Files and Folders Generic

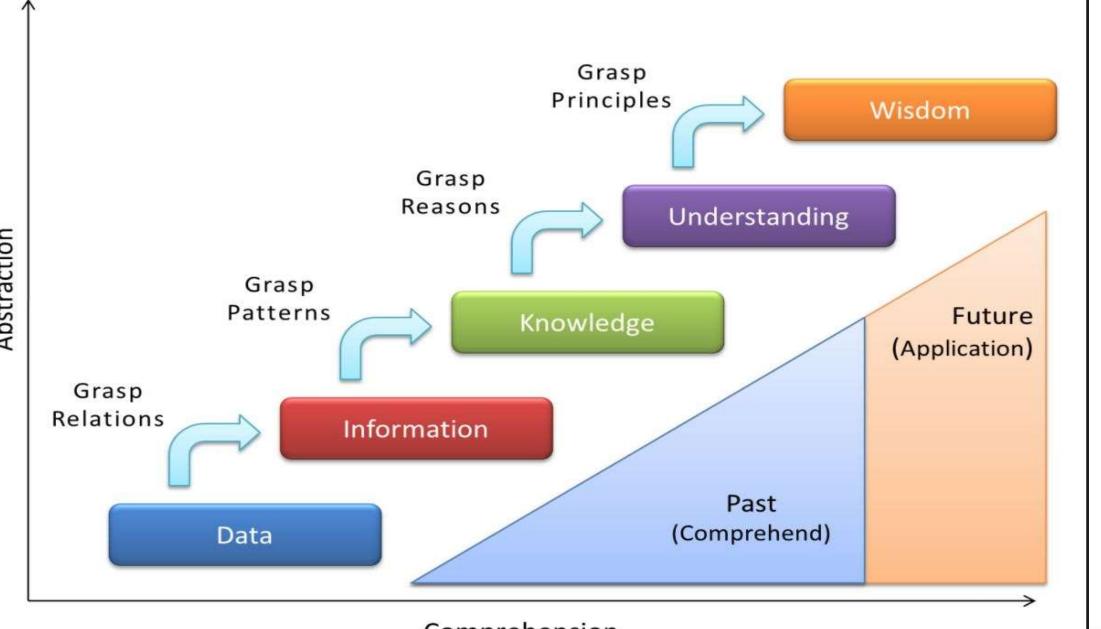
Sun City Computer Club Seminar

John Jenkinson

 To view and listen to the MP4 file of this seminar click on the link below:

https://vimeo.com/706248474

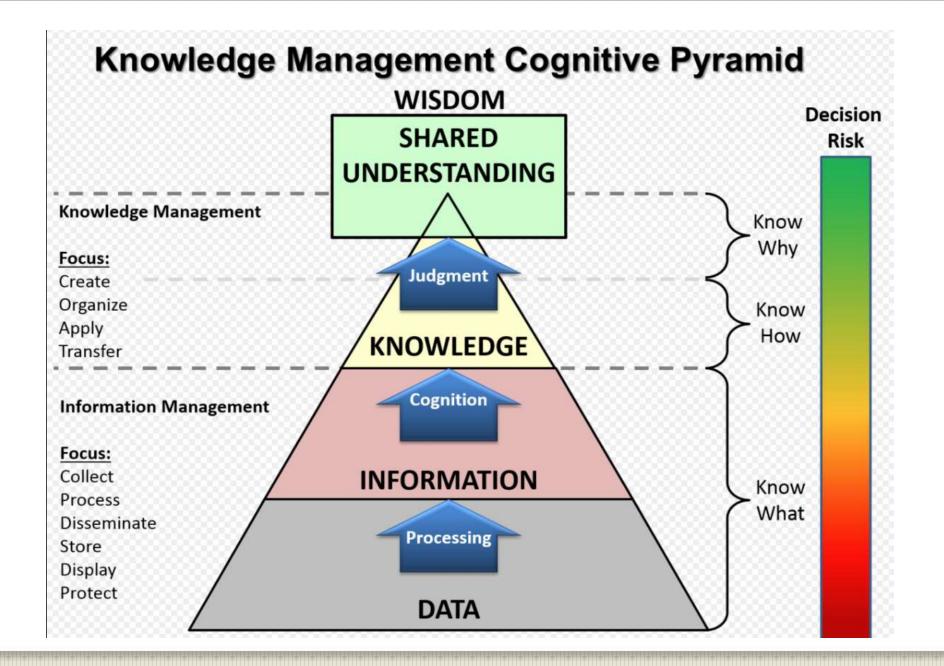




Comprehension

000

Abstraction







N 0 /

• Pre 1950s

Room sized, single program, relatively small memory, no disks

- 1st generation 1940s -> 1958 relays, tubes (valves)
- 2nd generation 1959 -> 1964 transistor
- 3rd generation 1965 -> 1970 Integrated circuits
- 4th generation 1971 microprocessors, multi core
- 5th generation Artificial Intelligence, machine learning, ???

Computer History

Relative Computer Hierarchy

- Network 1Gb/sec
- Offline storage 60 MB/sec
- Disk 2 GB/sec
- Memory 10 GB/sec
- Cache 100 GB/sec
- Register 1 CPU cycle

-1-2-3-4 Steganography Hash Symmetric Asymmetric

cryptography

-1-2-3-4 Algorithm Key •Plain text Cypher text

cryptography

One way Fixed length output Any length input Message digests •E.g. MD2, MD4, MD5, SHA-1, SHA-2 Used for integrity, digital signing & passphrases has

- Plain text, algorithm, key, cypher text
- Algorithm usually public
- Key space is important
- Reversible with the one key
- Does not scale
- E.g. RC4,SEAL DES,3DES,RC5,Rijndael
- One-time pad
- Cryptanalysis
- Control

symmetric

- Public & private key
- Intractable problem
- Symmetric key exchange in presence of advisory
- Thousands of times slower
- E.g. RSA, El Gamal, ECC
- Public key distributed and verified via Digital Certificate
- Signing via digital signature

Asymmetric

Confidentiality Integrity Authentication Non-Repudiation



- Banking until blockchain
- Ledger vs. transaction
- Distributed ledger peer review verified by chain and cryptography
- Timestamp, transaction data
- Growing chain with a limit
- World wide
- Permanent
- Untraceable ?
- Mining
- Many other uses in addition to currency good and bad

Digital Currency

Digital transformation Revolution, Evolution, Devolution?

- Library of Alexandria
- School Research Methods
 Library card catalog, Note cards, Typewriters, Copy Machines

Audio

gramophone, Records, cassette, CDs, Napster, Spotify,

Photos

Photo plates, film, Polaroid, smartphones

Our Files and Folders History



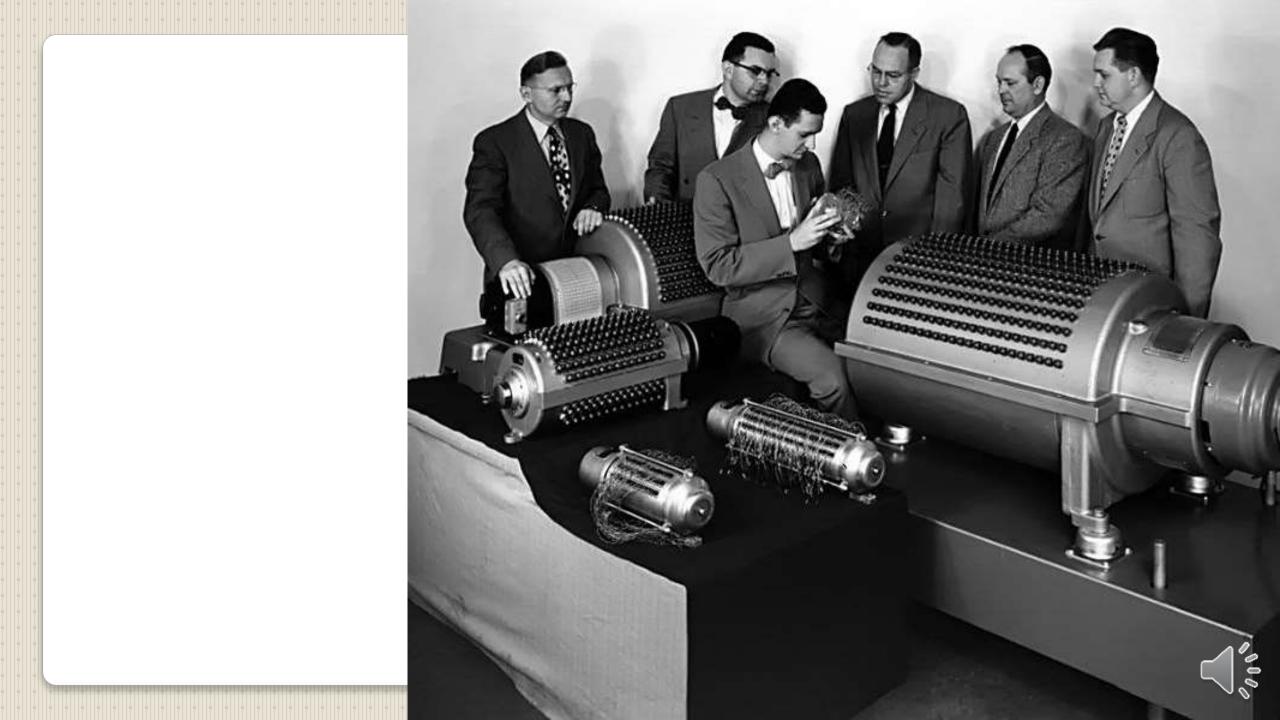
5 MB then 62,500 cards 4-day load

 ≥ 0

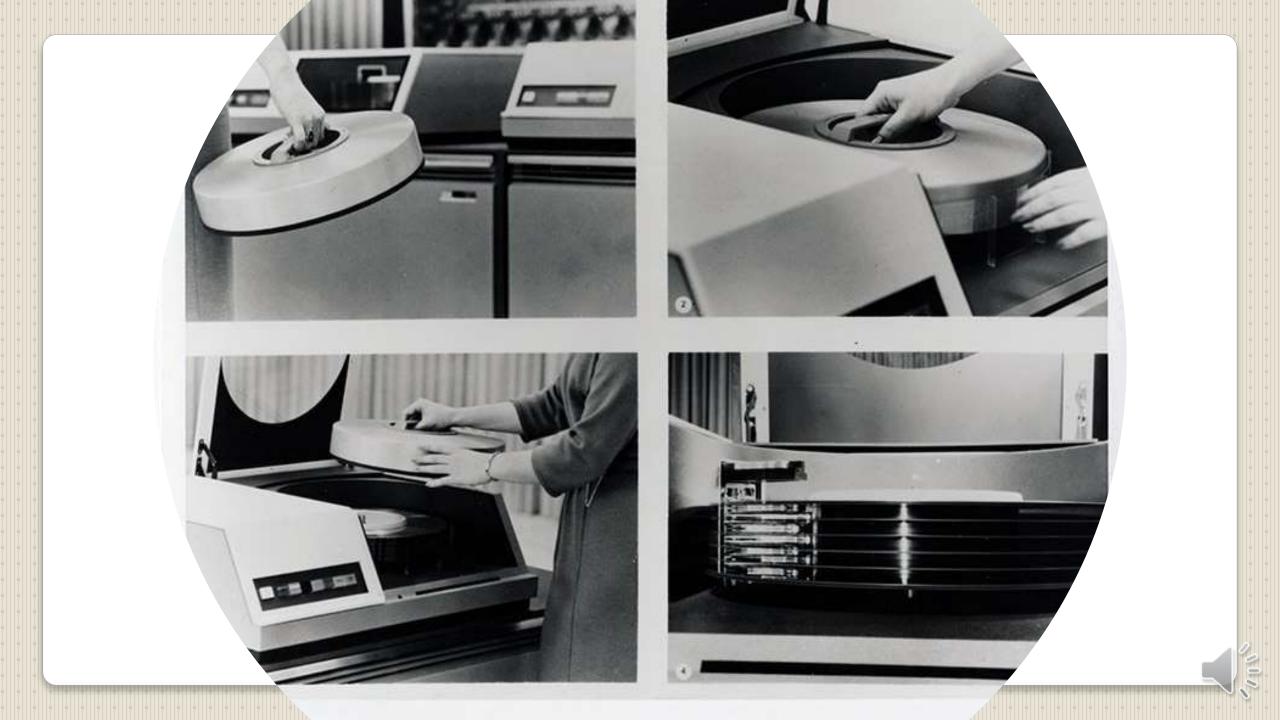
Digital Encoding

More and More with Less and Less





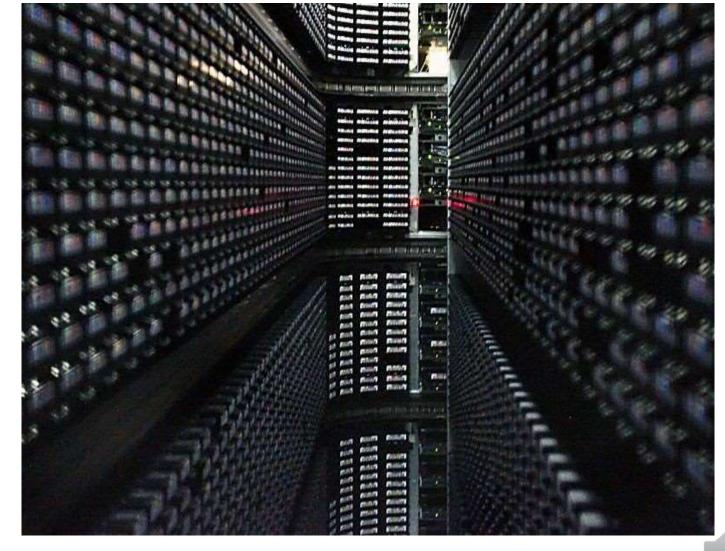




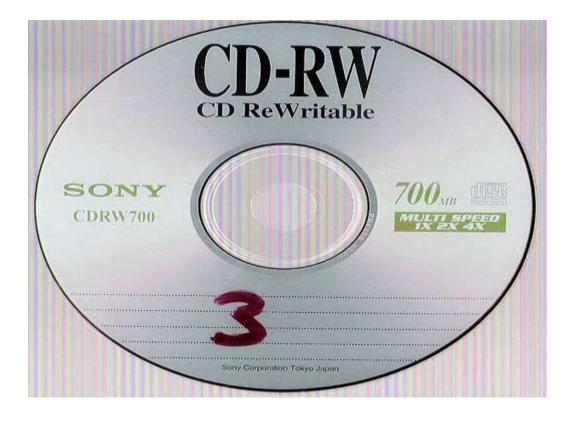


















Storage Devices

- Block oriented 512-byte blocks 4096-byte sectors
- Memory bit/byte addressable
- Storage devices block addressable
- Block 0 to maximum block capacity

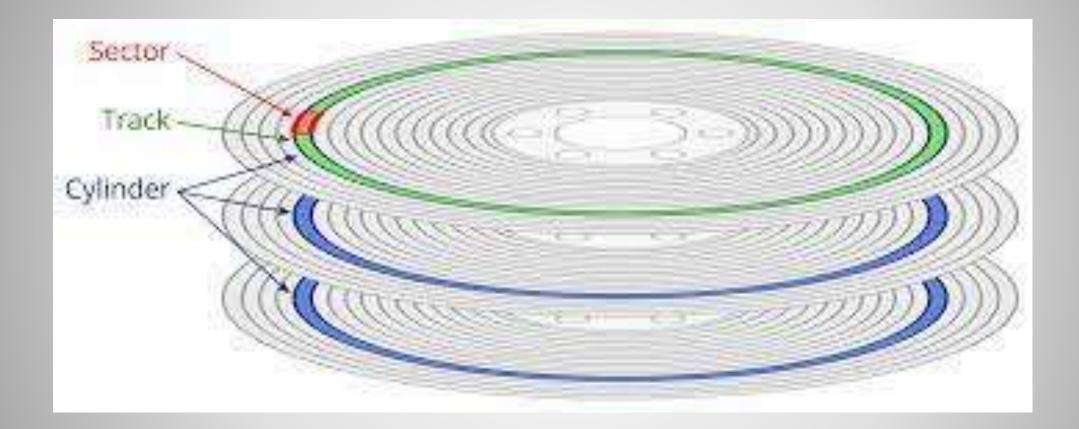


Hard disk drive example





Magnetic Disk (Disc) Mechanical



Hard Drive Disk

Hard Disk Drive Issues

- Block oriented
- Logical block number -> Cylinder + Track + Sector
- Latency Rotational delay + Head select + head settle + transfer
- Head settle
- Head crash
- Spin up Spin down (head "parking") Spinning
- Speed rotational delay
- Size
- Power consumption
- Noise
- Geometry inner cylinders vs. outer cylinders
- Transfer rates 140MB/s
- Fragmentation
- Bad Blocks static vs Dynamic
- Head flying needs fluid

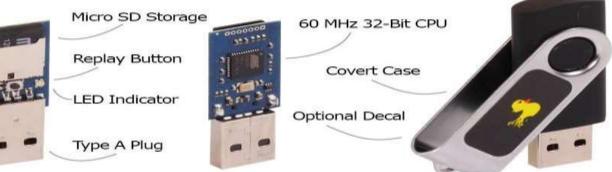
- Durability and resistance
- Random Access block
- Small
- Less power consumption

Shape

Solid State Disk Advantages

Disadvantages
 Capacitive storage
 Less "real" capacity





0

Semiconductor Disk

Formatting Each block labeled Servo tracking Magnetic domains – vertical vs. horizontal Encoding - avoid bit bleed

How to find my data

Filesystem

- Translation from bits to data
- Speed vs. Security
- Size, Complexity, ...
- How & where files (and folders/directories) are located
- Data about data Metadata
- Permissions Ownership Encryption
- Volumes split or join
- Microsoft FAT32 ExFAT NTFS
- Apple HFS+ APFS
- Linux Ext2 Ext3 Ext4

• Bit 0 or 1

- Nibble 4 bits 16 values One Hex value
- Byte 8 bits 256 values ASCII EBCDIC
- Unicode and multibyte encoding
- 16 bits 65,536
- 32 bits 4GiB
- 64 bits 18 quintillion



