

The Internet

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What IS the Internet?

The internet is a global network of interconnected computers, servers, phones, and smart appliances that communicate with each other using the transmission control protocol (TCP) standard to enable a fast exchange of information and files, along with other types of services.

-- Spiceworks

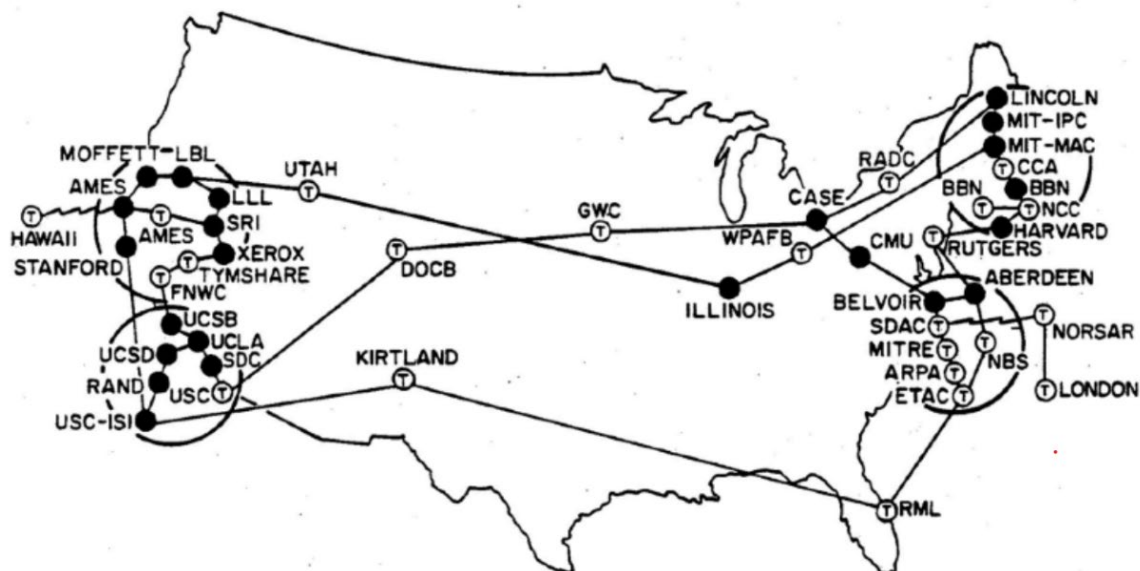
One way to think about the internet is to see it as an old-school conference call, where multiple people—anywhere in the world—could talk together at the same time. As long as they have the correct equipment, multiple people can communicate simultaneously. But unlike phone calls, you can leave text messages, and pictures and files for people if they aren't on at the same time you are.

The internet is a bunch of servers that are connected (often with wires) to form a network where all the devices have the ability to talk to each other. It is composed of data centers (rooms or buildings that hold a bunch of servers), the backbone (the wires and cables that link the data centers together), and the cables and wires and such that create the link between the data center and your device(s).

The internet is decentralized, meaning that no one person, government, or corporation owns or controls it. People, governments, and corporations can and do control parts of it (ie the Great Firewall of China, Facebook, your local ISP) but no one controls the internet as a whole.

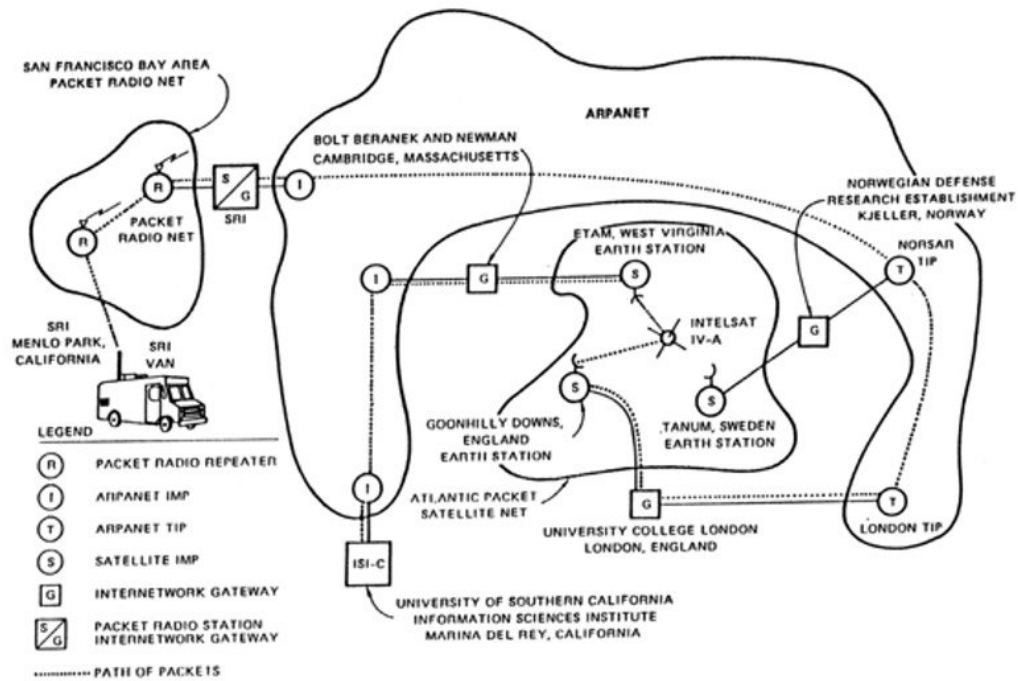
How We Got the Internet

The internet we now have started during the cold war as an Advanced Research Projects Agency (ARPA) initiative, that eventually became ARPANET which connected military installations, third-party contractors, and a handful of universities in the US, via existing telephone lines.



