

Spring cleaning your devices

Mendlesham Computer Club

By Giles Godart-Brown

Do we need to spring clean?

- It's not essential to have a tidy device, they don't mind being untidy and only start slowing down when over 80% full.
- They have good search capabilities that can get around untidiness.
- It is better to remove redundant files and photos as you go along rather than try to find them at the last minute if you run out of Cloud storage.
- Back up is much easier, and can be quicker, if old and static files can easily be found.
- I spring clean once a year on New Years day.

Spring cleaning a Phone or Tablet

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Seeing cleaning a phone or tablet

Consider the following actions;

- Delete unwanted apps
- Organising home screens to have apps in folders
- Organise photos
 - delete unwanted photos
 - create albums

Folders and backups

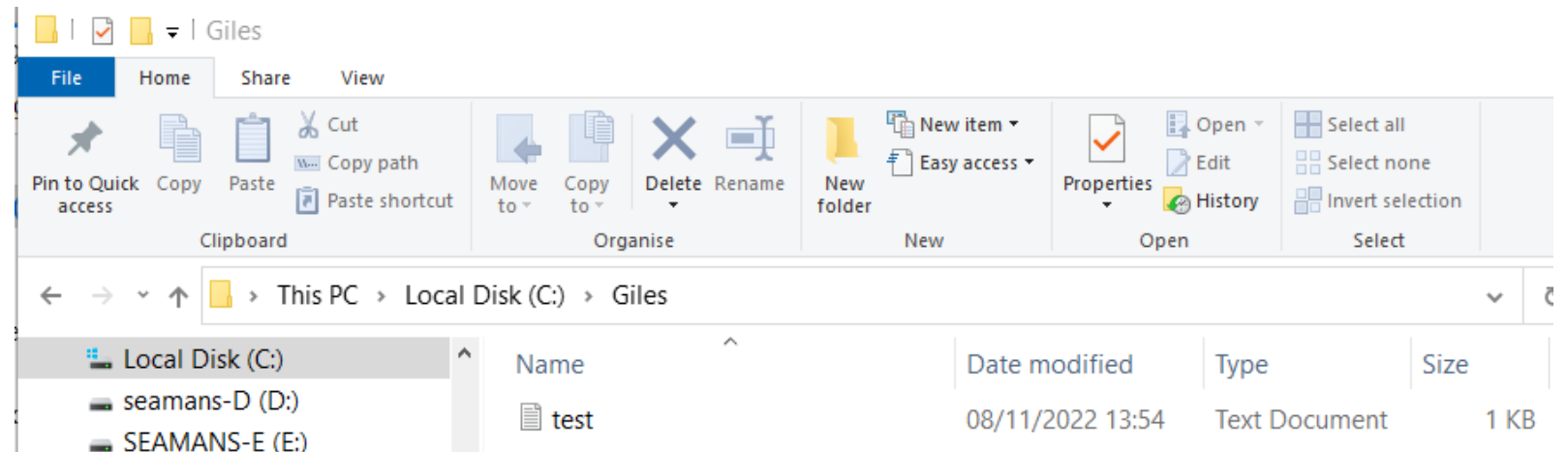
Scope

Don't forget that in addition to the files and folders on your computer, your email system also has folders and your Photo system probably has Albums both of which you should spring clean separately.

Managing disk folders

How to organise a disk drive

- Disks are organised into folders, each folder may contain many files as well as sub folders. E.g. the file test.txt in the folder Giles on drive letter C would be represented as C:\Giles\test.txt
- You cannot have two files with the same name in a folder
- Using folders allows you to organise your files and makes it easier to make backups.



Windows default folders

- Windows and Macs come with a few commonly used folders already set up notably;
 - Desktop
 - Documents
 - Pictures (Images on Mac)
 - Music
 - Videos (Movies on Mac)
 - Downloads
- Some of these folders are automatically copied to Microsoft OneDrive or Apple iCloud if you have set this up
- I also create one called temp for files I am currently working on and can delete later.