I asked what time it was, you told me how to build a watch

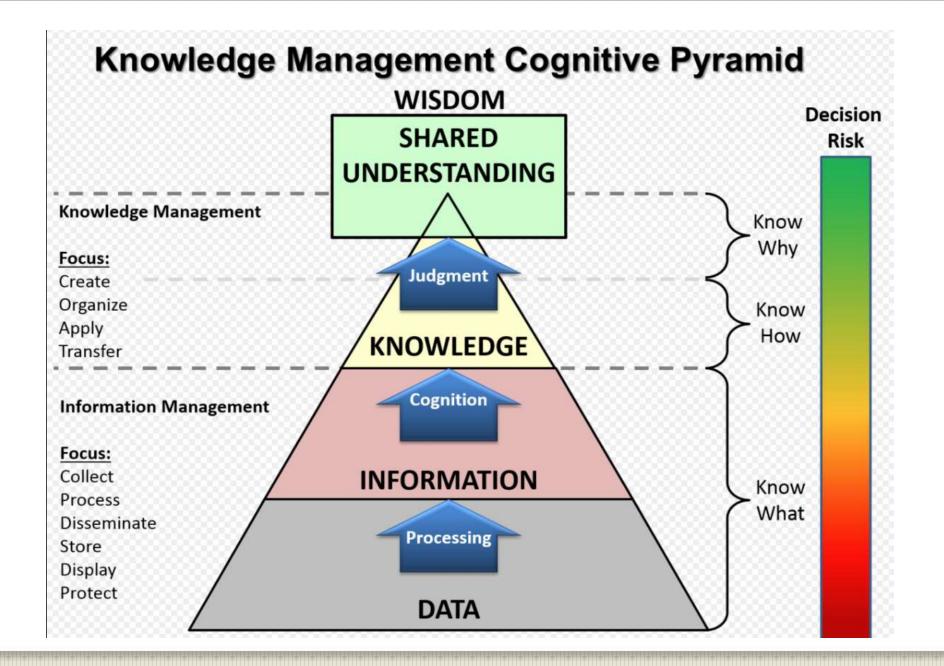


- Personal Computers
- Printers and Faxes
- Digital Cameras
- Smart phones & tablets
- Garman
- Black Boxes
- CCTVs

Files and Folders Any/Everywhere

Data Centers, Cloud, Big Data, Internet

Data in your files, folders, volumes,



File Systems

- Folders Directories Files of Files
- Files contain data
- Data text, music, videos, movies, any/everything
- Solve the disconnect

Smart device -> Music, messages, maps, etc. -> the one I want

Name/type/date/

- GUI
- Point and click
- Drag and drop
- Double tap
- Mouse
- Touch Screen
- Pencil Pointing Device
- Gaze & focus
- Keyboard

Graphical User Interface

Filesystem

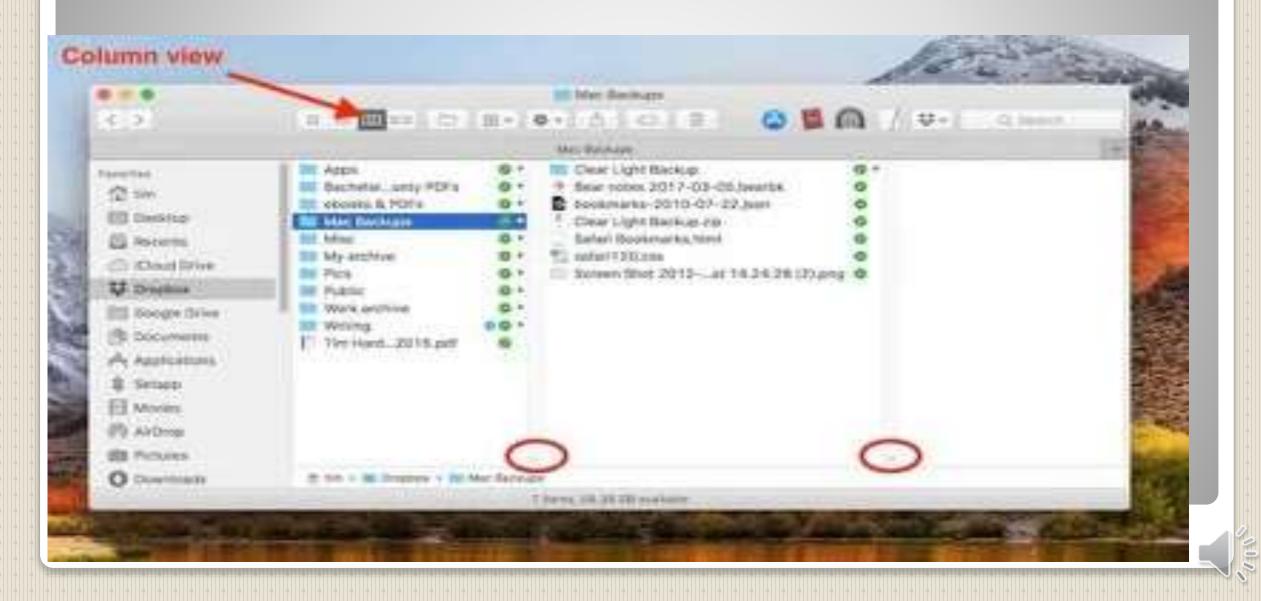
- Our history Files, Folders, File cabinets
- Logical Filesystem User interface Open, Read, Close, Delete
- Virtual Filesystem Volumes, Shares, Cloud, USB, cameras, Network
- Physical Device Drivers

Filesystem

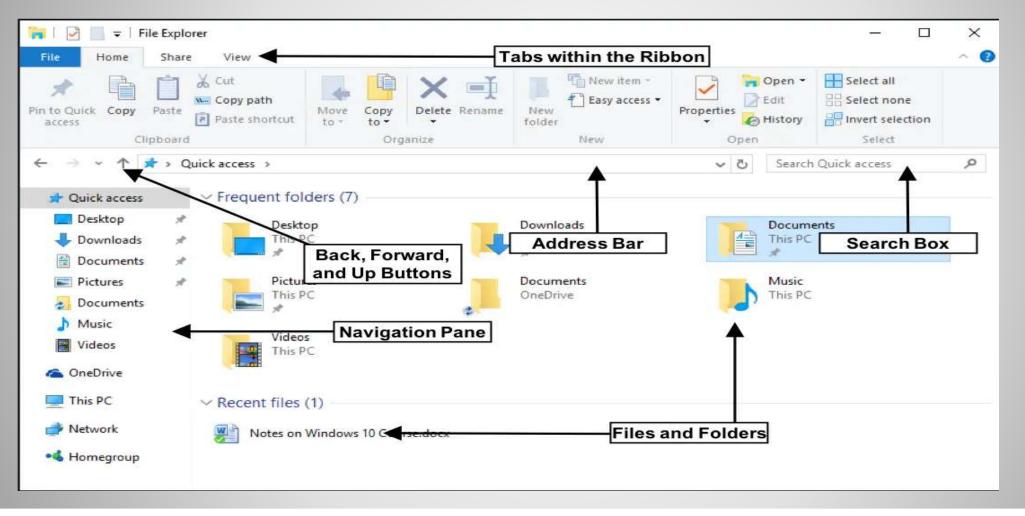
- Space Management
- File Names
- Folders / Directories
- Metadata
- Extensions
- Utilities
- Granting/Denying Access
- Integrity
- Your "stuff"
- The "Path" Volumes

| * * # Home | | | | | Q ≡ ::: ♦ Ø |
|-------------------|-----------------------------|-----------------|-----------|--------------|------------------------|
| Places | | | | | |
| P Recent | Aadhar Card | Android Games | backup | bin | Binary |
| 🖻 Home | Addital Card | Android Games | Баскар | bin | Binary |
| Desktop | | | | | |
| Documents | crossroads-2.74 | daily | Desktop | Documents | Downloads |
| Downloads | | | | | |
| Music | | | | | |
| Pictures | ffmpeg usage | firefox | games | img | Jammu- SrinagarTrip |
| 🗑 Trash | | | | | |
| Devices | | | | | |
| | JustDial | katoolin-master | Linux-ISO | LinuxSay.com | Linux-Tricks |
| Windows8_OS | Business Contacts - Proj | | | | |
| LRS_ESP | | | | | |
| Computer | | | J | | |
| Bookmarks | Movies | MultiCD | Music | Music-Player | netdata |
| Videos | | | | | |

Linux Filesystem GUI



Windows File Explorer



<u>https://www.youtube.com/results?search_query=files+and+folder</u> <u>s+macmost</u>

2019

September 2019 - macOS Catalina

May 2019 - Roloud Considerations

April 2019 - Photo Project Extension Apps

Marith 2015 - Markapa

February 2019 - Cyber Security

January 2019 - Some New Things in Mojave

2018

Neversiber 2018 - Some Little Estras

October 2018 - Numbers, A Powerful Spreadsheet

September 2018 - Majave macOS 10.14 - IPs Coming!

May 2018 - Mac Do's & Dan's

April 2018 - Miscellaneous Tips

March 2018 - Fun With Provinw

February 2018 - Using Markup For Image Files

Jemuery 2018 - Serves Sector Benics.

2017

November 2017 - IOS 11's Dock on the iPad

September 2017 - macmost.com - Great Video Help Online

June 2017 - Phillip Pensabene's ICloud Presentation

April 2017 Printing Your David Photos

January 2012- URLs

2016

Nov - Time Machine

Clot - macOS Bierra 10.12

Simple - Hudga, Huslan, Huslan, Hinday



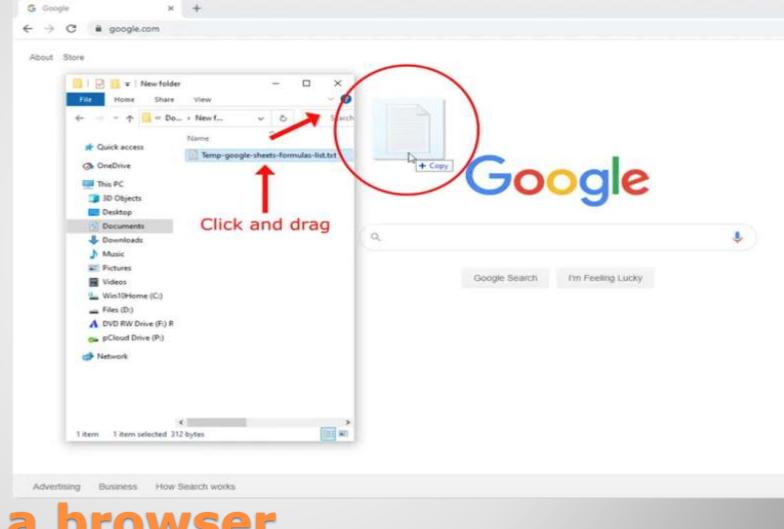
macOS Finder

< > Project Files

 How files & folders displayed icons lists columns gallery

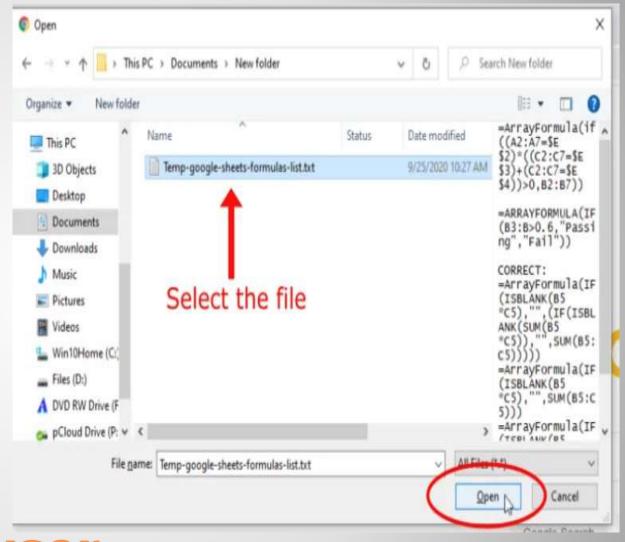
88 :=

Drag + Drop



View file in a browser

Browser "Open"
CTRL + O - Windows
CMD + O Mac



000

View file in a browser

Use address barProvide path name

Solution×+-⊥×←→C①FileC:/☆CDicognito (2):GSafe Browsing - Go...amass - Automate...©Microsoft Patch Tue...>

Index of C:\

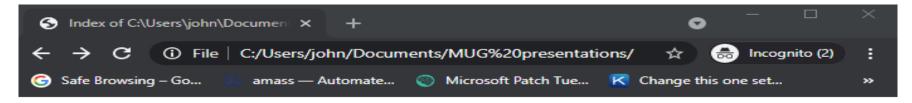
| Name | Size | Date Modified |
|----------------------------|--------|-----------------------|
| SRECYCLE.BIN/ | | 2/16/18, 4:03:02 PM |
| SWINDOWS.~BT/ | | 1/31/21, 1:22:26 PM |
| SWindows.~WS/ | | 1/31/21, 1:38:35 PM |
| SWinREAgent/ | | 10/27/20, 6:02:33 PM |
| AdwCleaner/ | | 11/28/19, 11:42:45 AM |
| Config.Msi/ | | 4/29/21, 8:06:28 AM |
| Documents and Settings/ | | 2/15/18, 11:28:38 AM |
| ESD/ | | 1/31/21, 2:02:47 PM |
| hp/ | | 2/15/18, 10:56:11 AM |
| inetpub/ | | 8/5/20, 7:03:43 PM |
| Intel/ | | 4/29/21, 8:03:09 AM |
| OneDriveTemp/ | | 12/16/20, 1:34:58 PM |
| opal/ | | 7/31/19, 1:58:21 PM |
| PerfLogs/ | | 12/7/19, 3:14:52 AM |
| Program Files/ | | 4/28/21, 2:20:33 PM |
| Program Files (x86)/ | | 2/22/21, 11:47:05 AM |
| ProgramData/ | | 2/22/21, 11:47:05 AM |
| Recovery/ | | 8/5/20, 4:20:04 PM |
| SWSetup/ | | 2/15/18, 11:24:16 AM |
| System Volume Information/ | | 5/1/21, 5:08:30 PM |
| SYSTEM.SAV/ | | 2/15/18, 11:32:41 AM |
| Users/ | | 8/11/20, 1:15:16 PM |
| Windows/ | | 4/29/21, 7:59:30 AM |
| DumpStack.log.tmp | 8.0 kB | 4/29/21, 8:01:57 AM |
| 🗋 hiberfil.sys | 6.4 GB | 4/29/21, 8:01:48 AM |
| pagefile.sys | 1.5 GB | 5/8/21, 12:13:40 AM |
| scan.out | 591 kB | 7/7/20, 10:19:37 AM |
| swapfile.sys | 272 MB | 5/2/21, 3:27:49 PM |

Open file in browser

Unique location in filesystem
Volume Directory Subdirectory(s) File

Volume Folder Subfolder(s) File

What is a file path name



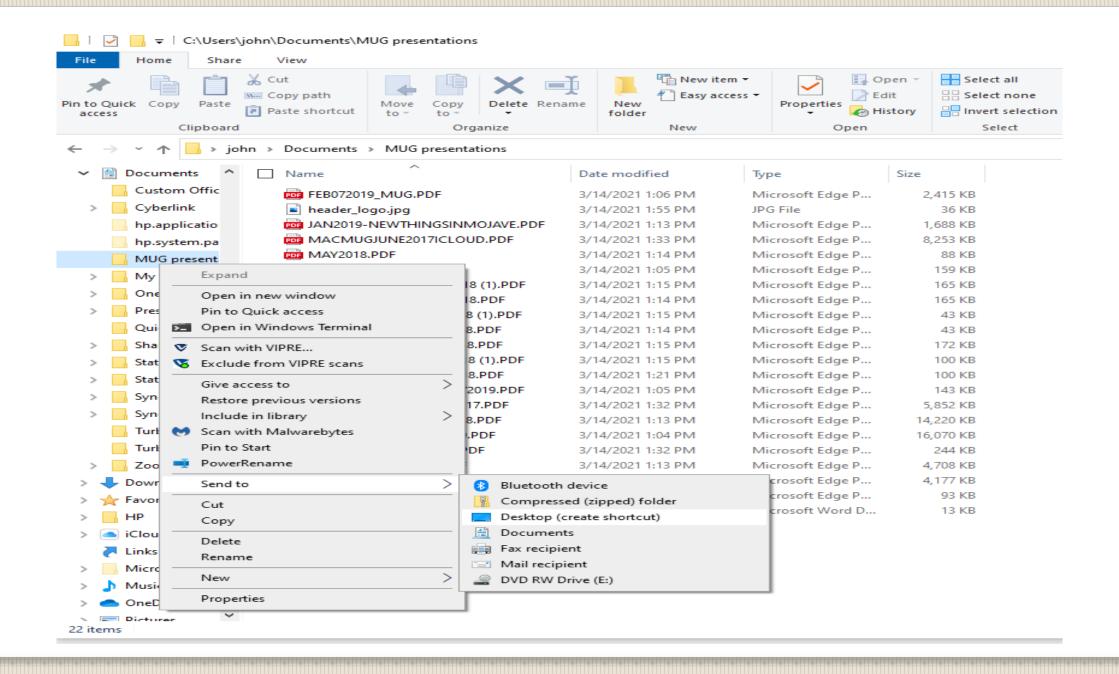
Index of C:\Users\john\Documents\MUG presentat

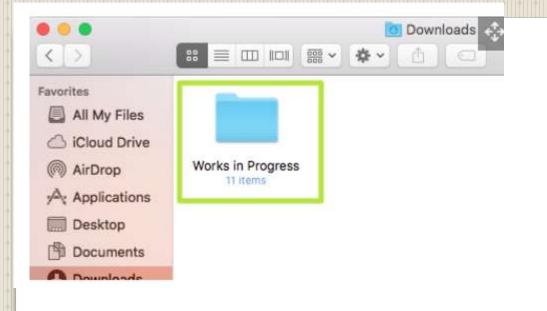
▶ 8

[parent directory]