ARPANET access points in the 1970s from Semaforo GMS (2022)

From there ARPANET connected to NORSAR, a US-Norwegian system for monitoring seismic activity (earthquakes, nuclear blasts), and from there connected to London, and eventually other parts of the world.



Internetworking demonstration, linking the ARPANET, PRNET, and SATNET in 1977. From the Computer History Museum

In the 80s, other universities joined ARPANET, and eventually the military portion branched off.

The Start of Home Internet

The early internet was *nothing* like what we have today as it was entirely text based; the earliest communities were computer bulletin board services (BBSs) where your computer would directly dial up another computer to download and upload information.

```

Welcome to the...

#####
## #####
# #####
#####
#####
#####

##### # # ##### # #
# # # # # # #
# # # # ##### # #
##### ## # # # #####

Bulletin Board System

Brought to you by
Case Western Reserve University
Information Network Services

-----
h=Help, x=Exit FreePort, "go help"=extended help
    
```

The start of many of the services we think of as “The Internet” came with the founding of CompuServe, a computer time-sharing service founded in 1969. In 1979, CompuServe became the first company to offer electronic mail to the public, and in 1980 it began to offer real-time chat.

It opened in 1969 as a timesharing and remote access service marketed to corporations. After a successful 1979 venture selling otherwise under-utilized after-hours time to Radio Shack customers, the system was opened to the public. the CompuServe Network Services, was formed in 1982 to generate revenue by selling connectivity to the nationwide packet network CompuServe had built to support its time-sharing service.

At its peak during the early 1990s, CIS had an online chat system, message forums for a variety of topics, extensive software libraries for most personal computers, and a series of popular online games, including MegaWars III and Island of Kesmai. It introduced the GIF format for pictures and a system for exchanging GIF files.

The World Wide Web came into being in 1993 when CERN (European Organization for Nuclear Research) opened web software to the public. From there developed web browsers; Mosaic was the first popular browser, then came Netscape and the start of the internet as we now know it.

Some Terms

Bit

A unit of data represent as a 0 or a 1. Bits are used to define data in motion: how much data you can transfer in one second.

Byte

Eight bits, given as zeros and ones. Bytes are used to define storage units of data.

A...	Equals	...which is...
Bit		One binary number (0 or 1)
Byte	Eight bits	The letter M in binary (01001101)
KB (Kilobyte)	1,024 Bytes	6 ¼ text messages (of 160 characters)
MB (Megabyte)	1, 024 KB	6 of Shakespeare’s plays (Romeo and Juliet, Hamlet, King Richard III, Macbeth, Othello, Cymbeline)
GB (Gigabyte)	1,024 MB	One hour of HD video
TB (Terabyte)	1,024 GB	250,000 cell phone photos

Broadband

a system that makes it possible for many messages or large amounts of information to be sent at the same time and very quickly between computers or other electronic devices. A fast, reliable connection to the internet that is “always on”

There are several important terms related to Broadband and the internet that comes into your home: Bandwidth, Speed, and Latency.

Bandwidth is the amount of data that can be transmitted at one time.

Think of the bandwidth like the water in your house. If you are the only person home, you can have a relaxing hot shower with great water pressure. But if you are also running the washing machine and the dishwasher and your partner is watering the lawn, the water coming out of your showerhead is going to be a trickle. So if your roommate is streaming a movie and visiting kids are gaming and you are trying to have a Zoom call, there isn't going to be quite enough bandwidth to go around.

Speed is conveyed as two numbers; download speed/upload speed. Download speed affects you watching a movie. Upload speed affects your video on a Zoom call. In 2015, the FCC defined broadband as at least 25/3mbps; the latest definition (2024) is 100/20 Mbps.

Latency is time delay or how long it takes data to travel between the sender and the receiver.

How the Internet Is Made (Yet More Terms)

Modem

A device for *modulation* and *demodulation*; a device that converts signals from one device into signals another device can read.

Server

A device that connects you to data not physically on your device.

Web Server

Connects you to the internet

Email server

Directs and stores email messages

Data Center

Building(s) that hold computers servers, telecommunication systems, and storage systems. Data centers store user data and host online apps and content.

ISP: Internet Service Provider

A company that provides services for accessing the internet.

Backbone

Long distance networks that carry data

Last Mile

How the internet gets to you, either through your ISP or cellular carrier.

Home Internet Types

You typically get home internet through your ISP. There are different services you can purchase through different companies, which are listed below in order from slowest to fastest. The fastest forms of internet (Broadband) may not be available in all areas.

Dial-Up

Uses phone lines to dial up to an ISP (Internet Service Provider). Dial up speeds are up to 56 Kbps

Satellite internet

Satellite internet is the most widely available type of internet because it doesn't rely on ground-laid infrastructure like cables, cellular towers or line-of-sight antenna connections. A mounted dish connects with geostationary satellites. Requires a clear view of the southern sky. Satellite internet providers offer speeds that typically vary from 12 to 100Mbps.

DSL internet

DSL (Digital Subscriber Line) is a fixed connection that runs through copper phone lines. DSL is not shared with your neighbors

