	1
Superheroes Wallpapers 4K B	ART_AND DESIGN	4.7	7699	4.2M	500,000+	Free		0 Everyone 10+	Art & Design	July 12, 2018	2.2.6.2
Mcqueen Coloring pages	ART_AND DESIGN	Nan	61	7.0M	100,000+	Free		0 Everyone	Art & Design;Act	March 7, 2018	1.0.0
HD Mickey Minnie Wallpapers	ART_AND DESIGN	4.7	118	23M	50,000+	Free		0 Everyone	Art & Design	July 7, 2018	1.1.3
Harley Quinn wallpapers HD	ART_AND DESIGN	4.8	192	6.0M	10,000+	Free		0 Everyone	Art & Design	April 25, 2018	1
Colorfit - Drawing & Colorina	ART_AND DESIGN	4.7	20260	25M	500,000+	Free		0 Everyone	Art & Design;Cr	October 11, 2011	1.0.8

P	Q
Category	
ART_AND DESIGN	
AUTO_AND_VEHICLES	
BEAUTY	
BOOKS_AND_REFERENCE	
BUSINESS	
COMICS	
COMMUNICATION	
DATING	
EDUCATION	
ENTERTAINMENT	
EVENTS	
FINANCE	
FOOD_AND_DRINK	
HEALTH_AND_FITNESS	
HOUSE_AND_HOME	
LIBRARIES_AND_DEMO	
LIFESTYLE	
GAME	
FAMILY	
MEDICAL	
SOCIAL	
SHOPPING	
PHOTOGRAPHY	
SPORTS	
TRAVEL_AND_LOCAL	
TOOLS	
PERSONALIZATION	
PRODUCTIVITY	

COUNTUNIQUE

3

- How many **Category** does google play store have?

COUNTUNIQUE(B:B)

COUNTIF

Category	Number	Basic overview
ART_AND DESIGN	65	
AUTO_AND VEHICLES	85	
BEAUTY	53	
BOOKS_AND REFERENCE	231	
BUSINESS	460	
COMICS	60	
COMMUNICATION	387	
DATING	234	
EDUCATION	156	
ENTERTAINMENT	149	
EVENTS	64	
FINANCE	366	
FOOD_AND DRINK	127	
HEALTH_AND FITNESS	341	
HOUSE_AND HOME	88	
LIBRARIES_AND DEMO	85	
LIFESTYLE	382	
GAME	1144	
FAMILY	1972	
MEDICAL	463	
SOCIAL	295	
SHOPPING	260	
PHOTOGRAPHY	335	
SPORTS	384	
TRAVEL_AND LOCAL	258	
TOOLS	813	

COUNTIF(range, criterion)

EX:

- COUNTIF(A1:A10,">20")
- COUNTIF(A1:A10,"Paid")

Practice :

Try to count the number of apps of each category.

COUNTIF

Category	Number
ART_AND DESIGN	65
AUTO_AND VEHICLES	85
BEAUTY	53
BOOKS_AND REFERENCE	231
BUSINESS	460
COMICS	60
COMMUNICATION	387
DATING	234
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SHOPPING	260
PHOTOGRAPHY	335
SPORTS	384
TRAVEL_AND LOCAL	258
TOOLS	813

Practice :

Try to count the number of apps of each category.

Ans :

=COUNTIF(raw_data!B:B,B4)

Category	Number
ART_AND DESIGN	? =COUNTIF(raw_data!B:B,B4)
AUTO_AND VEHICLES	85
BEAUTY	53
BOOKS_AND REFERENCE	231
BUSINESS	460

COUNTIFS

`COUNTIFS(criteria_range1, criterion1, [criteria_range2, criterion2, ...])`

- `COUNTIFS(A1:A10, ">20", B1:B10, "<30")`
- `COUNTIFS(A7:A24, ">6", B7:B24, "<"&DATE(1969,7,20))`
- `COUNTIFS(B8:B27, ">" & B12, C8:C27, "<" & C13, D8:D27, "=>10")`

Category	Basic overview				
	Number	Rating > 4	Rating > 3	Rating > 2	Rating < 2
ART_AND DESIGN	65				
AUTO_AND VEHICLES	85				
BEAUTY	53				
BOOKS_AND_REFERENCE	231				
BUSINESS	460				
COMICS	60				
COMMUNICATION	387				
DATING	234				
EDUCATION	156				
ENTERTAINMENT	149				
EVENTS	64				
FINANCE	366				
FOOD_AND_DRINK	107				

Practice :

Try to count the number of apps of each category by

- Rating ≥ 4
- Rating $\geq 3, < 4$
- Rating $\geq 2, < 3$
- Rating < 2

COUNTIFS

Ans :

Category	Basic overview				
	Number	Rating > 4	Rating > 3	Rating > 2	Rating < 2
ART_AND DESIGN	65	=COUNTIFS(raw_data!\$C:\$C, ">=4", raw_data!\$B:\$B, B4)	55	16	2
AUTO_AND_VEHICLES	85		16	2	0
BEAUTY	53	35	7	0	0
BOOKS_AND_REFERENCE	231	149	28	1	0
BUSINESS	460	223	63	15	2

Category	Basic overview				
	Number	Rating > 4	Rating > 3	Rating > 2	Rating < 2
ART_AND DESIGN	65	55	=COUNTIFS(raw_data!\$C:\$C, ">=3", raw_data!\$C:\$C, "<4", raw_data!\$B:\$B, B4)	16	2
AUTO_AND_VEHICLES	85	55	16	2	0
BEAUTY	53	35	7	0	0
BOOKS AND REFERENCE	231	149	28	1	0

Category	Basic overview				
	Number	Rating > 4	Rating > 3	Rating > 2	Rating < 2
ART_AND DESIGN	65	55	7	=COUNTIFS(raw_data!\$C:\$C, "<2", raw_data!\$B:\$B, B4)	2
AUTO_AND_VEHICLES	85	55	16	2	0
BEAUTY	53	35	7	0	0