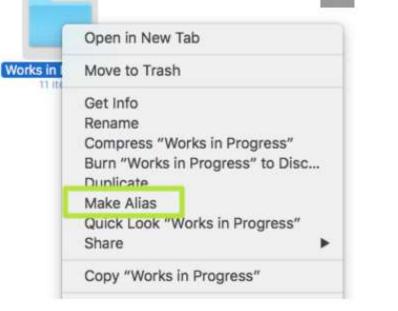
- 1 C

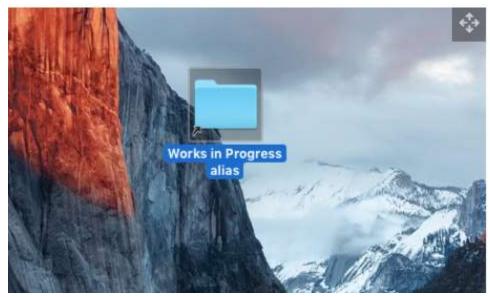
| Name | Size | Date Modified |
|-------------------------------|---------|---------------------|
| FEB072019_MUG.PDF | 2.4 MB | 3/14/21, 1:06:02 PM |
| header_logo.jpg | 36.0 kB | 3/14/21, 1:55:01 PM |
| JAN2019-NEWTHINGSINMOJAVE.PDF | 1.6 MB | 3/14/21, 1:13:02 PM |
| MACMUGJUNE2017ICLOUD.PDF | 8.1 MB | 3/14/21, 1:33:42 PM |
| MAY2018.PDF | 87.4 kB | 3/14/21, 1:14:03 PM |
| MAY2019.PDF | 158 kB | 3/14/21, 1:05:16 PM |
| MEETING-NOTES-APR2018 (1).PDF | 164 kB | 3/14/21, 1:15:02 PM |
| MEETING-NOTES-APR2018.PDF | 164 kB | 3/14/21, 1:14:16 PM |
| MEETING-NOTES-FEB2018 (1).PDF | 42.5 kB | 3/14/21, 1:15:15 PM |
| MEETING-NOTES-FEB2018.PDF | 42.5 kB | 3/14/21, 1:14:28 PM |
| MEETING-NOTES-JAN2018 (1).PDF | 99.9 kB | 3/14/21, 1:15:50 PM |
| MEETING-NOTES-JAN2018.PDF | 99.9 kB | 3/14/21, 1:21:00 PM |
| MEETING-NOTES-MAR072019.PDF | 142 kB | 3/14/21, 1:05:47 PM |
| MEETING-NOTES-NOV2017.PDF | 5.7 MB | 3/14/21, 1:32:30 PM |
| MEETING-NOTES-SEP2018.PDF | 13.9 MB | 3/14/21, 1:13:46 PM |
| MEETING-NOTESFEB12018.PDF | 172 kB | 3/14/21, 1:15:25 PM |
| MEETING-NOTESSEP2019.PDF | 15.7 MB | 3/14/21, 1:04:55 PM |
| MUGMACMOST.PAGES.PDF | 244 kB | 3/14/21, 1:32:53 PM |
| MUGOCTOBER42018.PDF | 4.6 MB | 3/14/21, 1:13:32 PM |
| PHOTOS_ON_MAC.PDF | 4.1 MB | 3/14/21, 1:05:33 PM |
| SOMELITTLEEXTRAS_NOV2018.PDF | 92.7 kB | 3/14/21, 1:13:14 PM |
| The Mac User overview.docx | 12.6 kB | 3/14/21, 1:54:27 PM |





Drag Alias to Desktop



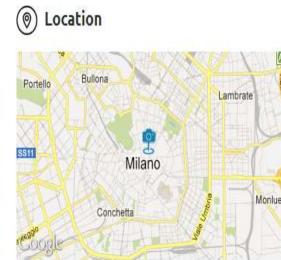


 ~ 0

| Exif details | |
|-----------------|------------------------------------|
| File Name | Example Teatro Scala.JPG |
| Creation Date | 2012- <mark>02-</mark> 18 22:15:34 |
| File Size | 266,358 bytes (260.1 KB) |
| Dimensions | 1024 x 768 pixels |
| Make | Apple |
| Model | iPhone 4S |
| Latitude | 45.467 |
| Longitude | 9.18967 |
| GPS Coordinates | <u>45.467, 9.18967</u> |

💿 Image





Exif metadata example

File Settings Help

8

APDV

- 🗆 🗙

Check out our other software at acutesystems.com

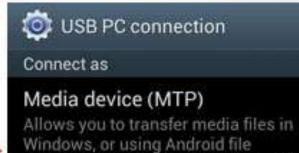
| C:\Use | ☑ Show image preview ☑ Show embedded preview if available (faster) | |
|--------|---|---|
| | A | |
| AP IN | An 1 | |
| | | 1 |

| Image Summary | | EXIF General Tags | | EXIF General Tags (continued) | |
|----------------------|-----------------------------|-------------------------|---------------------------------|-------------------------------|-------------------------------|
| File name: | Softpedia exif photo-QR.jpg | Make: | Hewlett Packard | FNumber: | F4.7 |
| File size: | 1.8 MB | Model: | Photosmart M425 | FileSrc: | Digital Still Camera (DSC) |
| File Modified: | 9/6/2014, 3:42 | Orientation: | top, left side | Flash: | Flash did not fire, auto mode |
| Pixel W x H: | 2576 x 1920 pixels | ResolutionUnit: | inches | FlashPorVersion: | 0100 |
| DPI W x H: | 230 x 230 dots per inch | Software: | Version 1.4100, SN: CN63KC70SGF | FocalLength: | 6.0 mm |
| Print size W x H: | 11.2 x 8.3 inches | XResolution: | 230 | FocalLength1n35mmFilm | : 36 mm |
| Color type: | RGB | YCbCrPositioning: | Datum point | GainControl: | None |
| Color bits per pixel | : 24 | YResolution: | 230 | 150SpeedRatings: | 100 |
| Transparency: | No | ApertureValue: | F4.7 | LightSource: | 050 |
| Background color: | No | BrightnessValue: | 7999/1000 | MakerNote: | HH. |
| | | ColorSpace: | sRGB | MaxApertureValue: | F2.8 |
| | | ComponentsConfiguration | e YCbCr | MeteringMode: | Center weighted average |
| | | CompressedBitsPerPixel: | 16/5 bits/pixel | PixelXDimension: | 2576.0 |
| | | Contrast: | Normal | PixelYDimension: | 1920 0 |
| | | CustomRendered: | Normal process | Saturation: | Normal |
| | | DateTimeDigitized: | 2008:09:17 08:14:59 | SceneCaptureType: | Standard |
| | | DateTimeOriginal: | 2008:09:17 08:14:59 | SceneType: | Directly photographed image |
| | | DigitalZoomRatio: | 0/10 | SensingMethod: | One-chip color area sensor |
| | | ExifVersion: | 0220 | Sharpness: | Normal |
| | | ExposureBiasValue: | 8 | ShutterSpeedValue: | 1/256 sec |
| | | ExposureIndex: | 100/1 | SubjectDistanceRange: | Distant view |
| | | ExposureMode: | Auto exposure | WhiteBalance: | Auto white balance |
| | | ExposureProgram: | Program normal | InteroperabilityIndex: | 898 |
| | | ExposureTime: | 301/125000 sec | InteroperabilityVersion: | 0100 |

000

Unlock Android phone

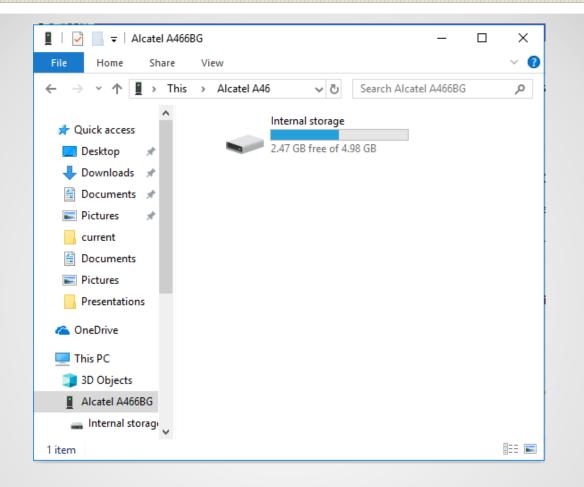




Windows, or using Android file transfer on a Mac (see www.android. com/filetransfer) \checkmark

Camera (PTP) Allows you to transfer photos using

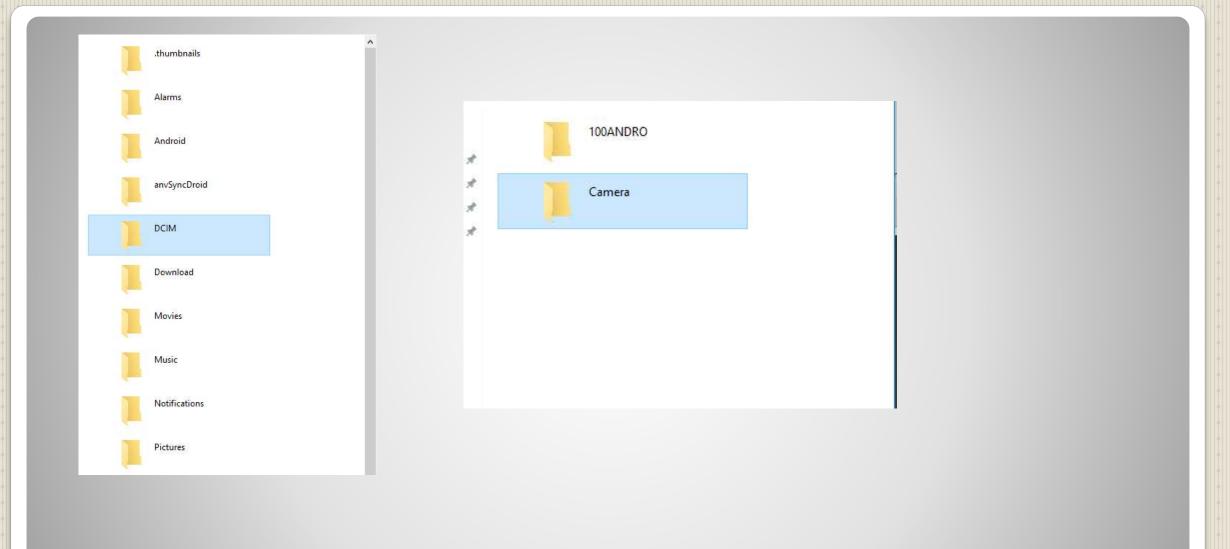
Micro USB device







Android phone as Folder





MG_20180718_151735.jpg

٨

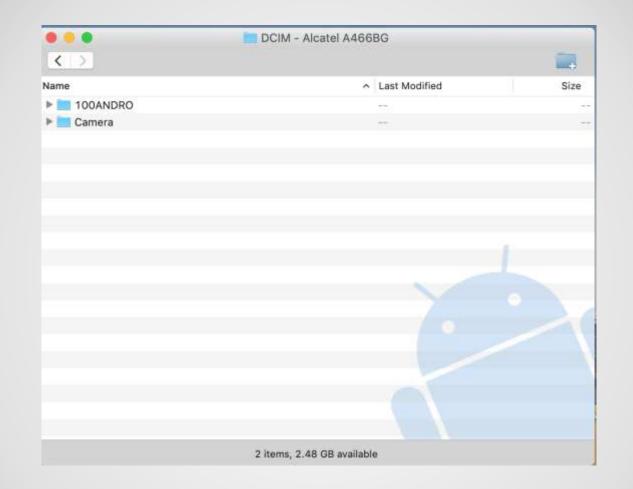


JPG File



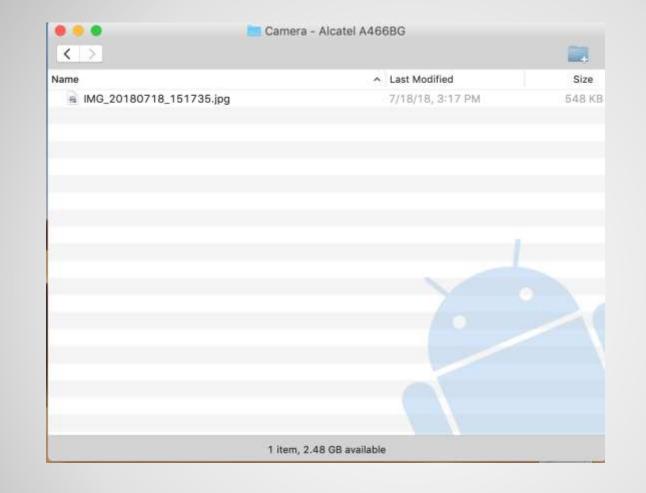


Android File Transfer



N 0 /





The Photo Drag and Drop

Files and Folders Generic

Sun City Computer Club Seminar Part 2

John Jenkinson

My Apologies

- File Digital resource for recording data on a storage device
- Folder Virtual container within a digital filesystem in which groups of files and other folders can be kept and organized
- Directory Similar definition for folder
- Filesystem hierarchical (resembles tree with branches)

Parent and child folders/directories

- Folder metaphor
- Folder Graphical User Interface Icon
- Directory element of a path

 Path – general form of the name for a file and/or folder specifies unique location in a filesystem follows directory hierarchical tree expressed as character string

delimiters separate directory structure
usually colon ":" slash "/" backslash "\"

 Examples: Unix (MacOS) /home/user/docs/Letter.txt Windows C:\user\docs\Letter.txt

Definitions



Filename extensions

• 8.3

Filetype

- Filename suffix
- Characteristic of file contents intended use
- WhatApp
- Period usual separator
- Metadata
- MAY NOT BE DISPLAYED icon instead
- LETTER-FOR-YOU.TXT.vbs

Common (?) Filename extensions

Common filename extensions – NOT inclusive

- Audio .mid .mp3 .wav
- Compressed .7z .rar .z .zip
- Disk & media .bin .iso .vcd
- Data & database .csv .dat .log .sav .sql .xml
- eMail .email .msg .ost .pst .vcf
- Executable .bat .pl .exe .jar .py .wsf
- Font .fnt .otf .ttf
- Image .pbm .gif .ico .jpg .jpeg .ps
- Internet .asp .cgi .css .htm .html
- Presentation .key .pps .ppt .pptx and so on and so on

- Network Volume Directory filename extension
- Network Volume Directory filename extension version
- Artificial versioning filename_1 filename_2 filename_21-May-2021 filename_save filename save your version naming scheme



Universal Naming Convention (UNC)

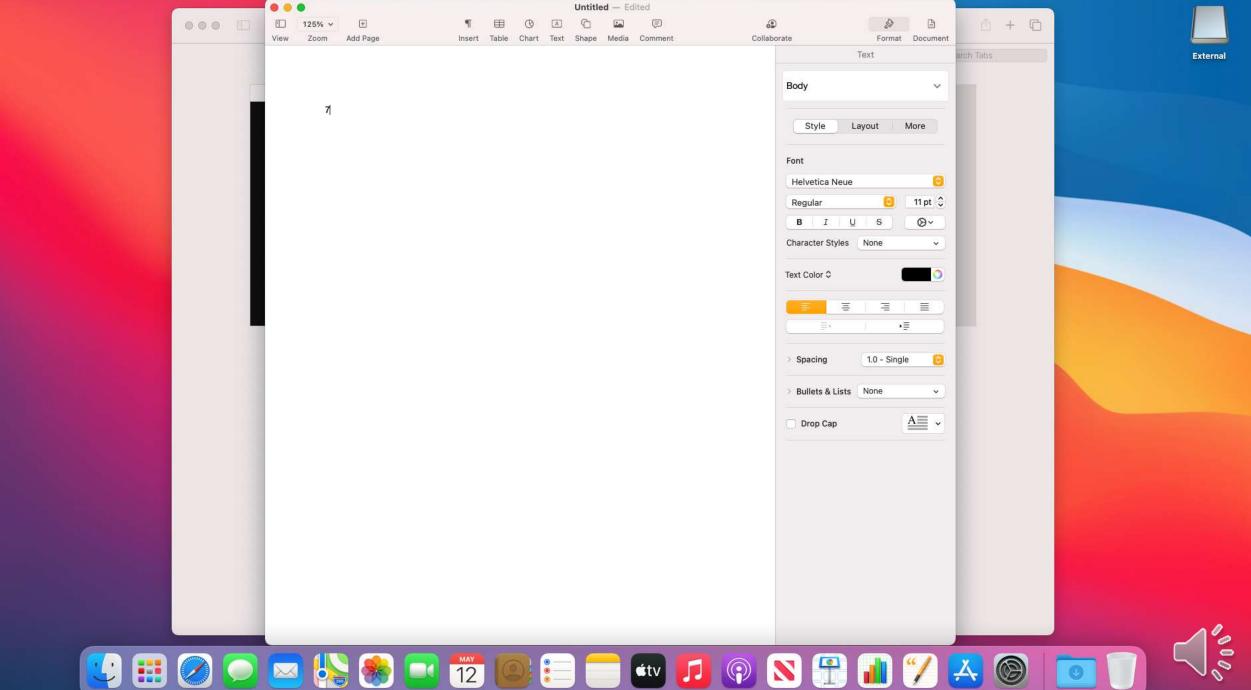
Networked Files and Folders
 \\ComputerName\SharedFolder\Resource