5G home internet

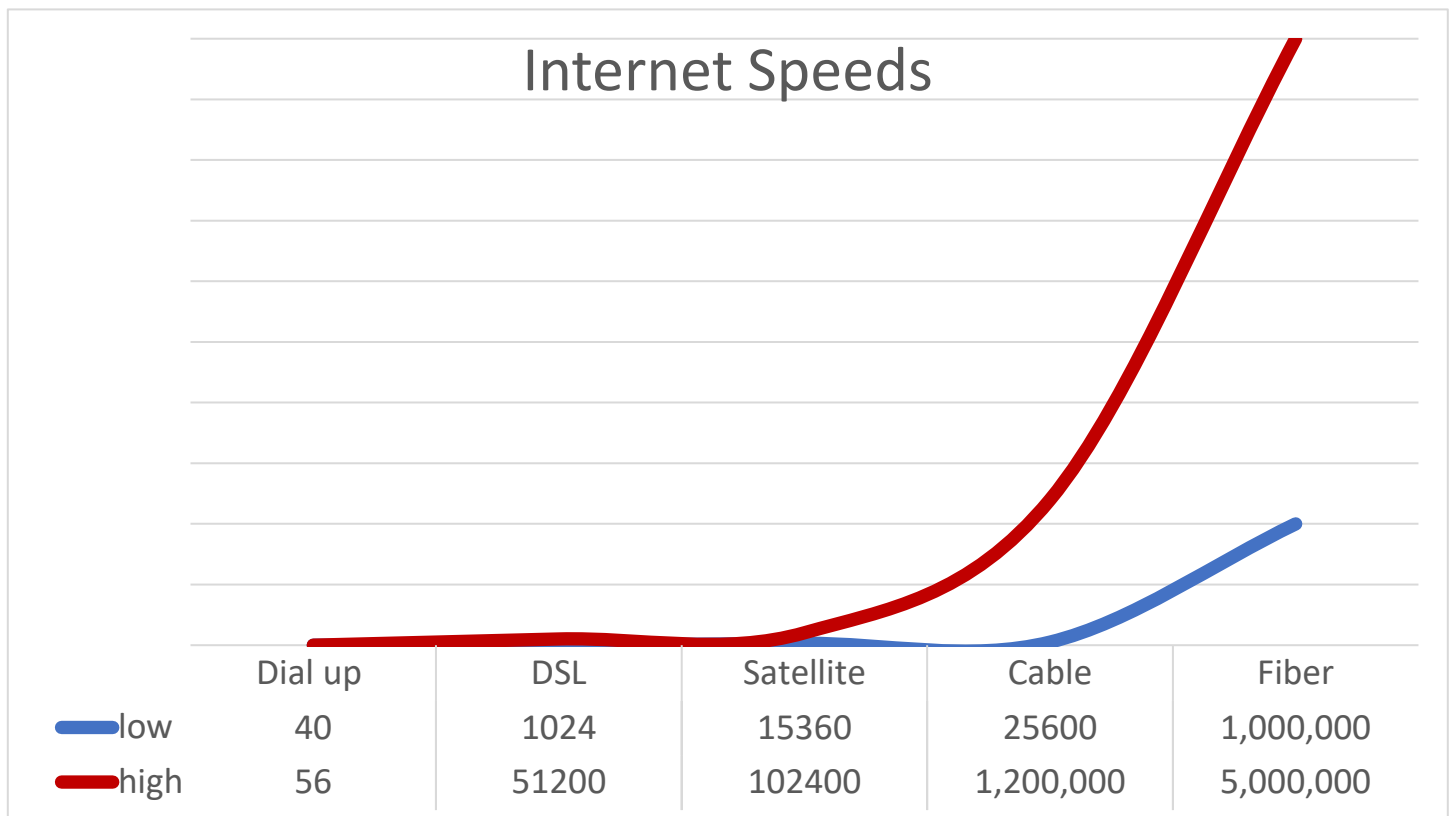
A cell carrier sends out 5G signals that a home router receives those signals and turns them into a home connection.

Cable internet

Cable is one of the most common types of internet connections -- available to nearly 90% of US households. Cable internet speeds are affected by your neighbors' usage.

Fiber internet

Fiber-optic can deliver download speeds as fast as 10 gigabits (10,000 megabits per second) or higher, but most providers have max download speeds around 1,000 to 5,000Mbps.



Web Browsers

Web browsers are programs installed on your computer or smart phone that allow you to surf the Internet. A web browser takes computer code (generally from the internet) and changes it into formatted text and images you can view and understand.

Most computers come with a web browser installed. Apple devices come pre-installed with Safari, Microsoft devices with Edge.



You are **not** restricted to those default options, and I encourage you to download one or more alternate web browsers.

Some alternate web browsers are: Chrome, Firefox, and Opera.



Things can get confusing because companies have named their products in a way that doesn't make it clear where one product ends and the other begins.