How do you want your folders to be structured ?

- Its worth spending a little time on this as it will save a lot when you come to find things later.
- There are 2 schools of thought, both are good, its up to you how you like to work.
 1. Have lots of folders and sub folders, so you can find stuff by navigating up and down
e.g. Documents/Private/Tax/2022/return.doc
 2. Have a few folders and use a combination of the search facility and contextual file names
e.g. Documents/2022_tax_return.doc

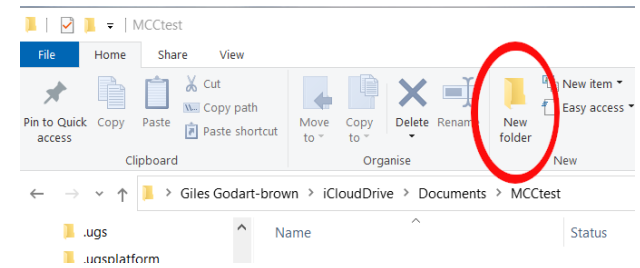
How to create a folder - Windows

- Open up the Windows Explorer Application

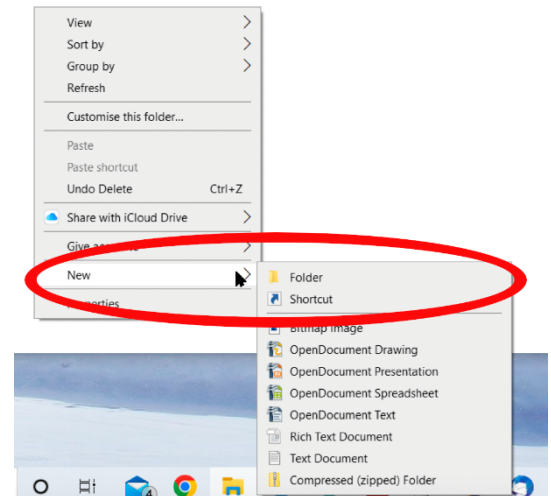


and navigate to the parent folder

- Either click on the 'New Folder' icon at the top or



- Right click with the mouse on an empty space in the folder and select 'New ' and then 'folder'



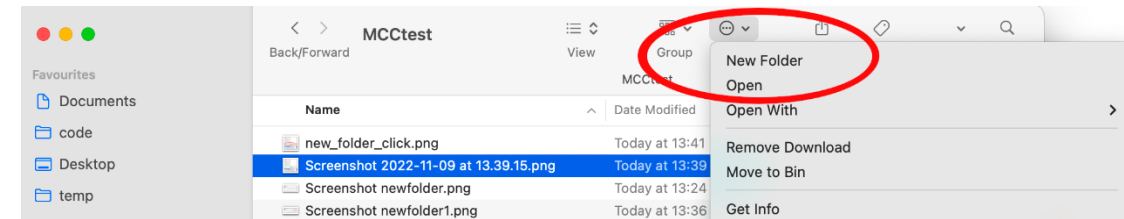
How to create a folder - Mac

- Open up the Finder Application

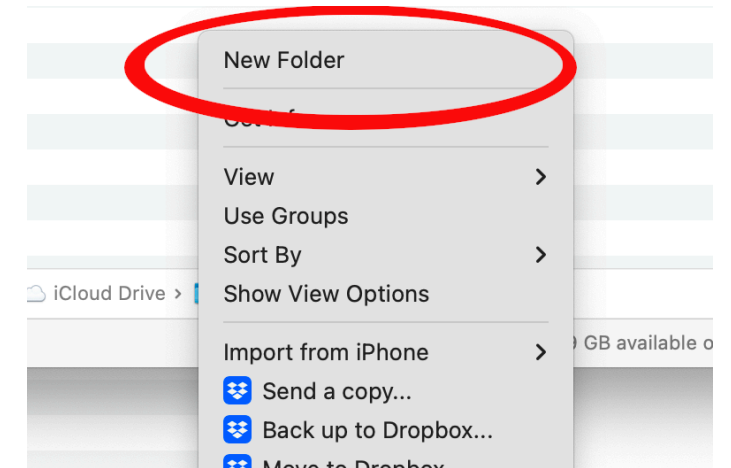


and navigate to the parent folder



- Click on Action and select –
‘New Folder’ or



- Right click with the mouse on an empty space in the folder and select ‘New Folder’