Filenames can be the same Paths must be unique WEB file address (path)
 scheme:[//authority]path[?query][#fragment]
 authority = [userinfo@]host[:port]



mailto:someone@example.com

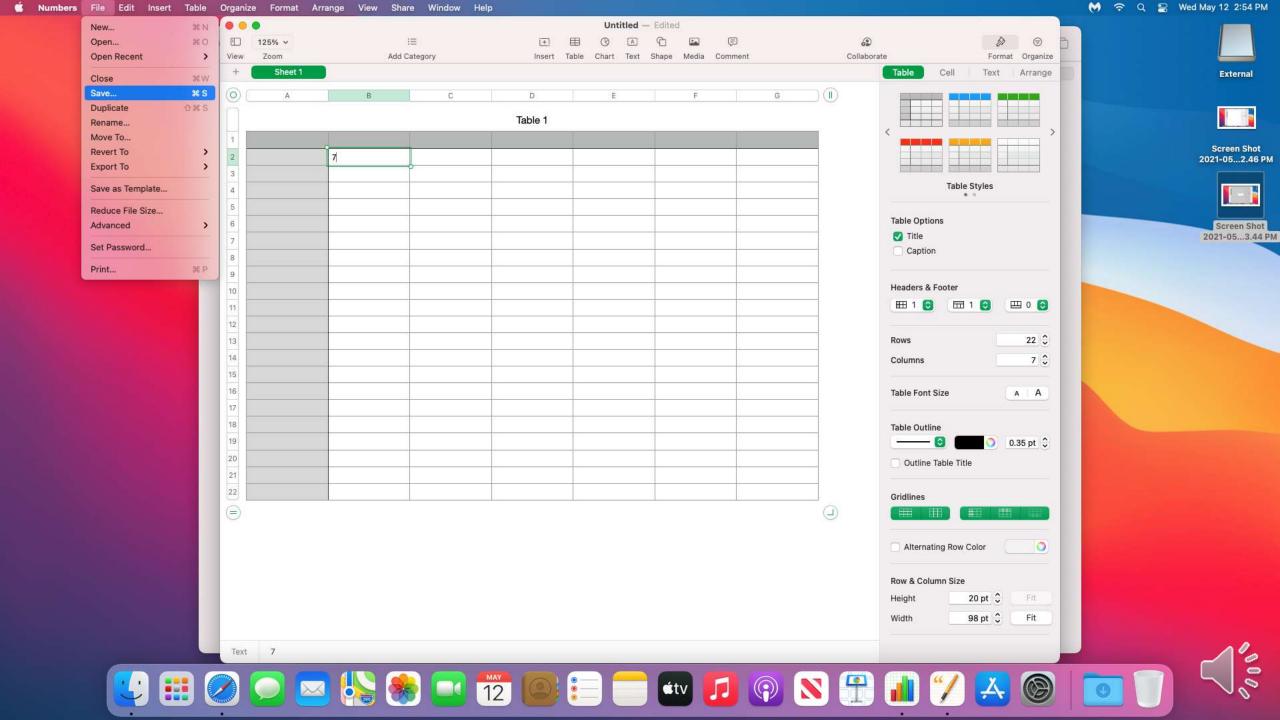
M 🗢 Q 🗟 Wed May 12 2:52 PM

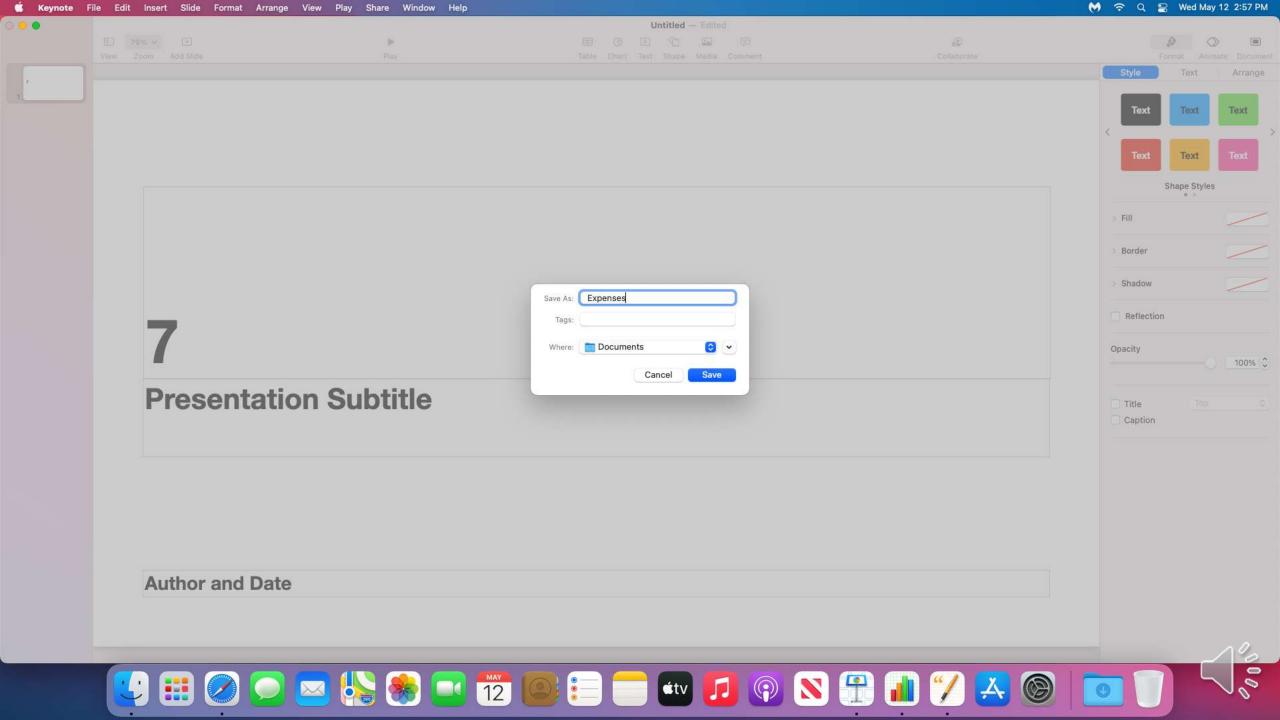


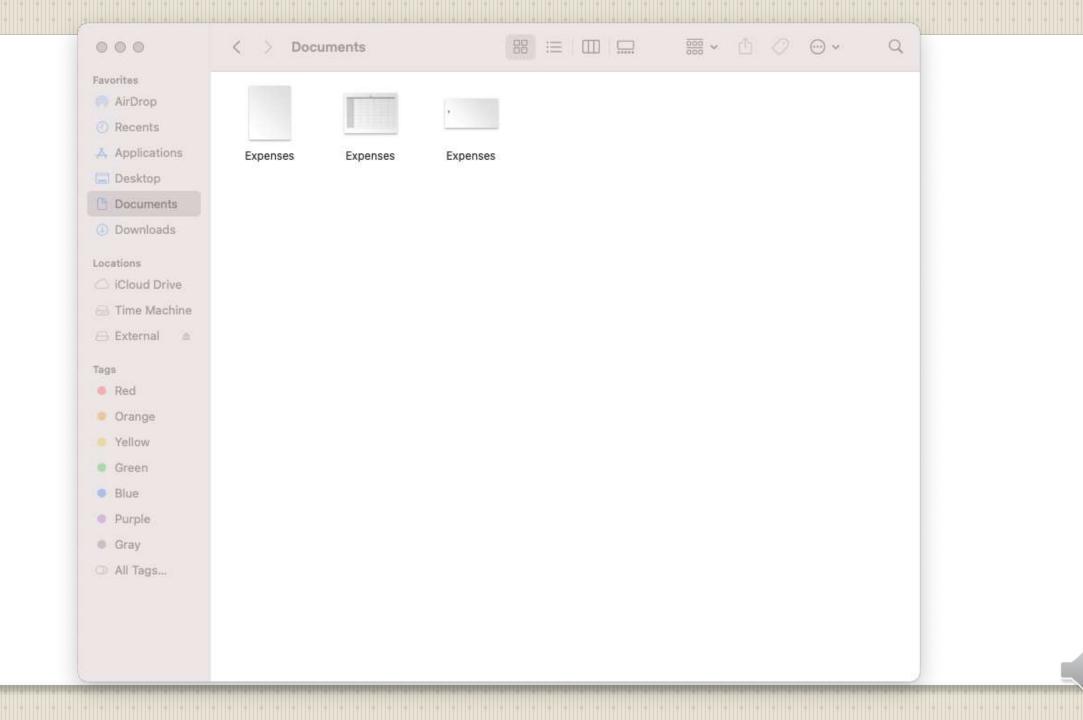
📫 Pages File Edit Insert Format Arrange View Share Window Help

💓 奈 Q 😪 Wed May 12 <u>2:53 PM</u>

| Pages File Edit Insert Format Arrange View | Share Window Help | 😸 🛜 Q 🚆 Wed May 12 2:53 PM |
|--|---|--|
| | Untitled — Edited | |
| | Insert Table Chart Text Shape Media Comment Collaborate Formet Document | |
| | Text arch Tabs | External |
| | Body | |
| | 7 | |
| A CONTRACTOR OF | Style Layout More | Screen Shot |
| | Font | 2021-052.46 PM |
| and the second | Helvetica Neue | |
| and the second | Regular 🗢 11 pt 🗘 | |
| | B I U S O× | |
| | Character Styles None 🗸 | |
| | Text Color \$ | |
| | Save As. Expenses | |
| | Tags: | |
| and the second | Where: Documents | |
| and the second | Cancel Save Spacing 1.0 - Single 🗢 | |
| | Bullets & Lists None ~ | |
| | | |
| and the second secon | Drop Cap A | |
| | | |
| | | |
| and the second | | |
| | | and the second |
| | | |
| | | |
| | | |
| | | |
| | | 10 |
| | Solution Solution | |
| | 🗠 🛞 🐨 🕒 12 🐷 🍋 🔛 💴 🕑 🚺 🚺 🖊 📥 🧶 | |



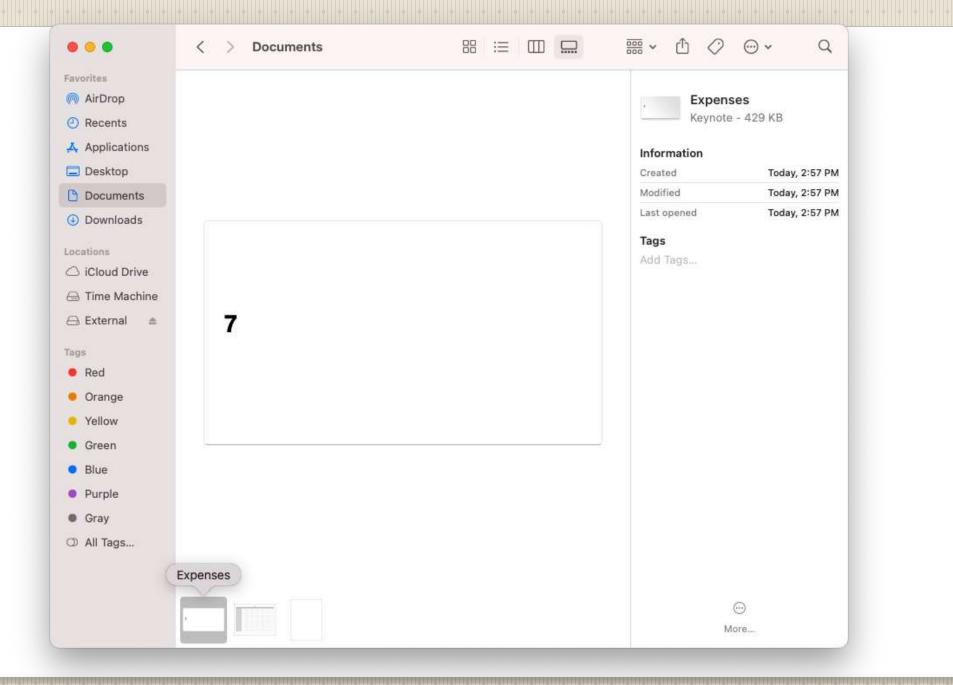




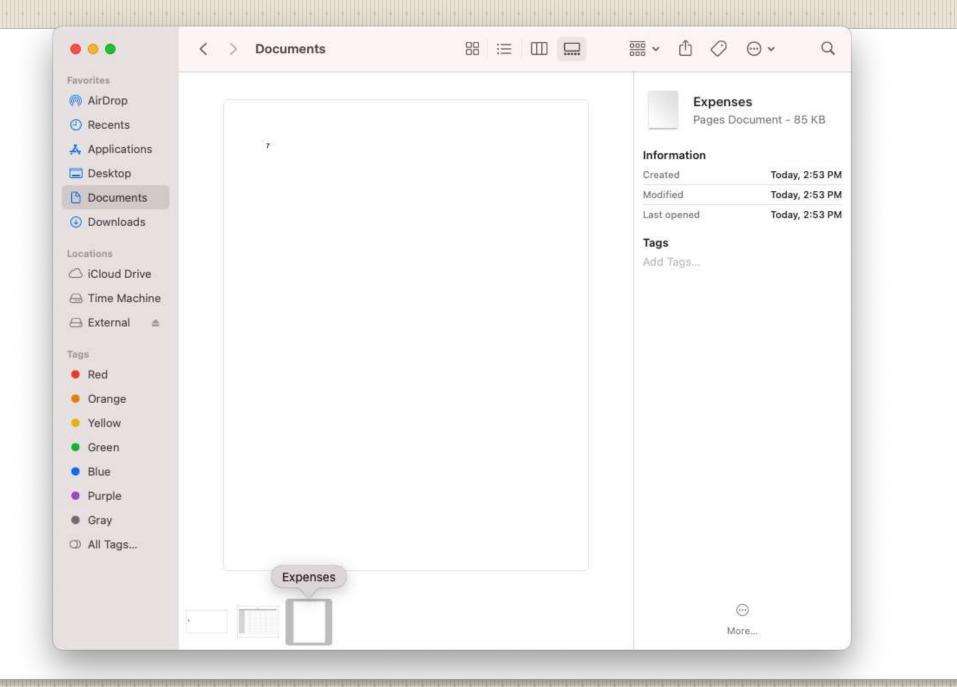
0.0

| • • • | < > Documents | | ₩ • 🖞 ⊘ | ⊕v Q |
|----------------|---------------|------------------|---------|---------|
| Favorites | Name | A Date Modified | Size | Kind |
| AirDrop | Expenses | Today at 2:57 PM | 429 KB | Keynote |
| ecents | Expenses | Today at 2:55 PM | 132 KB | Numbers |
| Applications | Expenses | Today at 2:53 PM | 85 KB | Pages |
| 🚍 Desktop | | | | |
| Documents | | | | |
| Downloads | | | | |
| Locations | | | | |
| CiCloud Drive | | | | |
| 🖂 Time Machine | | | | |
| 🖂 External 🛛 📾 | | | | |
| Tags | | | | |
| Red | | | | |
| Orange | | | | |
| Yellow | | | | |
| • Green | | | | |
| • Blue | | | | |
| Purple | | | | |
| Gray | | | | |
| ② All Tags | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| • • • | < > Documents | …· ↓ ◇ ⊙· | Q |
|----------------|---------------|-----------|---|
| Favorites | Expenses | | |
| 🧑 AirDrop | Expenses | | |
| ④ Recents | Expenses | | |
| Applications | | | |
| 🚍 Desktop | | | |
| Documents | | | |
| Downloads | | | |
| Locations | | | |
| C iCloud Drive | | | |
| 🖂 Time Machine | | | |
| 🖂 External 📾 | | | |
| Tags | | | |
| Red | | | |
| • Orange | | | |
| Yellow | | | |
| • Green | | | |
| Blue | | | |
| Purple | | | |
| Gray | | | |
| ② All Tags | | | |
| | | | |
| | | | |
| | | | |
| | | | |



| AirDrop | Sheet | 1 | | | Expens | s - 132 KB |
|----------------|-------|---|---|---------|-------------|----------------|
|) Recents | | | | | Number | 5 - 152 KD |
| Applications | | | | | Information | |
| Desktop | | | | | Created | Today, 2:55 PM |
| Documents | | | | Table 1 | Modified | Today, 2:55 PM |
| Downloads | 1 | | | | Last opened | Today, 2:55 PM |
| cations | | | 7 | | Tags | |
| 3 iCloud Drive | | | | | Add Tags | |
| Time Machine | | | | | | |
| ∋ External 📾 | | | | | | |
| | | | | | | |
| gs D-d | - | | | | | |
| Red | | | | | | |
| Orange | | | | | | |
| Yellow | | | | | | |
| Green | | | | | | |
| Blue | | | | | | |
| Purple | _ | | | | | |
| Gray | | | | | | |
| D All Tags | | | | | | |
| | | | | | | |



| Th | This PC > Documents > river | | | | | | Search river |
|----|-----------------------------|-------------------|-----------------------------------|-------|--|--------------|-------------------------|
| ٨ | Name ^ | Date modified | Туре | Size | | | Size All Columns to Fit |
| | \min expenses.docx | 5/12/2021 5:15 PM | Microsoft Word Document | 12 KB | | \checkmark | Name |
| | 😰 expenses.pptx | 5/12/2021 5:17 PM | Microsoft PowerPoint Presentation | 32 KB | | , V | Date modified |
| | 😰 expenses.xlsx | 5/12/2021 5:16 PM | Microsoft Excel Worksheet | 9 KB | | ~ | Туре |

Size

Date created

Authors

Categories

Tags

Title

More...

000

 \checkmark

> This PC > Documents > river

5

C

2

0

S

P)

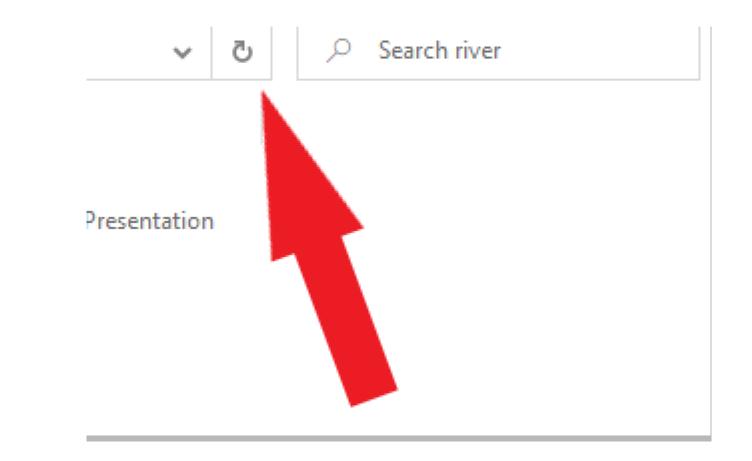
| ~ | ō | 2 | Search river |
|---|---|---|--------------|
| | ~ | | |

| ^ | Name ^ | Date modified | Туре | Size | Date created | Authors | Title |
|---|-----------------|-------------------|-----------------------------------|-------|-------------------|----------|-------------------------|
| | 👜 expenses.docx | 5/12/2021 5:15 PM | Microsoft Word Document | 12 KB | 5/12/2021 5:15 PM | John Jen | |
| e | 🔁 expenses.pptx | 5/12/2021 5:17 PM | Microsoft PowerPoint Presentation | 32 KB | 5/12/2021 5:17 PM | John Jen | PowerPoint Presentation |
| | 😰 expenses.xlsx | 5/12/2021 5:16 PM | Microsoft Excel Worksheet | 9 KB | 5/12/2021 5:16 PM | john | |

| Select the details you want to display for the item | is in this folder. |
|---|--------------------|
| Name ^ | Move Up |
| ✓ Date modified | Move Down |
| ✓ Type | THOTE DOMIN |
| ✓ Size ✓ Date created | Show |
| Authors | Hide |
| | Titue |
| □ # | |
| 35mm focal length | |
| Account name | |
| Album | |
| Album artist | |
| Album ID | |
| Anniversary | |
| Assistant's name 🗸 | |
| Width of selected column (in pixels): 272 | |
| ОК | Cancel |

Refresh View Windows

⊘ Search river This PC > Documents > river 5 V \sim ▲ Name Date modified Type Size Date created Authors Title expenses.docx 5/12/2021 5:15 PM Microsoft Word Document 12 KB 5/12/2021 5:15 PM John Jen... expenses.pptx 5/12/2021 5:17 PM Microsoft PowerPoint Presentation 32 KB 5/12/2021 5:17 PM John Jen... PowerPoint Presentation expenses.xlsx 5/12/2021 5:16 PM Microsoft Excel Worksheet 9 KB 5/12/2021 5:16 PM john Choose Details \times Select the details you want to display for the items in this folder. Details: ✓ Name \land Move Up ✓ Date modified Move Down 🗹 Туре ✓ Size Show ✓ Date created Authors Hide ✓ Title # 35mm focal length Account name Album Album artist Album ID Anniversary Assistant's name ÷ Width of selected column (in pixels): 272 OK Cancel المحمد المحمد المرجمة فتنصر المرجم والمرجم والمتنا والمتنا ومراجع والموجوع والمراجع والمراجع والمراجع