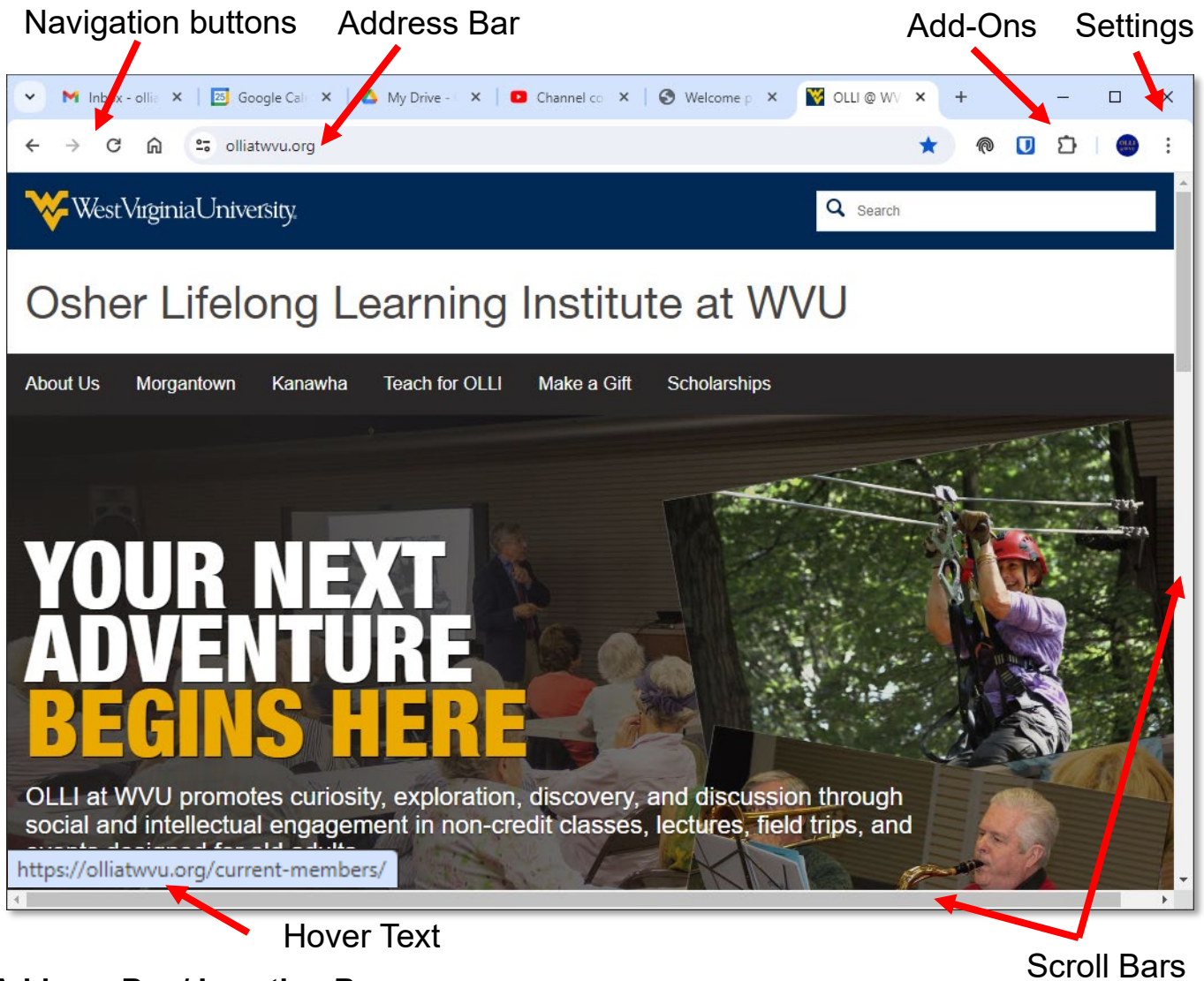
For example, Microsoft has Microsoft Windows the operating system, Microsoft Office the productivity suite, and Microsoft Edge the web browser. Because of this, it helps to pay attention to precisely what product you are using.

Why should you install an alternate browser?

1. A site that doesn't work in one browser will sometimes work perfectly well in a different browser.
2. It is harder for websites to track you across different browsers.

Parts of a Web Browser

It is helpful to know what the various parts a thing are called. It not only makes using help easier, you might discover new about something you use all the time.



Address Bar / Location Bar

Enter / display the [URL](#) (Uniform Resource Locator) of the page you are currently viewing.



Navigation Buttons

For moving between previously visited pages and checking for changes to current page.



Back: return to the previous page(s) you were viewing

Forward: After going **Back** go forward to where you were

Refresh: Check for changes to the page you are currently viewing

Tabs



Tabs show you the web pages you currently have open in your web browser. You switch between open tabs by clicking on them.

Scroll Bar(s)

Allow you to move up and down (and sometimes left and right) through the web page you are currently viewing.

Content

The stuff you want to view.

Hover Text

Found in the status bar at the bottom of the browser window.

When you hold your cursor over a hyperlink, hover text displays the URL of that hyperlink.

Hover text can help protect you from malicious links and phishing attempts.

Settings

Where you change the way the browser looks and behaves. It is also where you can find:

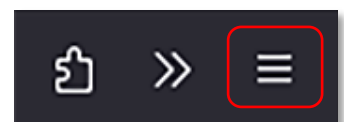


History

All the pages you have visited.

Bookmarks

The URLs of web pages you would want to visit again. It is a good idea to bookmark the addresses of your bank(s), doctor, and important pages.



The settings button is usually either three dots or three lines.

Browser Add-Ons

Add-ons allow you to make your web browser behave the way YOU want to it, rather than the way the designers think it should. Add Ons can increase privacy, sync with a password manager, or even change the color scheme.

Privacy Add-Ons

These add-ons work to keep third party cookies from sticking their tentacles into everything you do on the internet, to warn you of malicious websites, and to prompt you to be aware of security.

Some popular security add-ons:

- uBlock Origin
- Disconnect
- Privacy Badger

Websites

Websites are the various places you visit on the internet, like facebook.com, OLLIatWVU.org, wikipedia.org, google.com, cdc.gov, etc.

Websites are locations connected to the Internet that maintain one or more pages on the World Wide Web. Any web browser—whether on your computer or your mobile device—should allow you to visit any website by entering the URL or web address into the location bar of the browser, for example: <http://dictionary.com>

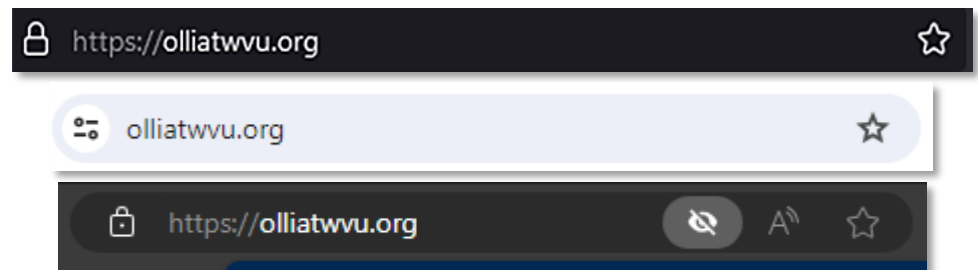
URL (Uniform Resource Locator)

The URL is the address of the website you are viewing/visiting. Every single page has a unique URL.

<https://olliatwvu.org/current-members>

https://	protocol / scheme
olliatwvu	domain
org	top-level-domain
current-members	subdirectory

The URL appears in the address or location bar of a web browser (which is always at the top of the browser window), and where you type in an address to visit a new site.