Moving files around

- Once you have saved a file you can move it around in the Windows Explorer application  or Finder on a Mac 
- You can cut, copy and paste files just like you can with words in a document, even with the keyboard shortcuts.
- You can also 'Drag and Drop' to move files. Select a file with the left mouse, keeping the button down drag the file to the new location and release the button to drop it into the new location. You may want to have 2 windows open to make this easier. I normally go left to right to avoid mistakes.

Backups

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Why are they essential?

Because bad things happen when you least want them to

- Human error, usually me
- Hardware failure – usually disk drives
- Malicious intrusion

What is a backup?

- A copy of files or folders to somewhere other than the computer or device where they are normally used. These can then be restored in the event of a failure of the original material.
- Common locations for backups
 - The Cloud
 - External Storage – USB Flash memory sticks and USB external disk drives

Cloud Storage examples

- iCloud Photos/Drive
(5 Gby free, 50 Gby £0.99/m, 200 Gby £2.99/m)
- Microsoft OneDrive
(5 Gby free, but needs Office 365 subscription above that)
- Google Drive
(15 Gby free, 100 Gby £1.59/m, 200 Gby £2.49/m)

External Local storage

USB Flash memory stick
(£6 for 64Gb, £13 for 128 Gby)



USB External disk
(£40 for 1 Tby, £ 64 for 2 Tby)



Can you rely on the Cloud for backup?

- The Cloud simply copies files from your device, if you delete or modify a file or photo, this WILL be reflected in the Cloud.
- It doesn't protect you from yourself.
- It is good practice to additionally back up valuable items like photos to a USB flash memory stick or external USB disk drive.
- The memory stick is much cheaper, but not as big and a little less reliable.
- I back up to disks

Backing up a phone or tablet

- It is very difficult to backup a phone or tablet beyond the capabilities of the built-in Cloud storage because very few Phones or tablets support removable media (flash memory or disks)
- The best method is to log into the Cloud platform in a Browser on a PC or Mac, then you can export files and photos from the Cloud to the PC disks and then back them up from there.

Decide on a strategy

- What can you not afford to lose? E.g. Photos, Documents, Videos, Music
- How big is it?
 - This will dictate how big your backup destination(s) will need to be.
 - If it is small, you can probably just overwrite what is already in the backup, if it is large you may need to just save the files that have changed since your last backup.
- How volatile is it? - How often will you need to run the backup?
- Where do you want it to be saved?
- How will you test you can recover files from your backup?