Windows Rename

| Name ^ | Date modified | Туре | Size | Date created |
|----------------------------|-------------------|-----------------------------------|-------|-------------------|
| 👜 expenses.docx | 5/12/2021 5:15 PM | Microsoft Word Document | 12 KB | 5/12/2021 5:15 PM |
| 📴 expenses.pptx | 5/12/2021 5:17 PM | Microsoft PowerPoint Presentation | 32 KB | 5/12/2021 5:17 PM |
| expenses where | 5/12/2021 5:16 PM | Microsoft Excel Worksheet | 9 KB | 5/12/2021 5:16 PM |
| Open | | | | |
| New | | | | |
| Print | | | | |
| S Share with Skype | | | | |
| Move to OneDrive | | | | |
| 🖻 Share | | | | |
| Open with | <u> </u> | | | |
| Scan with VIPRE | | | | |
| K Exclude from VIPRE scans | | | | |
| Give access to | > | | | |
| Scan with Malwarebytes | | | | |
| PowerRename | | | | |
| Restore previous versions | | | | |
| Send to | > | | | |
| Cut | | | | |
| Сору | | | | |
| Create shortcut | | | | |
| Delete | | | | |
| Rename | | | | |
| Properties | | | | |

| Name ^ | Date modified | Type Size Date created | |
|-------------------|-------------------|--|--|
| 💼 expenses.docx | 5/12/2021 5:15 PM | 12 KD 5 (12 (2021 § 15 PM | |
| 😰 expenses.pptx | 5/12/2021 5:17 PM | Rename :17 PM | |
| expenses.xlsx.doc | 5/12/2021 5:16 PM | If you change a file name extension, the file might become unusable. | |
| | | Are you sure you want to change it? | |
| | | Yes No | |

Windows WARNING!!

| ∧ Name | Date modified | Туре | Size | Date created |
|-------------------|-------------------|-----------------------------------|-------|-------------------|
| expenses.docx | 5/12/2021 5:15 PM | Microsoft Word Document | 12 KB | 5/12/2021 5:15 PM |
| expenses.pptx | 5/12/2021 5:17 PM | Microsoft PowerPoint Presentation | 32 KB | 5/12/2021 5:17 PM |
| expenses.xlsx.doc | 5/12/2021 5:16 PM | Microsoft Word 97 - 2003 Document | 9 KB | 5/12/2021 5:16 PM |

Windows Type has changed Contents have not changed

| □ Name | Date modified | Туре | Size | Date created |
|-----------------|-------------------|-----------------------------------|-------|-------------------|
| 🗐 expenses.docx | 5/12/2021 5:15 PM | Microsoft Word Document | 12 KB | 5/12/2021 5:15 PM |
| 😰 expenses.pptx | 5/12/2021 5:17 PM | Microsoft PowerPoint Presentation | 32 KB | 5/12/2021 5:17 PM |
| expenses.xlsx | 5/12/2021 5:16 PM | Microsoft Excel Worksheet | 9 KB | 5/12/2021 5:16 PM |

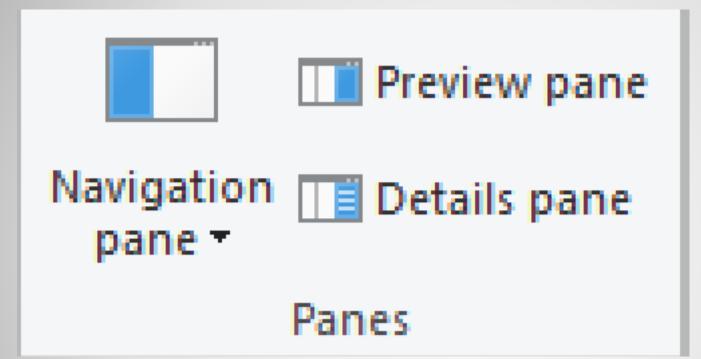
Windows Rename the Rename Rename back



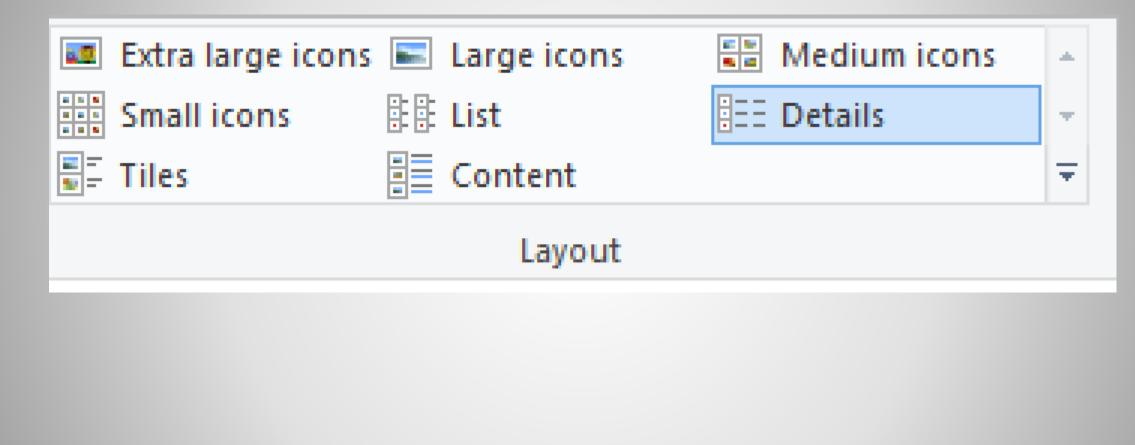
Windows File Explorer icon

| 📙 📝 📙 🖛 C:\Users\jol | hn\Documents\river | | | | | | - [| x c | |
|---|---|--|---|-------------------------|------------|-----------------------|-------------------|-----|-----|
| File Home Share | View | | | | | | | ^ ? | |
| Navigation Details pane | Extra large icons Large icons Small icons List | Medium icons | Group b i Group b i Add colu Sort by ▼ Size all c | | extensions | Hide selecte items | d Options | | |
| Panes | Layout | | Current vi | ew | Show/hide | | | | |
| \leftarrow \rightarrow \checkmark \uparrow \square \rightarrow This | PC → Documents → river | | | | ~ | ۹ ۵ | Search river | | |
| iCloud Drive ^ | Name ^ | Date modified | Туре | | Si | ize | Date created | | |
| Tinks 🔁 | 🖬 expenses.docx | 5/12/2021 5:15 PM | Microsoft V | Nord Document | | 12 KB | 5/12/2021 5:15 PM | r | rcl |
| MicrosoftEdge | 😰 expenses.pptx | 5/12/2021 5:17 PM | Microsoft P | PowerPoint Presentation | | 32 KB | 5/12/2021 5:17 PM | | H |
| 👌 Music | 🔊 expenses.xlsx | 5/12/2021 5:16 PM | Microsoft E | Excel Worksheet | | 9 KB | 5/12/2021 5:16 PM | | |
| OneDrive | | | | | | | | | |
| E Pictures | | | | | | | | | |
| Saved Games | | | | | | | | | |
| 🔎 Searches | | | | | | | | | |
| Videos | | | | | | | | | |

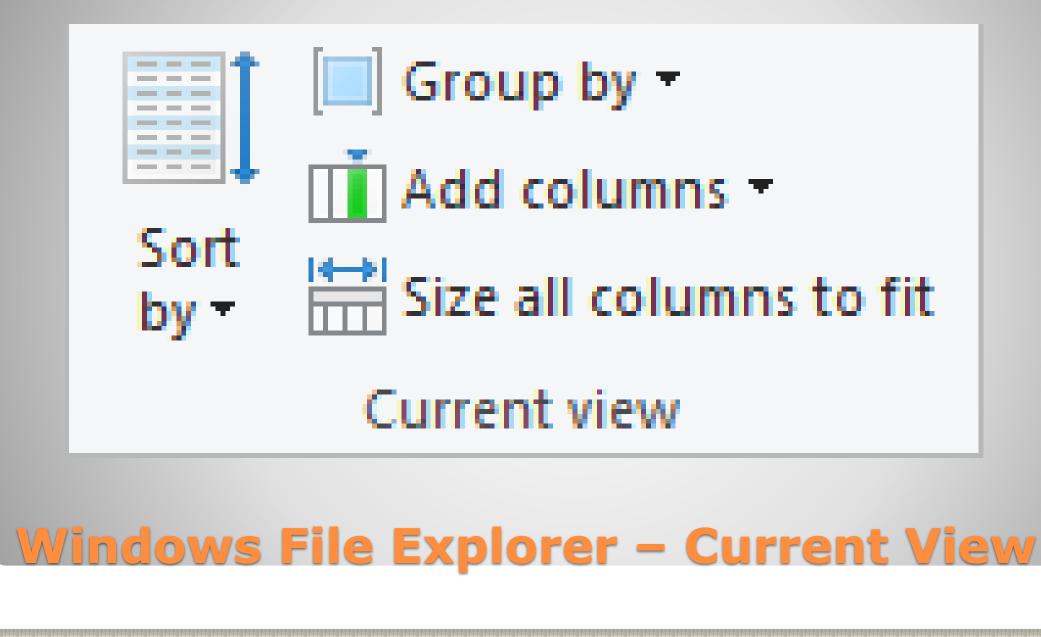
Windows File Explorer View Tab

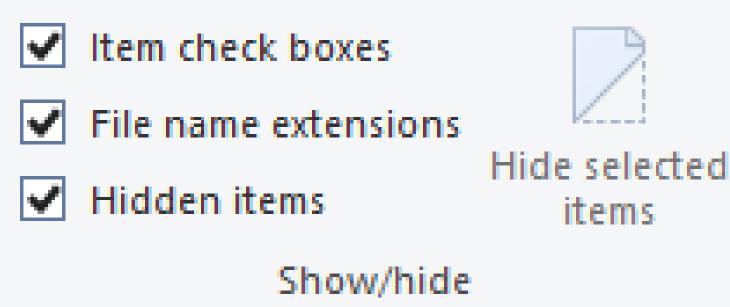


Windows File Explorer - Panes



Windows File Explorer - Layout





Windows File Explorer – Show/Hide

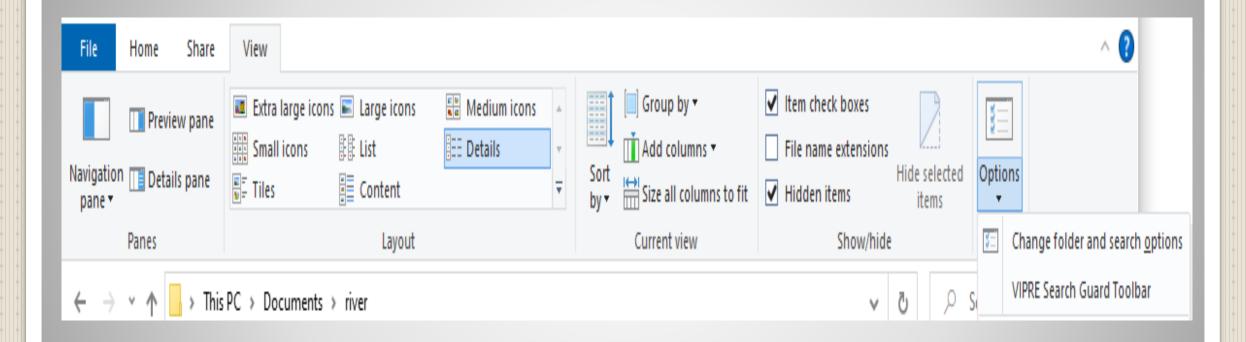
| Extra large icons E Large icons for Me Small icons E List Tiles Content Layout | tails | t Helen und State | Item check boxes File name extensions Hidden items Show/hid | ide selected items | Options T |
|---|-------------------|---------------------------|--|-----------------------|-------------------|
| C > Documents > river | | | ~ | Q 5 | Search river |
| Name ^ | Date modified | ✓ Туре | | Size | Date created |
| 🔁 expenses | 5/12/2021 5:15 PM | Microsoft Word Documen | t | 12 KB | 5/12/2021 5:15 PM |
| 🔁 expenses | 5/12/2021 5:17 PM | Microsoft PowerPoint Pres | sentation | 32 KB | 5/12/2021 5:17 PM |
| 😰 expenses | 5/12/2021 5:16 PM | Microsoft Excel Workshee | t | 9 KB | 5/12/2021 5:16 PM |

Windows File Explorer – Hide Extensions Default

Microsoft Windows Hide File Extensions

- Why Avoid user error
- Can actually cause user error
- Important Notice.txt.exe will display Important Notice.txt
- BAD BAD for security suggest showing file extensions

Double check the icon of the file



 $\mathbb{N} = \mathbb{N}$

Windows File Explorer - Options

Windows File Explorer - Options

| Folder Options X | Folder Options | × Folder Options × |
|--|--|---|
| General View Search Open File Explorer to: Quick access ✓ Browse folders ✓ Image: | Show drive letters | General View Search How to search Don't use the index when searching in file folders for system files (searches might take longer) When searching non-indexed locations When searching non-indexed locations Include system directories Include compressed files (ZIP, CAB) Always search file names and contents (this might take several minutes) |
| Underline icon titles only when I point at them Double-click to open an item (single-click to select) Privacy Show recently used files in Quick access Show frequently used folders in Quick access Clear File Explorer history Clear Restore Defaults | Show encrypted or compressed NTFS files in color Show pop-up description for folder and desktop items Show preview handlers in preview pane Show status bar Show sync provider notifications Use check boxes to select items Use Sharing Wizard (Recommended) When typing into list view Automatically type into the Search Box Select the typed item in the view | Restore Defaults |
| OK Cancel Apply | OK Cancel App | ly OK Cancel Apply |

Windows File Explorer

File & Folder Explorer

Path

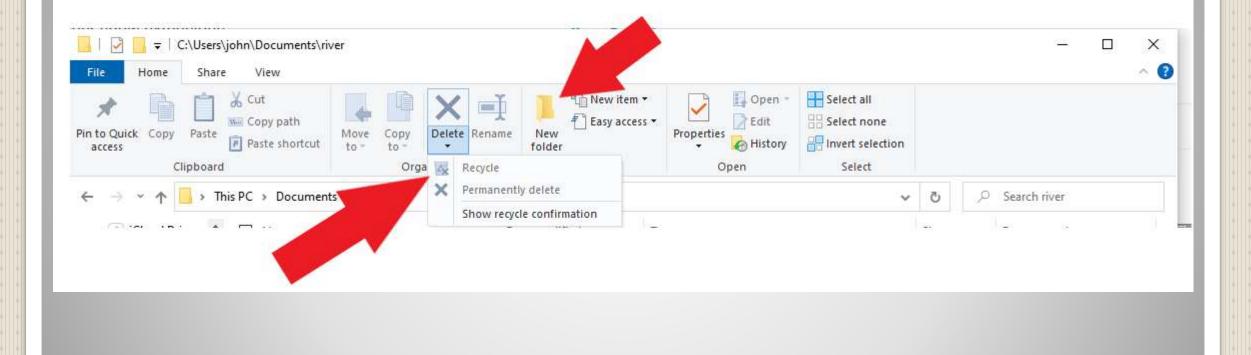
Folders are files of files and folders

C:\Users\john\Documents\river

| macOS | | | 6 General Tags Sidebar Advanced |
|--|-----------------------------------|--|---|
| Finder Prefere General Tags Sidet Si |) ඟි _ල par Advanced | Finder Preferences General Pags Sidebar Sidebar Show all filename extensions Show warning before changing an extension Show warning before removing from iCloud Drive Show warning before emptying the Trash Remove items from the Trash after 30 days Keep folders on top: In windows when sorting by name On Desktop When performing a search: Search This Mac | Show these items in the sidebar: Favorites Recents Recents ArDrop ArDrop ArDrop Desktop Documents Documents Documents Documents Documents Documents Documents Documents Documents Ard disks Ard disks Ard disks Components Coud Storage Cloud Storage |
| rag your favorite tags to the area b railable for quick use in Finder men Tags | us. | | Groud Gorage Senjour computers Senjour computers Connected servers Tags Recent Tags |

Files and Folders

Windows



| New Finder Window New Folder | 光 N 公光 N | | < > Documents | ₩ 😑 🖽 🛄 | ‱ × û ⊘ | | C |
|---|---------------|--|----------------|----------------------|---------|---------|---|
| New Folder with "Expenses.key New Smart Folder | /" ^96 N | Favorites | Documents | ~ Date Modified | Size | Kind | |
| New Tab | ×⊤ | AirDrop | Expenses.pages | Yesterday at 2:53 PM | 85 KB | Pages | |
| Open | ¥ 0 | Recents | Presentations | | | | |
| Open With Close Window | > xw | Applications | Expenses.key | Yesterday at 2:57 PM | 429 KB | Keynote | |
| | | Desktop | Spreadsheets | Yesterday at 2:55 PM | 100 KD | Numbers | |
| Get Info Rename | 35 1 | Documents Downloads | | resteruay at 2.55 PM | 132 ND | Numbers | |
| Compress Duplicate | 96 D | Locations | | | | | |
| Make Alias | ~35 A | iCloud Drive | | | | | |
| Quick Look | 36 Y | 🖂 Time Machine | | | | | |
| Print | 96 P | ⊖ External ≜ | | | | | |
| Share | > | | | | | | |
| Show Original Add to Dock | # R ^쇼:# T | • Red | | | | | |
| | | Orange | | | | | |
| Move to Trash Eject | ₩ Ø3 | Yellow | | | | | |
| | m E | Green | | | | | |
| | | • Blue | | | | | |
| Tags | | Purple | | | | | |
| Find | 36 F | Gray | | | | | |
| | | All Tags | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Files and Folders Mac

Digital analog to physical files and folders
Cameras, Smart TVs, tablets, smart phones, printers, copiers, fax, Garman, drones, ...