If a website is designed well, the URL s should tell you something about the content of the page.

<https://wvusports.com/sports/womens-tennis>
<https://wvstateparks.com/park/berkeley-springs-state-park>
<https://www.history.com/topics/world-war-i/1918-flu-pandemic>
<https://www.penguinrandomhouse.com/the-read-down/cozy-mysteries>
<https://olliatwvu.org/current-members/tech-documents>

Even the link below, which has some unexpected bits in it gives you an idea of what the page is about.

<https://uswildflowers.com/wfquery.php?State=WV>

Translated: on the website *US Wildflowers*, find (*query*) the *state* of *WV*. So it is most likely a list of WV wildflowers.

Web File Formats

Just as you have a variety of file formats for your computer (text documents, pictures, videos) you can have a variety of file formats for web pages. These are some of the more common file types you may see.

HTML	Hypertext Markup Language
ASP	Active Server Page
CSS	Cascading Style Sheet
PHP	Personal Home Page / PHP: Hypertext Preprocessor
XHTML	Extensible Hypertext Markup Language
PDF	Portable Document Format

It shouldn't matter what type of file format a page uses, as long as the page is well-designed and created with good code. Where you may have problems sometimes is viewing a web page on your phone, if it does not have a separate layout for smaller screens. Additionally, a PDF will always be difficult to read on a smaller screen.

Domains

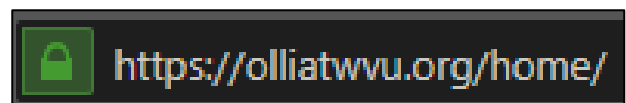
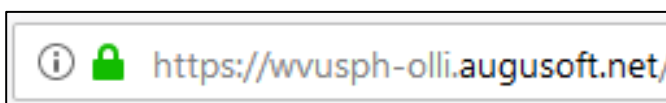
: a subdivision of the Internet consisting of computers or sites usually with a common purpose (such as providing commercial information) and denoted in Internet addresses by a unique abbreviation (such as com for commercial sites or gov for government sites)

-- Merriam-Webster.com

Most people are aware of the more common domains—major businesses use .com—but it's important to know other common domains.

.com	commercial	.ca	Canada	.biz
.org	organization	.cn	mainland China	.info
.net	network	.fr	France	.jobs
.us	United States	.ch	Switzerland	.mobi
.co	Colombia	.au	Australia	.name
.int	international	.in	India	.ly
.mil	military	.de	Germany	.tel
.edu	education	.jp	Japan	.kitchen
.gov	government	.nl	Netherlands	.email
		.uk	United Kingdom	.tech
		.mx	Mexico	.estate
		.ru	Russia	.xyz
		.se	Sweden	.codes
		.es	Spain	.bargains
				.bid

Note that different countries have different domains. What this means is that olliawvu.org is NOT the same as olliawvu.com or olliawvu.ru



Search Engines

Search engines are systems connected to a database that link related information allowing a user to input a question and receive links to multiple possible answers.

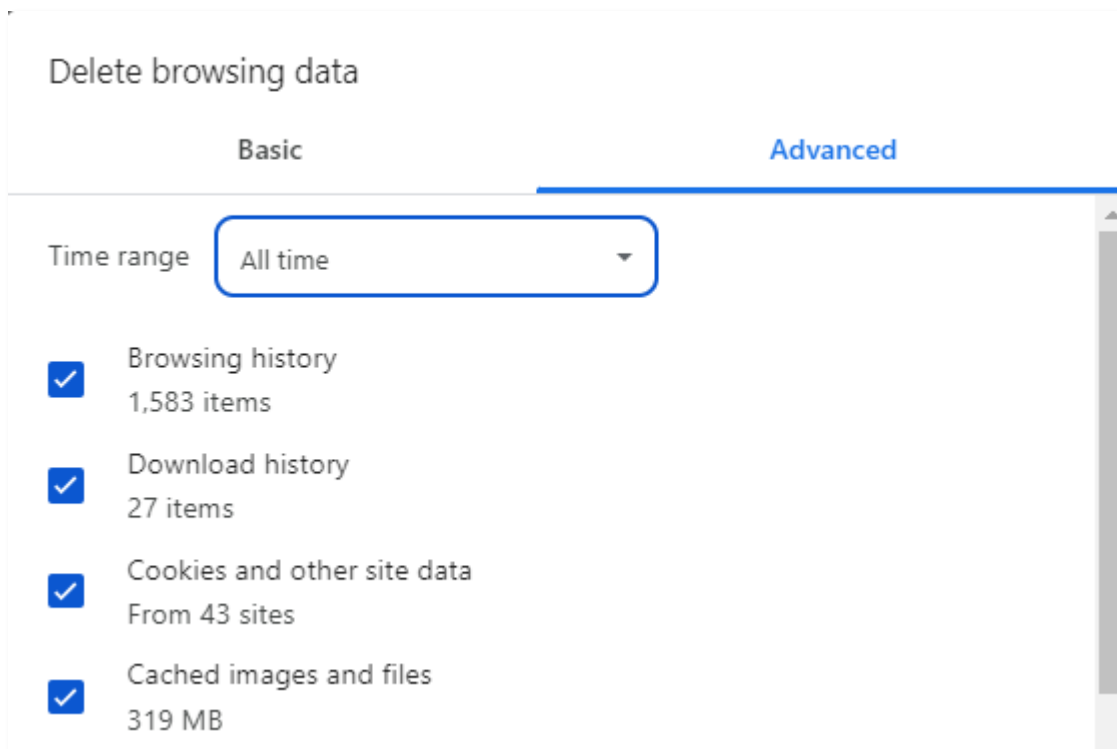
There are multiple search engines available for your research needs. Google is the most common, but there are many others, all of which use their own methods for curating information. Using a different search engine typically gives you different results.