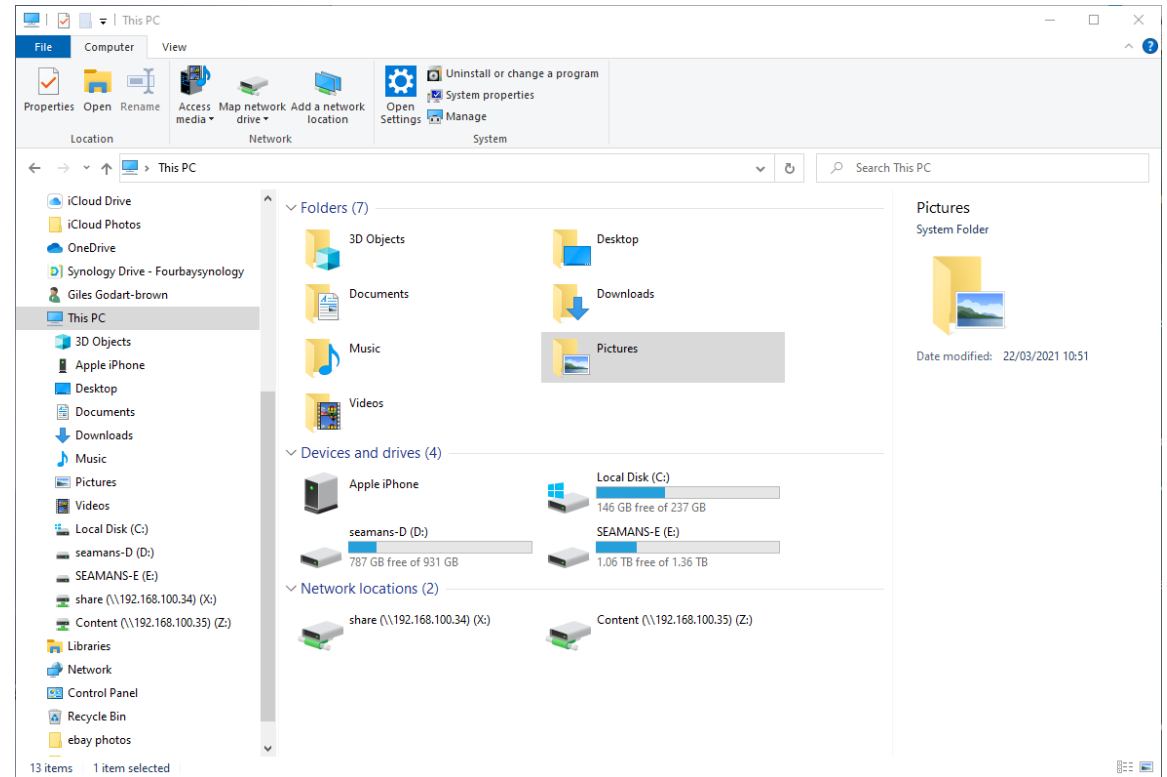
What to backup to an external device and how big is it?

What to back up to an external device.

The Windows and Mac default folders (Documents, Photos, Videos, Music etc.) are usually backed up to the Cloud by default.

Assuming that you always save files to these locations, then these are the folders to back up to an external device.

If you have a lot on you your desktop you may need to back this up separately.






What not to Backup

- The Downloads folder - if you can simply download the files again if they get lost.
- Your Applications (the “Program Files” and “Program Files (x86)” folders) because;
 - You can always download and re-install them again if they get lost.
 - They nearly all rely on hidden files in other places on your PC so if you were to just restore the Program Files folders it is unlikely they will work.
- The Windows operating system (the Windows folder)
 - It is huge and largely static and it is hard to do without using special backup software
 - It has a license number tied to your PC so it won't work if you just restore it to a new machine
 - If your PC does die catastrophically, you are likely to either get it repaired, in which case the repairer will install windows for you or you get a new one with it already installed.
 - Some installations have a hidden ‘restore partition’ on the hard drive which can be used to restore the Windows operating system (run Disk Management if you want to see). But this is useless if the drive is dead.

How big will my backup be?

Bits and Bytes

- Computers hold characters as 8 binary digits (Bits) called a Byte e.g.
 - A = 10000001 
 - B = 10000010 
 - C = 10000011 
- File size is in multiples of Bytes
 - 1024 Bytes = 1 Kilobyte (K, KB or KBy)
 - 1024 Kilobytes = 1 Megabyte (M, MB or Mby)
 - 1024 Megabytes = 1 Gigabyte (G, GB or Gby)
 - 1024 Gigabytes = 1 Terabyte (T, TB or Tby)
 - 1024 Terabytes = 1 Petabyte (PB or Pby)

What does that mean?