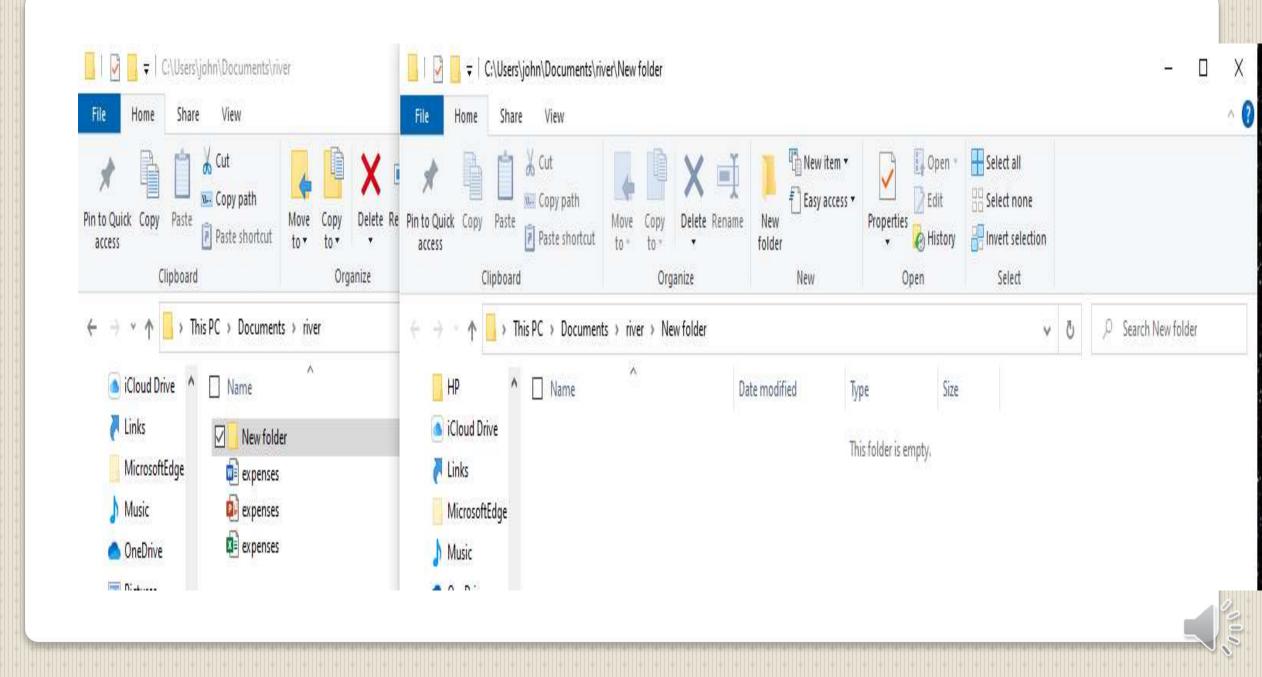
Android phone as Folder

| <mark> </mark> <mark>♥</mark> C:\ | \Users\john\Documents\riv | ver | | | | | | - 0 | × |
|---|--|---------------------|----------------|-----------------------------|--------------------------|---|-------|-------------------|---|
| File Home | Share View | | | | | | | | ^ |
| Pin to Quick Copy access | Cut M→ Copy path Paste Paste shortcut | Move Copy to • to • | - | New item ▼ Basy access ▼ | Properties | Select all Select none Invert selection | | | |
| Clip | board | Organize | | New | Open | Select | | | |
| \leftrightarrow \rightarrow \checkmark \uparrow | > This PC > Document | ts > river > | | | | ~ | ð 🔎 |) Search river | |
| iCloud Drive | Name | ^ | Date modified | Тур | e | | Size | Date created | |
| | New fold | er | 5/13/2021 1:21 | PM File | folder | | | 5/13/2021 1:21 PM | |
| MicrosoftEd | lge 🔹 expenses | | 5/12/2021 5:15 | PM Mic | crosoft Word Document | | 12 KB | 5/12/2021 5:15 PM | |
| 👌 Music | 😰 expenses | | 5/12/2021 5:17 | PM Mic | crosoft PowerPoint Prese | ntation | 32 KB | 5/12/2021 5:17 PM | |
| 📥 OneDrive | 🔊 expenses | | 5/12/2021 5:16 | PM Mic | crosoft Excel Worksheet | | 9 KB | 5/12/2021 5:16 PM | |
| Pictures | | | | | | | | | |
| 🕐 Saved Game | es | | | | | | | | |

Windows File Explorer - New Folder

| ☐ 🕑 🛄 🖛 C:\Users\john\Documents\river File | | | | | | - 0 | × ^ ? |
|--|-----------------------------|---|------------|------|-------|-------------------|----------|
| Open <u>n</u> ew window | New item • Easy access • | Properties | Select all | | | | |
| Open Windows PowerShell > Open new window in new process | lew | History Open | Select | | | | |
| Options | | | ~ | õ | م | Search river | |
| 2 Help ▶ | 1 | буре | | Size | | Date created | |
| | PIM F | File folder | | | | 5/13/2021 1:21 PM | |
| | PM N | Vicrosoft Word Document | | ţ | 12 KB | 5/12/2021 5:15 PM | |
| | PM N | Vicrosoft PowerPoint Prese | ntation | | 32 KB | 5/12/2021 5:17 PM | |
| - UneDrive - Copenses | M M | Microsoft Excel Worksheet | | | 9 KB | 5/12/2021 5:16 PM | |

Windows File Explorer – Open new Window



| III = Ci\Users\ File Home Share | | | - D X | Image: |
|---|---|-----------------------|--|---|
| in to Quick Copy Paste access Clipboard | Cut Copy path Paste shortcut Copy nath Move to * Copy | Rename New folder New | Open Select all Select none Select selection Open Open Select | Image: Copy Paste shortcut Image: Copy path access |
| - → × ∱ <mark> </mark> → 1 | his PC > Documents > river | | ✓ Ŏ ,○ Search river | 🗧 🚽 - 🛧 📙 > This PC > Documents > river > New folder 🗸 🗸 🖉 🔎 Search New folder |
| iCloud Drive \land | Name ^ | Date modified | Туре | HP Name Date modified Type Size |
| nks | New folder | 5/13/2021 1:21 PM | File folder | Cloud Drive |
| MicrosoftEdge | expenses | 5/12/2021 5:15 PM | Microsoft Word Document | This folder is empty. |
| 👌 Music | 😥 expenses | 5/12/2021 5:17 PM | Microsoft PowerPoint Presentation | MicrosoftEdge |
| oneDrive | 😰 expenses | 5/12/2021 5:16 PM | Microsoft Excel Worksheet | Music |
| 📰 Pictures | | | | OneDrive |
| 🛷 Saved Games | | | | Fictures |

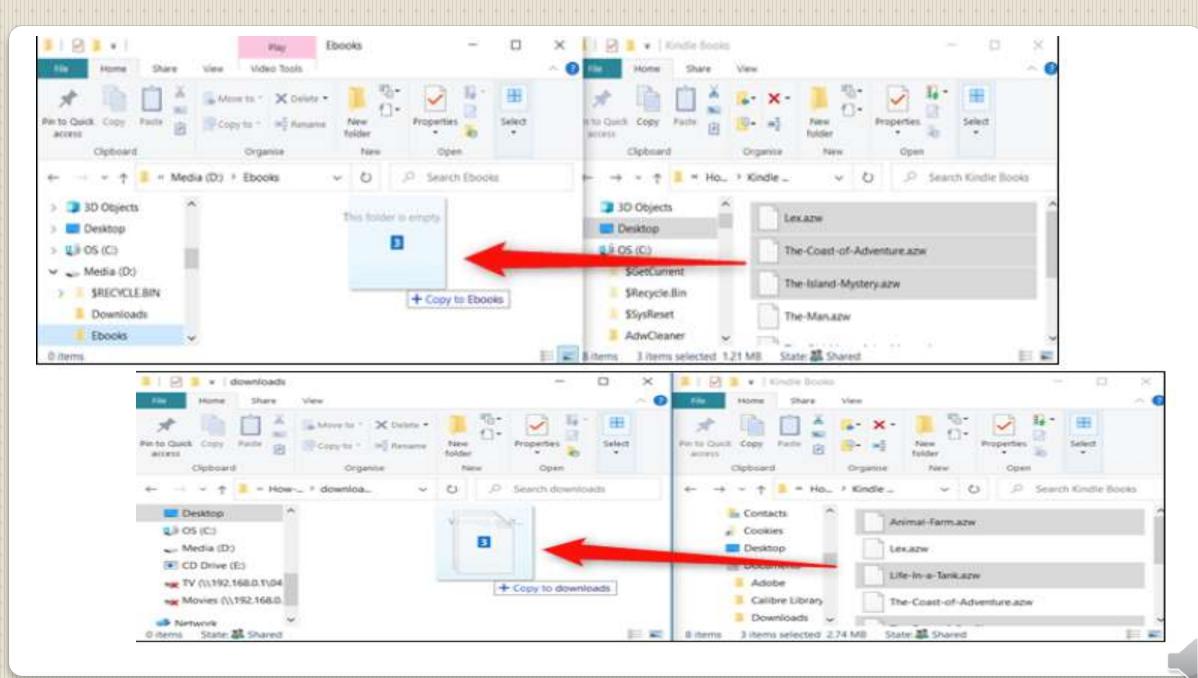
Windows Files and Folders

| 🔜 🛃 📕 🖛 C:\Users\ja | ohn\Documents\river | | | | | Documents\river\New folder | | | |
|--|------------------------------------|--|---|---|--|---------------------------------|---|-----------------------|---|
| File Home Share | | | | ~ 🕜 | and the second se | View | | | - U ^ |
| Pinto Quick Copy Parts | Cut Copy path Paste shortcut | e Copy Delete Rename New | Copen | II Ione election | Pin to Quick Copy Paste P | ut opy path aste shortcut | Delete Rename v | y access • Properties | Open Select all Edit Select none History Invert selection |
| | s PC > Documents > r | | | | Clipboard | | ganize New | Ope | |
| iCloud Drive Links MicrosoftEdge Music OneDrive Pictures Saved Games Searches Videos VirtualBox VMs This PC 3D Objects Desktop Documents Custom Offic Cyberlink hp.applicatio hp.system.pa MUG present My Kindle Co OneNote Not Presentations Quicken river Shared Folder | | ver Date modified 5/13/2021 1:21 5/12/2021 5:15 5/12/2021 5:16 7/12/2021 5:16 | I Type I PM File folder 5 PM Microsoft Word Document 7 PM Microsoft PowerPoint Preser | tation Copy Items Select the place w click the Copy but | HP Cicloud Drive Cicloud Driv | > Documents > river > N Name | ew folder Date modified This folder | v Õ | Size |
| Statistics for s Statistics for s 4 items 1 item selected 1 | | | |) | New folder | | | | |
| | | | | | | | | | |

| I Image: Imag | john\Documents\river : View | | - 0 | X I </th |
|---|--|--|--|--|
| Pin to Outleto Como Desta | Cut Copy path Paste shortcut Paste shortcut | folder 👻 | Open Select all Edit Select none History Invert selection pen Select | Image: Note of the original of |
| ← → ~ ↑ 🚺 > Th | nis PC > Documents > river | ~ | ල 🔎 Search river | (← → - ↑]. > This PC > Documents > river > New folder |
| iCloud Drive Links MicrosoftEdge Music OneDrive Pictures Saved Games Saved Games Videos VirtualBox VMs This PC 3D Objects Desktop Documents Custom Officion Ap.asplication Mp.system.pa MUG present My Kindle Co OneNote Not Presentations Quicken river Shared Folder | Name New folder expenses expenses i expenses | 5/12/2021 5:15 PM Mi 5/12/2021 5:17 PM Mi | pe e folder crosoft Word Document crosoft PowerPoint Presentation crosoft Excel Worksheet | HP Index Date modified Type Size iCloud Drive Index Si12/2021 5:15 PM Microsoft Word D 12 KB Microsoft Edge Microsoft Word D 12 KB Music OneDrive Saved Games Saved Games Saved Games Saved Games Saved Games Videos Videos Videos South Size Desktop Documents Custom Offic Cyberlink hp.applicatio hp.applicatio MUG present Microsoft Not Presentations Quicken |
| Statistics for s | | | | river |
| Statistics for s 4 items 1 item selected | | | | New folder |

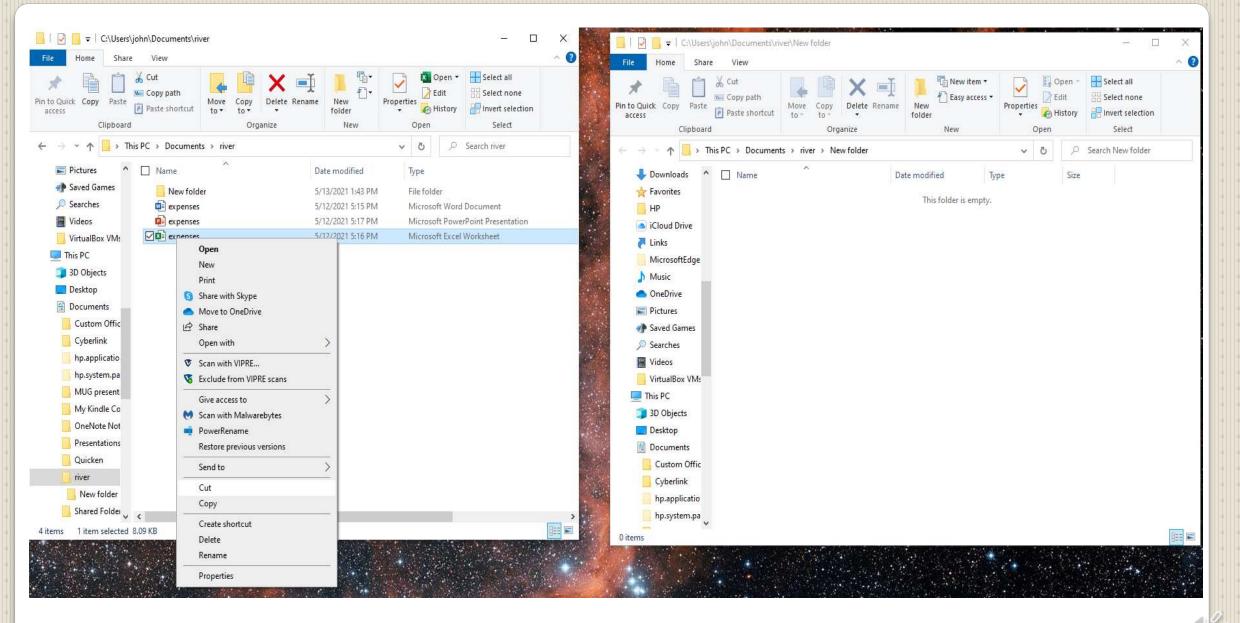
| March 1 Annual Annua | john\Documents\river | | - 🗆 X | - C X |
|---|---|---------------------------------|---|---|
| ile Home Share | | | | File Home Share View |
| to Quick Copy Pacte | Cut Copy path Paste shortcut Copy path Paste shortcut Copy Copy Copy Copy Copy Copy Copy Copy | elete Rename New Proj Tolder | Open Edit Edit Select none History Invert selection Open Select | Image: Copy path access Image: Copy path access |
| | | in incor | | Clipboard Organize New Open Select |
| → 丶 ↑ 📙 > Thi | is PC > Documents > river | | ✓ Ö P Search river | $\leftarrow \rightarrow \neg \uparrow$ \square > This PC > Documents > river > New folder \checkmark \circlearrowright \square Search New folder |
| iCloud Drive | Name | Date modified | Туре | HP Name Date modified Type Size |
| 🛃 Links | New folder | 5/13/2021 1:32 PM | File folder | iCloud Drive |
| MicrosoftEdge | expenses | 5/12/2021 5:15 PM | Microsoft Word Document | This folder is empty. |
| J Music | 🚯 expenses | 5/12/2021 5:17 PM | Microsoft PowerPoint Presentation | MicrosoftEdge |
| 📥 OneDrive | expenses | 5/12/2021 5:16 PM | Microsoft Excel Worksheet | Music |
| Pictures | | | | OneDrive |
| 🐠 Saved Games | | | | Pictures |
| 🔎 Searches | | | | P Saved Games Move Items X |
| Videos | | | | Searcher |
| VirtualBox VMs | | | | Select the place where you want to move 'expenses', then dick the Move button. |
| This PC | | | | VirtualBox VMs |
| 3D Objects | | | | hp.applications.package.appdata |
| Desktop | | | | 3D Objects MUG presentations |
| Documents | | | | Desktop My Kindle Content |
| Custom Offic | | | | Documents |
| Cyberlink | | | | Custom Offic |
| hp.applicatio | | | | Quicken |
| hp.system.pa | | | | Cyberlink v river |
| MUG present | | | | hp.applicatio |
| My Kindle Co | | | | hp.system.pa |
| OneNote Not | | | | MUG present Folder: New folder |
| Presentations | | | | My Kindle Co |
| Quicken | | | | OneNote Not Make New Folder Move Cancel |
| river | | | | Presentations |
| Shared Folder | | | | Quicken |
| Statistics for s | | | | river |
| Statistics for s | < | | | > New folder |
| ems 1 item selected 1 | | | | 0 items |

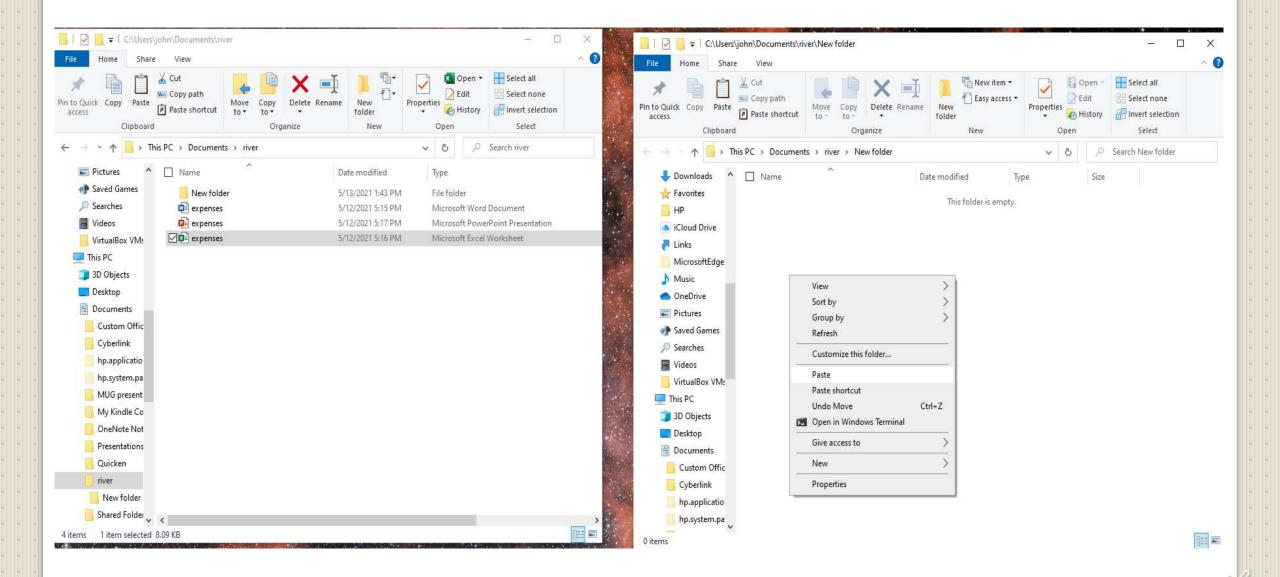
| Quick Copy Paste SS Clipboard | Move Copy to * to * Organize | New New | E LUIL SEIECLIIOTIE | | Copy path Paste shortcut | Copy to Organize | New item • | Properties • Open • Open • | Select all Select none Invert selection Select |
|--|------------------------------------|--|---|--|-----------------------------|------------------------|------------|---|---|
| → · ↑ | ~ | | O P Search river Type Image: Search river Search river | | PC > Documents > rive | | | | Search New folder |
| Links MicrosoftEdge Music OneDrive Pictures Saved Games Searches VirtualBox VM: This PC 3D Objects Desktop | er | 5/13/2021 1:32 PM 5/12/2021 5:17 PM | File folder Microsoft PowerPoint Presentation Microsoft Excel Worksheet | irif iCloud Drive iLinks MicrosoftEdge Music OneDrive Pictures Saved Games Searches Videos VirtualBox VMs This PC 3D Objects | expenses | | | ype Size | 12 KB |
| Documents Custom Offic Cyberlink hp.applicatio hp.system.pa | | | | Desktop Documents Custom Offic Cyberlink hp.applicatio | | | | | |
| MUG present My Kindle Co OneNote Not Presentations | | | | MUG present MUG present My Kindle Co | | | | | |
| Quicken river Shared Folder Statistics for s | | | | Presentations Quicken river | | | | | |
| Statistics for (V C | | | | New folder New folder Shared Folder | | | | | |