Google.com is a search engine website, but you may also have a google app on your mobile device that accesses the search engine directly without going through a web browser. The same holds true for other search engines—if you download their apps, you can bypass using a web browser.

Cache

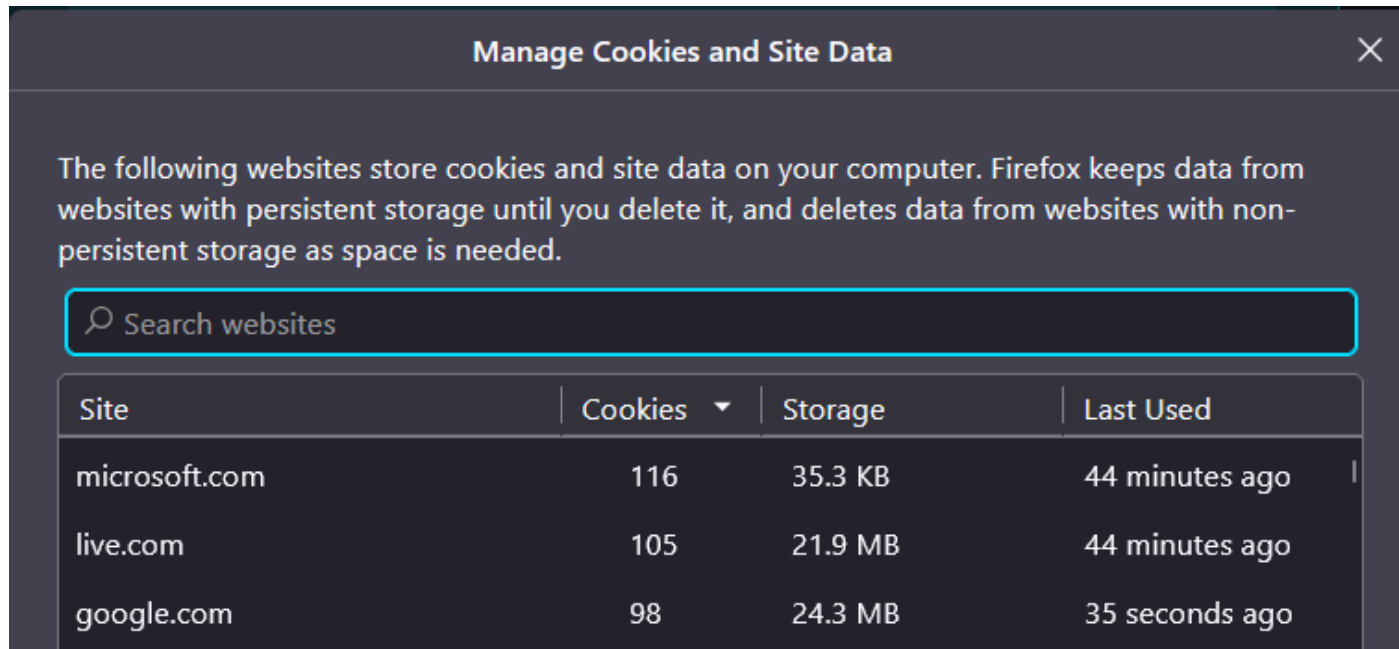
Cache contains the files your computer has stored behind the scenes to make browsing faster and easier. Images are often cached, so that the second time you visit a website, you won't have to wait for the images and other elements to appear.

If something is not working as expected when you view a website it may be due to your web browser cache. The first (and easiest) solution is to visit the site using a different browser. The second option is to clear your cache and/or cookies, which is also important to do after you have changed a website password.



Cookies

Cookies, when they pertain to a website, do not have anything to do with delicious baked goods. Web [cookies](#) are tiny pieces of data websites save to your computer while you are browsing. Cookies are how you can place items in an online shopping cart or to have a website remember your username.



The following websites store cookies and site data on your computer. Firefox keeps data from websites with persistent storage until you delete it, and deletes data from websites with non-persistent storage as space is needed.

Search websites

Site	Cookies ▾	Storage	Last Used
microsoft.com	116	35.3 KB	44 minutes ago
live.com	105	21.9 MB	44 minutes ago
google.com	98	24.3 MB	35 seconds ago

Web browsers typically use three types of cookies:

Persistent cookies

These save data for extended period of time and are often used to store usernames & passwords so you do not have to enter your log in credentials every time you visit a site.

Session cookies

These are deleted after you close the browser. Shopping carts are usually session cookies.

Third-party cookies

Collect data about your online activity to send to *different* websites.