- 1 Gby is about 10 metres of books on a shelf
- HD video is about 2 Mega bits/second so 1 Gby is about 45 minutes.
- Phone photos are about 2 Mby so 1 Gby is 500 photos



1Gby = 10m



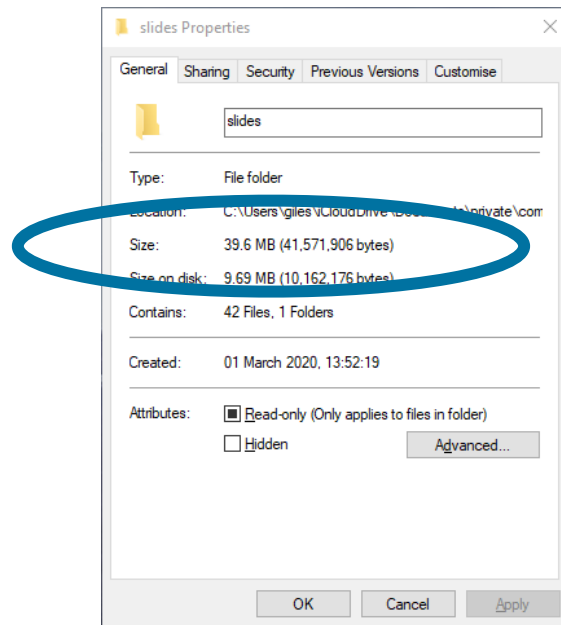
32Gby USB flash drive
(£5)

320m of books or
16,000 photos or
24 hours of HD video

How big are my files or folders?

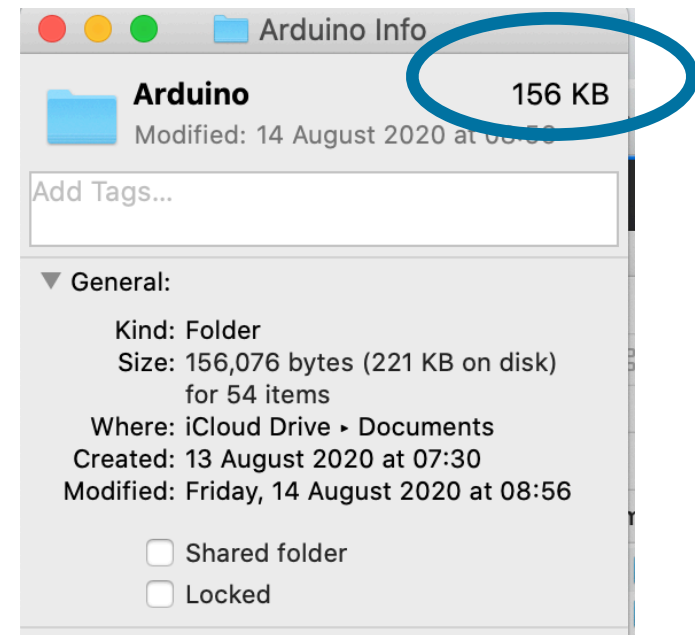
Windows

Select a folder or file in Explorer, right click on it and select 'Properties'



Mac

Select a folder or file in Finder, right click on it and select 'Get info'



Exercise

- How big is your documents folder?
 - Mine is 5.45 Gby, but I also have a 16.15 Gby code folder

Simple backup strategy

Create a small table to calculate how much space you need e.g.

You could make 376 different copies of these folders (one for every day of the year) on a 32G USB stick

See https://godartbrowncom.ipage.com/MCC/docs/simple_backup_calculator.ods for a spreadsheet version of the table above

Folder	Size
Documents	19M
Pictures	61M
Videos	1M
Music	1M
Desktop	22M
TOTAL	84M

How often?