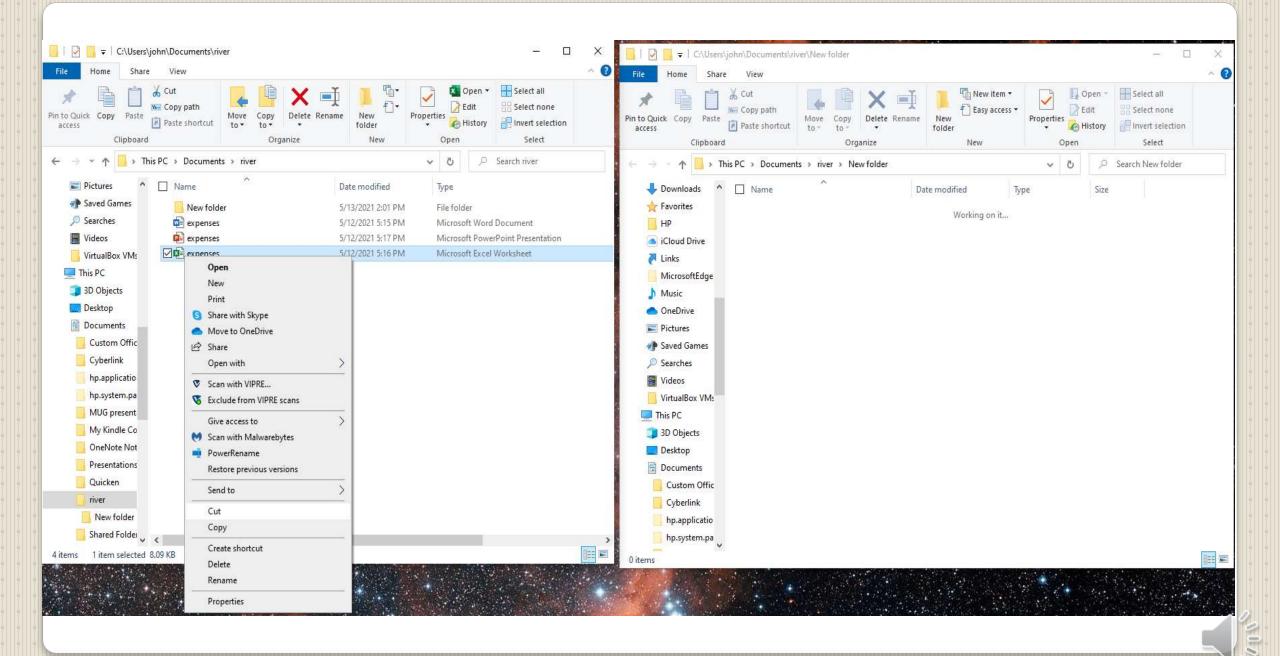
- Copy result two copies
- Move result one copy
- Copy default for different drive
- Move Default for same drive
- Copy to same drive Drag – BEFORE DROP press CTRL to trigger copy mode
 Move to different drive Drag – BEFORE DROP press SHIFT to trigger move mode

Windows Files and Folders Move vs Copy

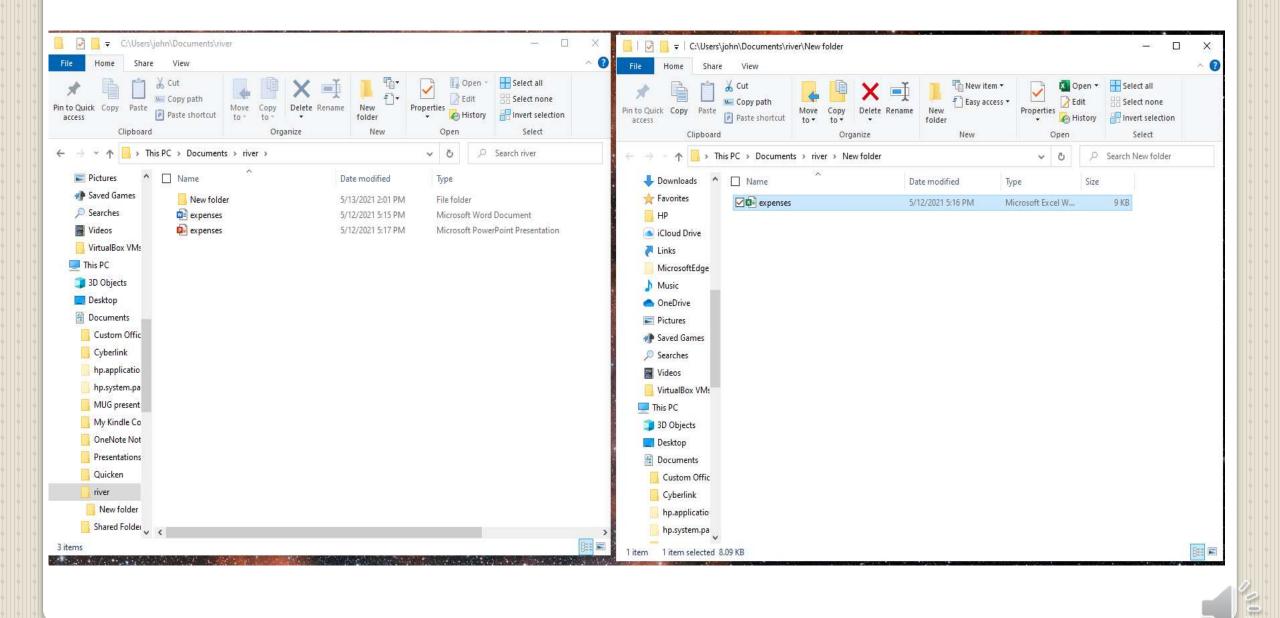




| Image: Share View - × | Image: Image | × |
|--|--|---|
| Pin to Quick Copy Paste Copy path Pin to Quick Copy Paste Paste shortcut Clipboard Organize | Image: Copy Paste Copy Paste Copy Paste Copy Copy Copy Copy Copy Copy Copy Copy | |
| ← → ~ ↑ 📴 > This PC > Documents > river > v 👌 🔎 Search river | \leftarrow \rightarrow \checkmark \uparrow This PC \rightarrow Documents \rightarrow river \rightarrow New folder \checkmark \checkmark \eth Search New folder | |
| ■ Pictures Name Date modified Type ● Saved Games New folder 5/13/2021 2:00 PM File folder | Downloads A □ Name Date modified Type Size Favorites S/12/2021 5:16 PM Microsoft Excel W 9 KB | |
| Searches image: spenses 5/12/2021 5:15 PM Microsoft Word Document Videos Image: spenses 5/12/2021 5:17 PM Microsoft PowerPoint Presentation VirtualBox VMs Image: spenses 5/12/2021 5:16 PM Microsoft Excel Worksheet | HP a iCloud Drive Links | |
| This PC Image: Second | MicrosoftEdge | |
| Custom Offic | OneDrive Pictures Particular Saved Games | |
| Cyberlink | ✓ Searches ✓ Videos | |
| hp.system.pa MUG present | VirtualBox VMs This PC | |
| My Kindle Co OneNote Not Presentations | 3D Objects Desktop Image: Constraint of the second se | |
| Quicken | Custom Offic | |
| Shared Folder | hp.applicatio | |
| 4 items 1 item selected 8.09 KB | 1 item 1 item selected 8.09 KB | |

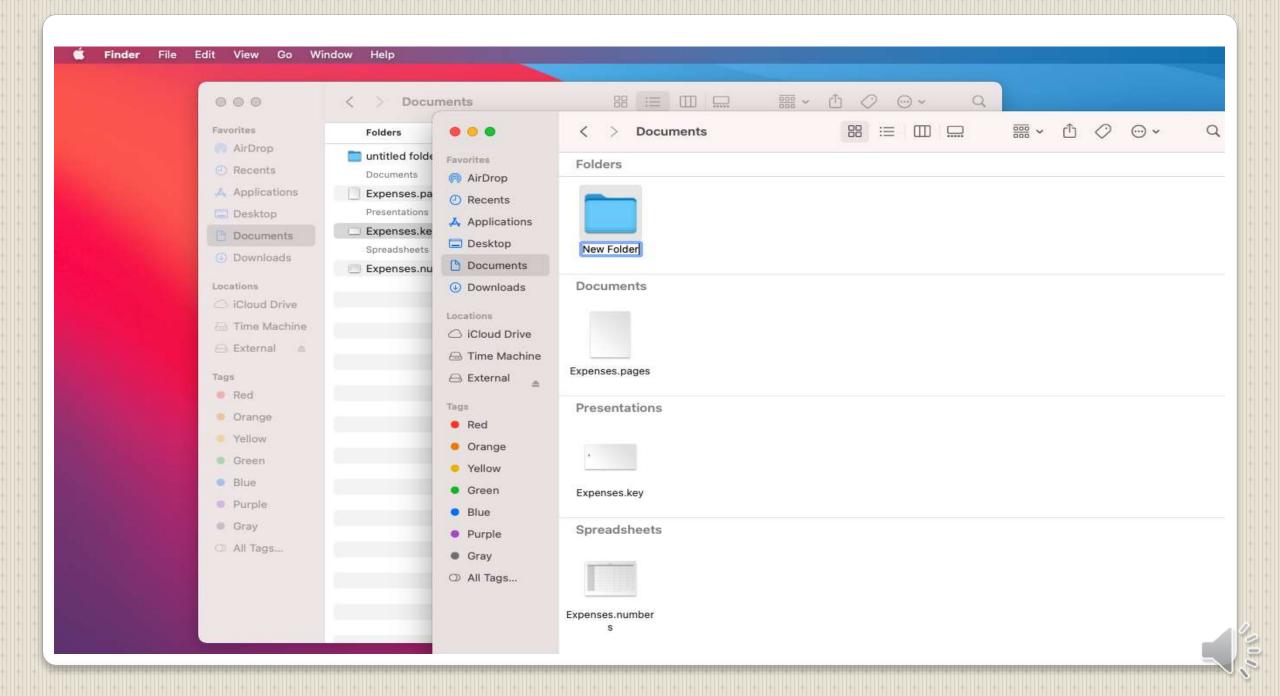


| Image: Copy of the copy | File Home Share View Image: Share Image: Share View Image: Share Image: Share View Image: Share Image: Share |
|---|--|
| → This PC > Documents > river 0 ■ Pictures Name Date modified Type ● Saved Games New folder 5/13/2021 2:01 PM File folder ● Searches New folder 5/12/2021 5:15 PM Microsoft W ● videos | tion ← → · ↑ → This PC → Documents → river → New folder ↓ Downloads ↑ Downloads ↑ Name Date modified Type Size Working on it ation iCloud Drive iCloud Drive |
| VirtualBox VM: ✓ 100 expenses 5/12/2021 5:16 PM Microsoft Expenses This PC 3 3D Objects Intersection Intersection Intersection Documents Custom Offic Cyberlink Intersection Intersection Intersection MUG present MUG present Intersection Intersection Intersection MUG present Mug present Intersection Intersection Intersection Quicken VirtualBox VM: VirtualBox VM: VirtualBox VM: VirtualBox VM: | Links MicrosoftEdge Music OneDrive OneDrive Pictures Customize this folder Saved Games Searches Videos Videos Videos Videos Videos Videos Videos Videos Desktop Documents Custom Offic |
| river New folder Shared Folder ems 1 item selected 8.09 KB | Cyberlink hp.applicatio hp.system.pa 0 items |



| 0.0.0 | < > Docum | renta | 88 🔳 🖽 🖬 | ≣~ 白 ⊘ ⊖~ 9 | |
|--|--|-------|---|-------------|--|
| Perotian AirDrop AirDrop Acofications Acofications Desking Desking Acofications Desking Acofications Aco | Folders Untitled folde Documenta Expenses.pe Presentations Expenses.ke Spreadsheets Expenses.mu | | Converts Folders Folders Documents Documents Expenses.pages Presentations Expenses.key Spreadsheets Expenses.number | | |

macOS Finder move and Copy



🗯 Finder File Edit View Go Window Help 器 ◇ × 凸 ◇ ⊙ • < > New Folder Q i≣ ¢ Q 000 Ocuments Favorites Favorites Folders Date Modified Size Kind AirDrop AirDrop New Folder Today at 2:16 PM -- Folder A Recents Recents Presentations Applications A Applications Expenses.key Yesterday at 2:57 PM 429 KB Keynote Desktop Spreadsheets Desktop Expenses.numbers Yesterday at 2:55 PM 132 KB Numbers Documents Documents Downloads Downloads Expenses.pages Locations Locations C iCloud Drive C iCloud Drive 🖂 Time Machine 😑 Time Machine 🖂 External 🛕 😑 External 🔺 Tags Tags Red Red Orange Orange Yellow Yellow Green Green Blue Blue Purple Purple Gray Gray All Tags... All Tags...

- Recovery Codes
- Authenticator Codes

Do Not forget Paper

Scan into Digital format

- Scanned image for digital document transfer
- Optical Recognition (OCR) for textual searches



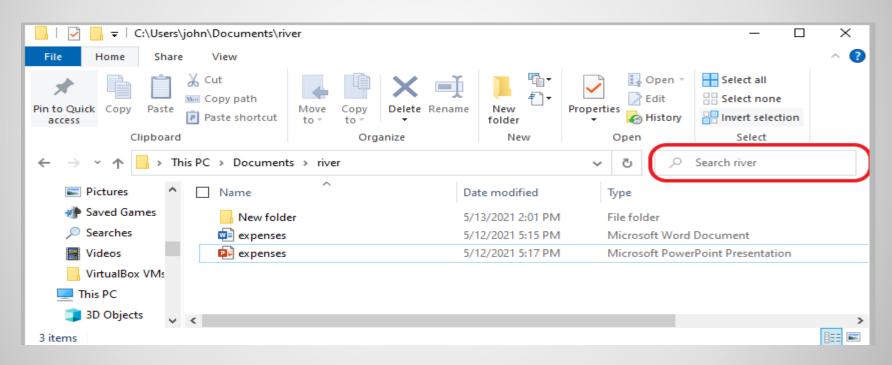
Electromagnetic Pulse (EMP)

macOS Spotlight

• Siri

Windows

• Cortana





| | Searching "5-iDB | 3" | | |
|--------------|-------------------------------------|----|--------------------------|-------------------------|
| < > | | Q | NAME + tips | 0 |
| Favorites | Search: This Mac | | - | Save + |
| a ownCloud | Name | ~ | ✓ Filename Everything | Date Last Opened |
| 5-iDB | LaunchpadTips | | Polael | Apr 1, 2019 at 10:34 AM |
| Recents | SpotlightSearchTips | | Folder | Aug 9, 2019 at 10:49 AM |
| AirDrop | FlickType Keyboard Apple Watch Tips | | JPEG image | Nov 7, 2018 at 8:56 AM |
| Applications | | | | |
| Desktop | | | | |
| O Downloads | | | | |
| Pictures | | | | |
| iCloud | | | | |
| Locations | | | | |
| Tags | | | | |
| | | | | |
| | | | | |
| | | | | |

macOS Finder search

| < > | | | 0 🚍 | ■ = × ◆ | • 1 0 | Q | NAME - tutoria | | 0 |
|--------------|----------------------|--|-------------------------------|-------------------------|-------|--------|----------------|------------------|----|
| Favorites | | Search: This Mac 5-108 Shared | | | | | | | |
| a ownCloud | | Name |) (1 | natches | 0 | | | | -+ |
| 5-iDB | ✓ Name | | | / matches | | | Kind | Date Last Opened | |
| Recents | Last ope Contents | | e contains all begins with | contains begins with | | | Folder | | |
| AirDrop | Created | eated date 'et ends st modified date is | ends with | 7 | | Folder | | | |
| Applications | Last mo Kind | | is is not | | | | | | |
| Desktop | COM CM | | | 19 THEE | | | | | |
| O Downloads | Other | | | | | | | | |
| Pictures | | | | | | | | | |
| | | | | | | | | | |
| loud | | | | | | | | | |
| ocations | | | | | | | | | |
| ags. | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Copy – identical copy