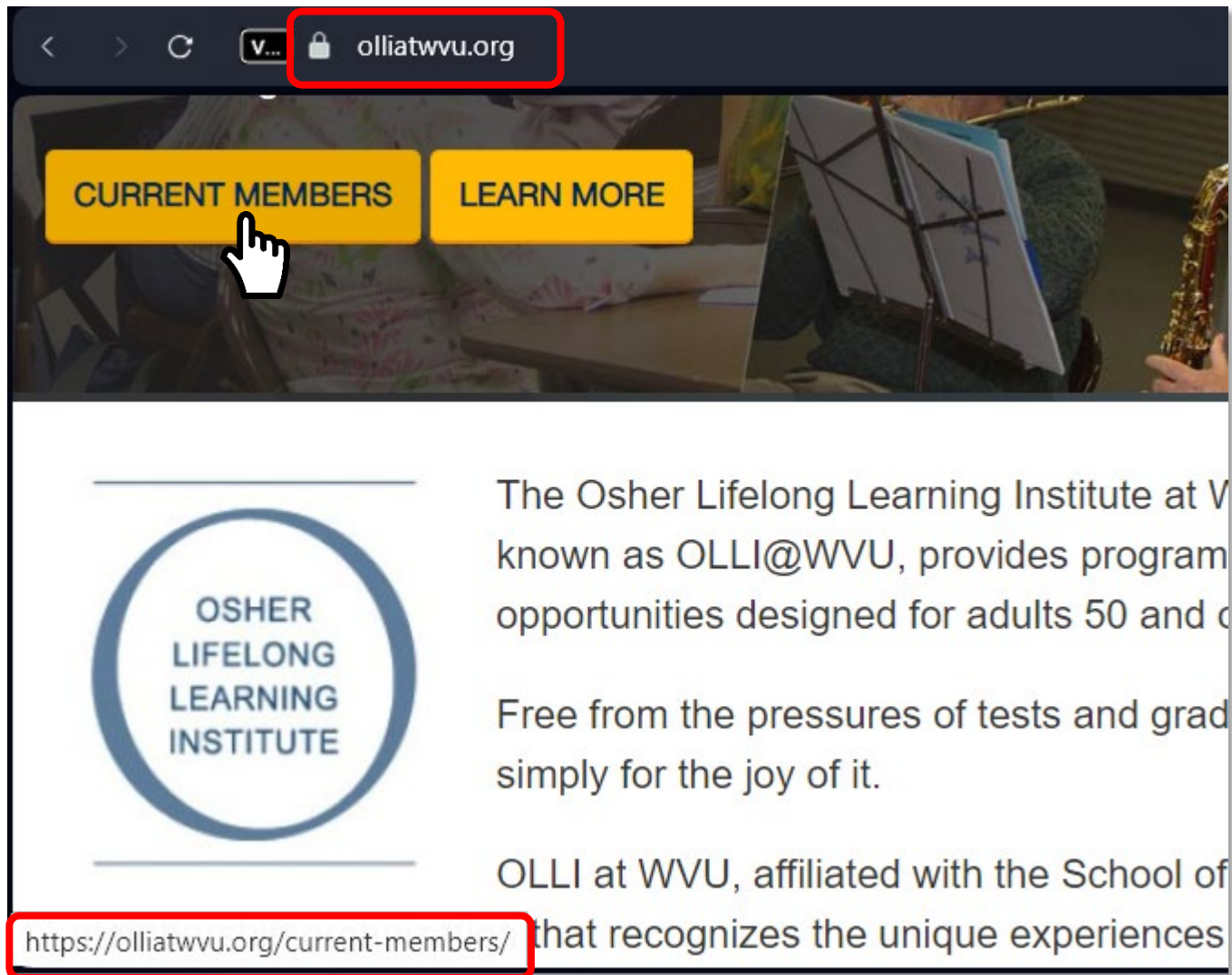
Third party cookies are commonly used to track what you are doing. If you see a Facebook “Like and Share” button on a web page, then Facebook is collecting information about what you are doing on that page.

Facebook collects this information whether you have a Facebook account or not.

Facebook collates and uses this information **whether you have a Facebook account or not.**

Hover Text

Phishing emails are messages that pretend to be from a real company, and prompt you to go to a website or reply to a message and give them your username and password. When you hold your cursor over a hyperlink, you can see the [URL](#) to which that link is going. This is the best way to avoid a [phishing](#) attack.



<https://olliatwvu.org/current-members/>

A link that redirects somewhere else is not necessarily fraudulent—many websites do not have the capability to process payments and so must send you to a third party website—but if a link is trying to redirect you to an odd [domain](#), it's a distinct possibility the website is fraudulent.

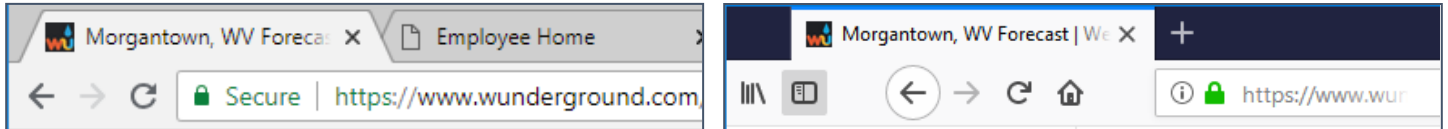
NO reputable company should EVER ask for your username and/or password over email. If a company does this, it is not one with whom you should be doing business. If you receive an email you think might be fraudulent, do **NOT** click on any links in that email, but instead go to the site from your bookmarks or open your search engine and look for that company yourself.

HTTP (HyperText Transfer Protocol)

At the start of every [URL](#), you will find the letters http or https. HTTP, or HyperText Transfer Protocol, is the method for transferring data between you and a website.

HTTPS or HyperText Transfer Protocol (Secure) is an encrypted version of http. This means that someone cannot easily capture information shared between you and a website.

Web browsers generally show encryption in two ways: a lock icon beside the location bar, and/or by seeing **https** (instead of http) at the start of the URL.



If you are only **viewing** a website, it doesn't matter if the site is not encrypted—does not use https. But if you do anything involving money or personal information DO NOT proceed unless you can see **https** and the information being sent is encrypted.

Web Forms and Passwords

All browsers will offer to save your form information and passwords. This is convenient but **NOT SECURE**. If you would like your login credentials to be auto-filled, get a browser [add-on](#) for your password manager.

Email

Email is a way of sending electronic messages to anyone in the world with access to a computer, smart phone, or tablet with an internet connection—even ereaders. Email is the modern equivalent of sending a letter—except that it is instantaneous and you can send that letter to multiple people.

All email address contain three bits of information: the **user name**, the at @ sign, and the **domain**. These are put together in the following manner: username@domain

As with URLs (see page 10), email addresses reference top-level domains and [domains](#).

michelle@wvu.edu

michelle
@
wvu
eud

username
at [historical (accounting): at the rate of]
domain
top-level domain

Every email address is unique. This means that you could have similar email addresses in your address book that are all for different people if the username is the same but the domain is different.

michelle@wvu.edu
michelle@gmail.com
michelle@yahoo.com
michelle@outlook.com
michelle@aol.com
michelle@comcast.com

Messages

Email messages are composed of two different parts you can see: the header information and the body.