How often to back up

- This depends on how important the file is or how often it changes
 - Really valuable files (like Photos) may need to be backed up immediately
 - Static or old files don't need to be backed up often
 - Things that are easy to replace (like Downloads) don't need backing up at all
- It may depend on how long/hard it is to do the backup
 - Its often easier to just back everything up at the end of the day

Built in backup software

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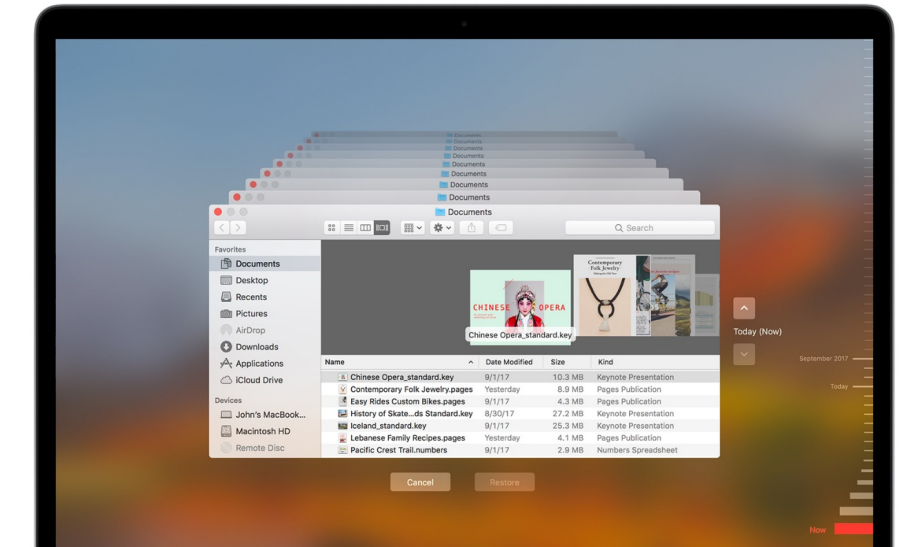
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Windows backup

- Windows has a built in backup tool that supports local drives and their One Drive Cloud space.
 - Windows>Settings>Update and Security>Backup
 - Add a drive and set it to be kept 'until space is needed'
 - Select the folders to backup
 - Select how often

Backup tool for Mac users

- The best by far is Time Machine, its free and built into the Mac Operating system.
- All you need is a USB drive



Simple USB stick backup demo

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USB device Backups example

- Make restoring easier by having a folder structure e.g.
 - For multiple versions name the folder by date e.g.
 - F:/Backups/2021/Jan
 - F:/Backups/2021/Feb
 - F:/Backups/2021/Mar
 - F:/Backups/2021/Apr
 - Etc...
 - Have single folders for static information that you want to just overwrite e.g.
 - F:/Backups/My_old_documents
- Use backup software if your backups are large and volatile so that only changed files get backed up, more in this later.
- **Don't forget to 'safely eject' USB storage devices**

Restoring

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Restoring

- Restoring individual files is simply a case of finding it on your USB stick and dragging it across to your PC disk.
- On Mac Time Machine go back in time to the version you want and click on restore.
- If the whole machine needs to be restored;
 - Windows - Install the Operating system then restore from the Cloud or USB stick
 - Mac - Boot from the Time Machine and it will do the rest.

Mail backup

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Email backups

- Emails are held both on the server (Gmail, Hotmail etc.) AND on your hard drive in a hidden folder so long as you have the IMAP option set up and not POP.
- Normally you don't need to back them up as your email provider will be looking after them in their IMAP folders
- You may want to keep a local copy of emails, folders and attachments on your PC where you can easily find them and add them to your own backup strategy.

Saving individual emails locally

Very few mail clients have the option to export an entire folder to a local file, you can only do this one email at a time.

The exact mechanisms for doing the following will vary a little depending on your email provider and the app you are using

- Attachments can simply be downloaded and saved locally. This is good practice anyway as you may then be able to delete the email and reduce how much of your email quota is in use.
- Use 'print' to save a copy of the text of an email as a pdf.
- Use save (...Actions->Save_as in the Windows mail client) to save an email with its attachment in a format (.eml) that can only be opened using a mail client.

3rd Party backup software

Backup Software

- Easus
- Paragon Backup & Recovery