Aliases – shortcuts , Links

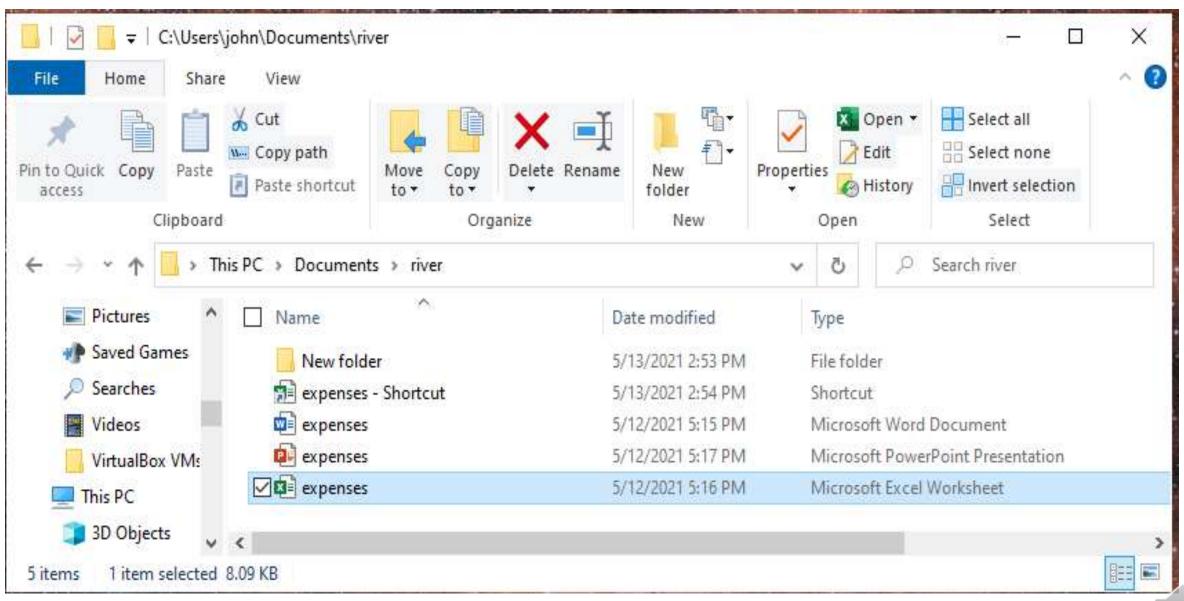
Filesystem feature - same blocks, different directory/folder entry

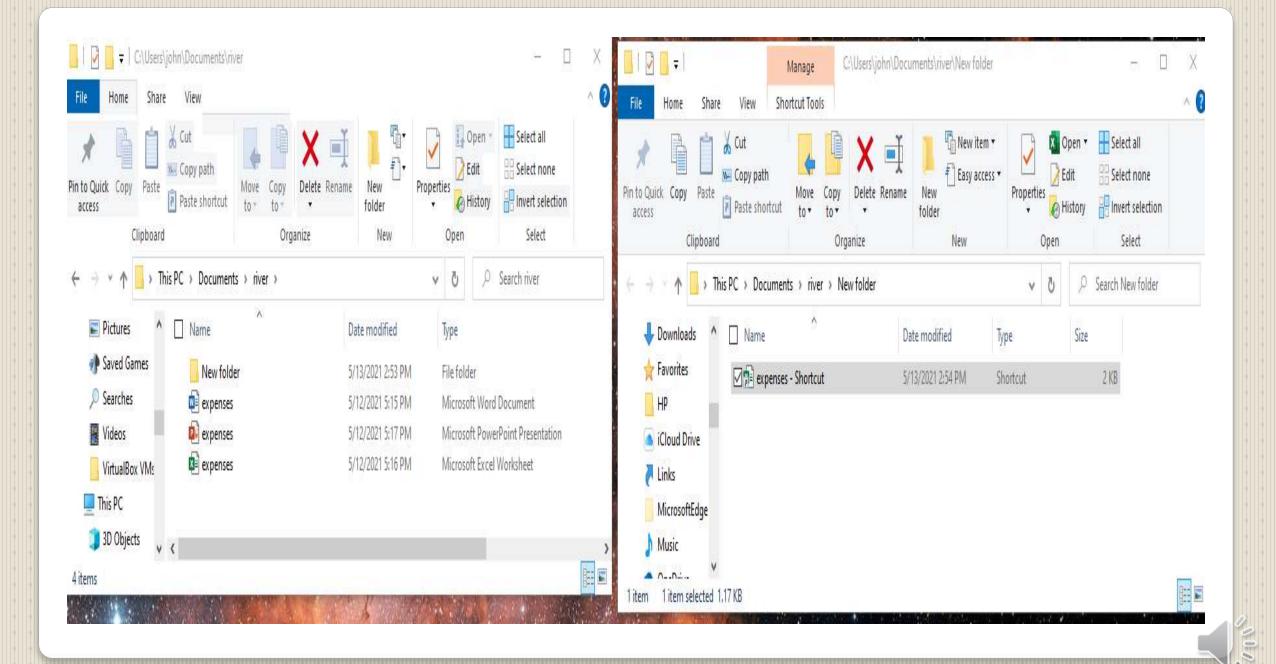
Duplicates – copy in same folder – must be renamed

Copies, Aliases, Duplicates

| Image: Provide the strate of the strate | I Image: Share View |
|--|---|
| Image: Copy Party Image: Copy path Image: Copy path </th <th>Image: Construction of Constructio on Construction of Construction on Construction on C</th> | Image: Construction of Constructio on Construction of Construction on Construction on C |
| - + + + • • • O .P Search river | + + + + † 🔒 > ThisPC > Documents > river > New folder 🗸 🖉 Search New folder |
| Pictures Saved Games Saved Games Searches Widess <l< td=""><td> Doweloads Favorites Favorites Favorites Favorites Favorites Cloud Drive Cloud Drive Cloud Drive Cloud Drive MicrosoftEdge Masic OneOnice Second Games Second Games Second Games VirtualBox VM: This PC 30 Objects </td></l<> | Doweloads Favorites Favorites Favorites Favorites Favorites Cloud Drive Cloud Drive Cloud Drive Cloud Drive MicrosoftEdge Masic OneOnice Second Games Second Games Second Games VirtualBox VM: This PC 30 Objects |
| PowerRename Restore previous versions | Desktop Documents |
| Send to > | Custom Offic |
| Cut Capy | hp.applicatio |
| Create shortout | hp.system.pa |
| Delete | Ditems |
| Sename Properties | |

Alias - shortcut





| 🗯 Finder | File Edit View Go Window | Help | | | | | | | | | |
|----------------------------------|---|---------------------------|--|------|--------------------|--|-----------|----------------|------|------------|---|
| •• | New Finder Window New Folder New Folder with "Expenses.pages" | 표 N 산북 N ^위 N | ≔≎ | | ⊙ | Q 000 | | < > New Folder | 88 ¢ | 1 ⁄ ⊖• | Q |
| Favoriti Air Re | New Smart Folder New Tab Open | жт жо | Date Modified Foday at 2:18 PM | Size | Kind Folder | Favorites | op nts | | | | |
| 🐥 Ap | Open With Close Window Get Info | × w | /esterday at 2:53 PM | | Pages | 👗 Appl | top | | | | |
| De De | Rename Compress | | Yesterday at 2:57 PM Yesterday at 2:55 PM | | Keynote Numbers | Docu Down | | | | | |
| Locatio | Duplicate Make Alias Quick Look | 원 D ^였 A 원 Y | | | | Locations | | | | | |
| 🖨 Tír 🖨 Ex | Share | ЖР > | | | | 🖂 Exte | nal 🚖 | | | | |
| Tags Re Or | Show Original Add to Dock | ₩ R ^☆% T | | | | Tags Red Oran | ge | | | | |
| • Ye • Gr | Move to Trash Eject | ₩ 68 ₩ E | - | | | YelloGree | | | | | |
| BliPu | Tags Find | ¥ F | | | | BluePurp | | | | | |
| • Gra | ly . | es r |) | | | Gray All Ta | | | | | |
| | | | | | | | | | | | |
| | | | | | - | | | | | | |

📫 Finder File Edit View Go Window Help

| • | < > Documents | ≔≎ | | ⊙ • Q | 000 | < > New Folder | 88 0 | ₩ · 🖞 🖉 💬 · |
|-------------|------------------------|----------------------|-----------|---------|----------------|----------------|------|-------------|
| ites | Folders | ~ Date Modified | Size | Kind | Favorites | | | |
| irDrop | New Folder | Today at 2:18 PM | | Folder | MirDrop | | | |
| ecents | Documents | | | | ecents | | | |
| oplications | Expenses.pages | Yesterday at 2:53 PM | | Pages | A Applications | | | |
| esktop | 🔊 Expenses.pages alias | Today at 2:58 PM | 860 bytes | Alias | 🔙 Desktop | | | |
| ocuments | Presentations | | | | 🕒 Documents | | | |
| ownloads | Expenses.key | Yesterday at 2:57 PM | 429 KB | Keynote | Ownloads | | | |
| ons | Spreadsheets | | 100 100 | | Locations | | | |
| loud Drive | Expenses.numbers | Yesterday at 2:55 PM | 132 KB | Numbers | C iCloud Drive | | | |
| me Machine | | | | | 🗁 Time Machine | | | |
| xternal 🛕 | | | | | 🖂 External 🔺 | | | |
| kternar = | | | | | | | | |
| | | | | | Tags | | | |
| ed | | | | | Red | | | |
| range | | | | | Orange | | | |
| ellow | | | | | Yellow | | | |
| reen | | | | | Green | | | |
| ue | | | | | Blue | | | |
| urple | | | | | Purple | | | |
| ray | | | | | Gray | | | |
| II Tags | | | | | 🗘 All Tags | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

🗯 Finder File Edit View Go Window Help

| | < > Documents | :≡ ≎ | ······································ | ······································ | | < > New Folder | i≡ ≎ |
|----------|------------------|-----------------------------------|--|--|---|----------------------|---|
| | Folders | Date Modified | Size | Kind | Favorites | Name | Date Modified Show items as icons, in a list |
| P | 🚞 New Folder | Today at 2:59 PM | 100 | Folder | Anorop Recents | Expenses.pages alias | Today at 2:58 PM |
| ts | Documents | | | | | | |
| ations | Expenses.pages | Yesterday at 2:53 PM | 85 KB | Pages | Applications | | |
| op | Presentations | | | | Desktop | | |
| nents | Expenses.key | Yesterday at 2:57 PM | 429 KB | Keynote | Documents | | |
| oads | Spreadsheets | Vesterday at 0.00 Dtd | 400 00 | blumbars | Downloads | | |
| | Expenses.numbers | Yesterday at 2:55 PM | 132 KB | Numbers | Locations | | |
| Drive | | | | | C iCloud Drive | | |
| Vlachine | | | | | 🖂 Time Machine | | |
| al 🚊 | | | | | ⊖ External ≜ | | |
| | | | | | | | |
| | | | | | Tags | | |
| | | | | | • Red | | |
| e | | | | | Orange | | |
| 1 | | | | | Yellow | | |
| | | | | | Green | | |
| | | | | | Blue | | |
| i. | | | | | Purple | | |
| | | | | | Gray | | |
| js | | | | | All Tags | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

- Icons differ
- Can be renamed
- Link count kept by filesystem
- Quick access from desktop (or anywhere)
- Cross references Expenses 2018 2019 2020 2021
 2018 Expenses letters bills photos
- Your design flexibility

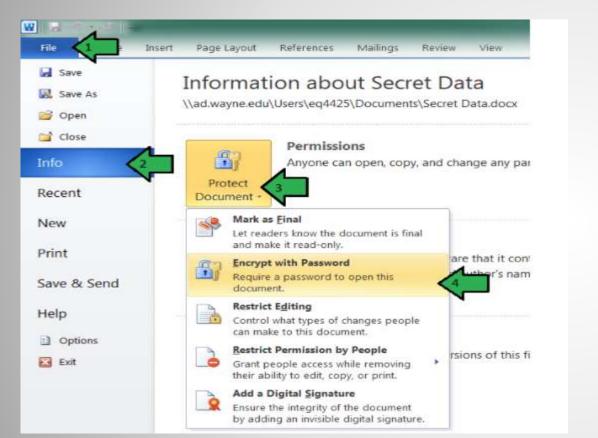
Uses of aliases, shortcuts, duplicates

- Operating system Recovery point Image backup hard drive clone cloud dedicated drive
- 3-2-1 backup

Three copies of your important data
Two different media choices
One copy offline (most of the time)
Use of cloud OneDrive iCloud Google Drive, etc.
ENCRYPTION



Microsoft Office document encryption



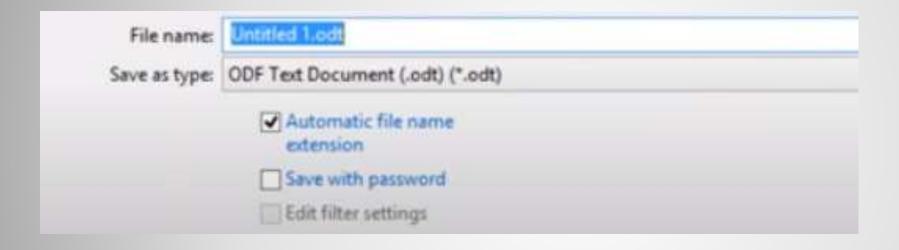




| Apple | office | Docu | ments |
|---------------------------|--------|-------|-------|
| • File -> | Set F | Passw | ord |

| Password: | |
|--------------------------------|---------------------------------------|
| Verify: | |
| Password Hint: Recommended) | |
| | Remember this password in my keychain |





 \mathbb{N}^{0}

Libre Office

Use Consumer Reports, PC World, Macworld

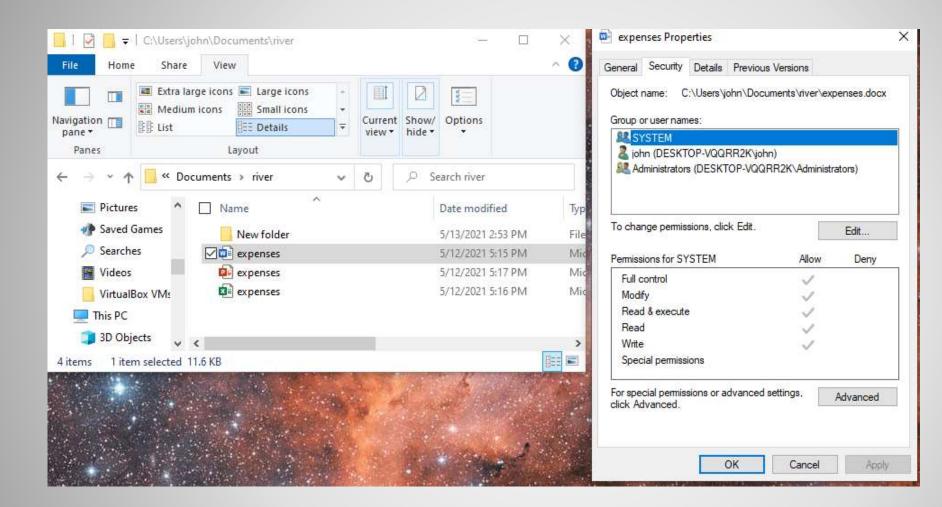
System Disk Encryption
 Laptop vs Desktop
 Vendor supplied preference

Third-party Encryption

Data about the data

| I C:\Users\john\Documents\river — — X | expenses Properties × Advanced Attributes × |
|---|--|
| File Home Share View Image: Constrained and the state interval of the state intervale | General Security Details Previous Versions Image: Choose the settings you want for this folder. Image: Choose the settings you want for this folder. Type of file: Microsoft Word Document (.docx) |
| Panes Layout ← → ▲ Documents > river ↓ ↓ Search river ■ Pictures ▲ □ Name Date modified Type ● Saved Games △ □ Name Date modified Type ● Saved Games ○ New folder 5/13/2021 2:53 PM File ● Searches ○ ● expenses 5/12/2021 5:15 PM Mile ● Videos ● expenses 5/12/2021 5:17 PM Mile ● VitualBox VMs ● ● expenses 5/12/2021 5:16 PM Mile | Opens with: Word Change Location: C:\Users\john\Documents\river Size: 11.6 KB (11.933 bytes) Size on disk: 12.0 KB (12.288 bytes) Oreated: Wednesday, May 12, 2021, 5:15:19 PM |
| This PC 3D Objects 4 items 1 item selected 11.6 KB | Accessed: Today, May 13, 2021, 3:51:12 PM |

File Metadata



Permissions - Security

| vigation pane + Panes | rge icons 📰 Large icons 🔹 n icons 🔛 Small icons 👻 Est Details 👻 | Current view • | Show/ hide • | Options | | Property Authors Last saved by Revision number | Value John Jenkinson John Jenkinson 1 | ^ |
|---|---|-------------------|-----------------|---|--------------------|---|--|---|
| > -> -> -> -> -> -> -> -> -> -> -> -> | cuments > river v | Ū | 1.5 | arch river Date modified | Тур | Version number Program name Company Manager | Microsoft Office Word | |
| Saved Games Searches Videos | New folder | | - | 5/13/2021 2:53 PM 5/12/2021 5:15 PM 5/12/2021 5:17 PM | File Mic Mic | C-4 10 | | |
| ☐ VirtualBox VM: This PC 3D Objects | expenses | | 5 | 5/12/2021 5:16 PM | Miq | Content Content status Content status Content type Pages | application/vnd.openxmlformats-offi | - |
| items 1 item selected 1 | 1.6 KB | | | | | Word count Character count Line count | 0 1 1 | Ŷ |

Windows Metadata - Details

• CMD + "I"

| 000 | < > E Documents | i = 0 | = · · · · | • · · | Q O O Expenses.pages Info |
|----------------------------|------------------|----------------------|-----------|---------|---|
| Tovoritos | Folders | Date Modified | Size | Kind | Expenses.pages 85 Modified: Yesterday, 2153 PM |
| AirDrop | E New Folder | Today at 2:59 PM | | Folder | Add Teas |
| Recenta | Documents | | | | - General: |
| Applications | Expenses.pages | Yesterday at 2:53 PM | 85 KB | Pages | Kind: Pages Document |
| 🖂 Desktop | Prasentations | | | | Size: 85,481 bytes (86 KB on disk) Where: Macintosh HD • Users • river • |
| Documenta | Expenses.key | Vesterday at 2:57 PM | 429 KB | Keynote | Documents Created: May 12, 2021 at 2:53 PM |
| Downloads | Spreadshowts | | | | Modified: May 12, 2021 at 2:53 PM |
| Locations | Expenses.numbers | Yesterday at 2:55 PM | 132 KB | Numbers | Stationery pad |
| < /iCloud Drive | | | | | More Info: |
| Time Machine | | | | | Last opened: May 12, 2021 at 2:53 PM |
| External | | | | | Vame & Extension: |
| | | | | | Expenses.pages |
| Тада | | | | | Pilde extension |
| e Red | | | | | > Comments: |
| Orange | | | | | > Open with: |
| Yellow | | | | | - Preview: |
| Green | | | | | |
| Blue | | | | | |
| Purpie | | | | | |
| Gray | | | | | |
| 🗇 All Taga | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | Sharing & Permissions: |
| | | | | | You can read and write |
| | | | | | Name Privilege |
| | | | | | river (Me) Read & Write |
| | | | | | 221 everyone © No Access |

00

macOS metadata

We want you!



- The Computer Club seeks new instructors and new course ideas.
- Instructors might receive fame, fortune, and a free membership to the club for the following year.
- We could especially use Mac courses and Android classes!
- Contact:

educationdirector@sctxcompcl ub.org

New Instructors and New Courses Wanted!