The header information can be thought of as the envelope on a piece of mail—it contains directions for getting the message where it needs to go, information about the sender, and a subject line (to help the recipient and sender keep multiple messages straight).

The body of the message contains what the sender wants to tell the recipient.

Email Fields

Email works by moving data from your device to the recipient’s device through a series of mail [servers](#) (dedicated computers that shift data from one place to another).

All email messages should all have the following fields

From	Who sent the message
To	Who is the message being sent to
Subject	What is this message about
Date & Time	When was this message sent

Messages may also use other fields.

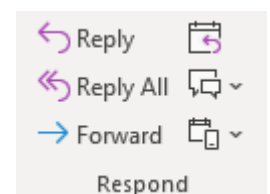
CC	Who is an additional recipient of this message
BCC	Who is secretly being sent this message

Cc

Bcc

When you receive a message, you generally have three options for responding to that message.

Reply	Respond to the sender
Reply All	Respond to the sender, the To & CC fields
Forward	Send the message to a different person entirely



You would use Reply All when trying to arrange a family dinner—a back and forth conversation between multiple people.

Person A: When can we all go to dinner?

Person B: I can't do Thursdays, I have a pottery class.

Person C: Mondays and Wednesdays are good for me.

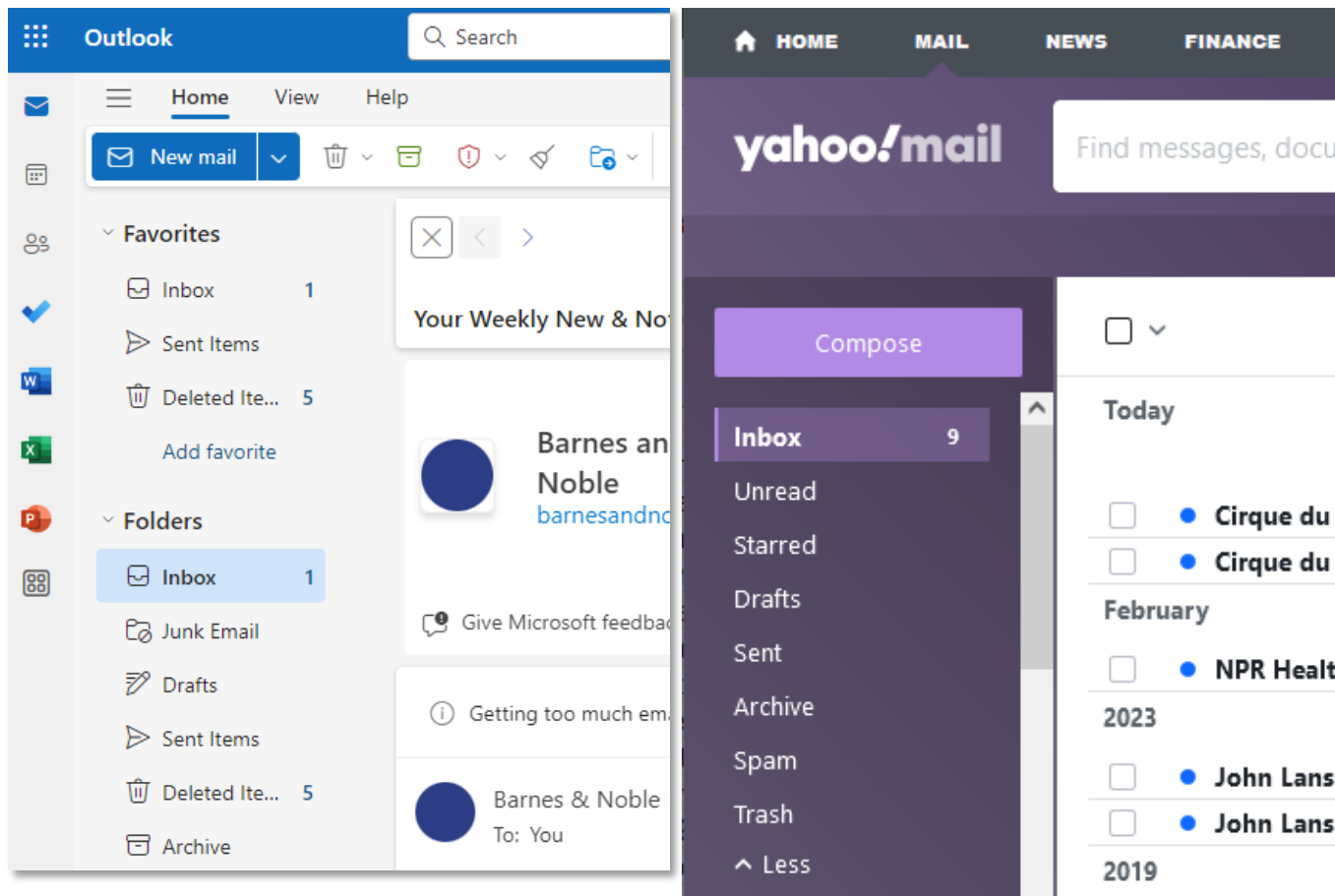
Person B: I work late on most Mondays.

Person A: It looks like Wednesday might work for everyone?

Do not use reply all if everyone in the email doesn't need to read your response. When replying to the holiday message, "Happy Traitors' Day Ungrateful Colonists!" you only need to respond to the sender, "Enjoy working today limey!"

Folders / Labels

You can organize your email into different folders (in Gmail they are called labels). Some email programs, such as gmail, can automatically apply organization for you, however, this can sometimes lead to not seeing important emails.

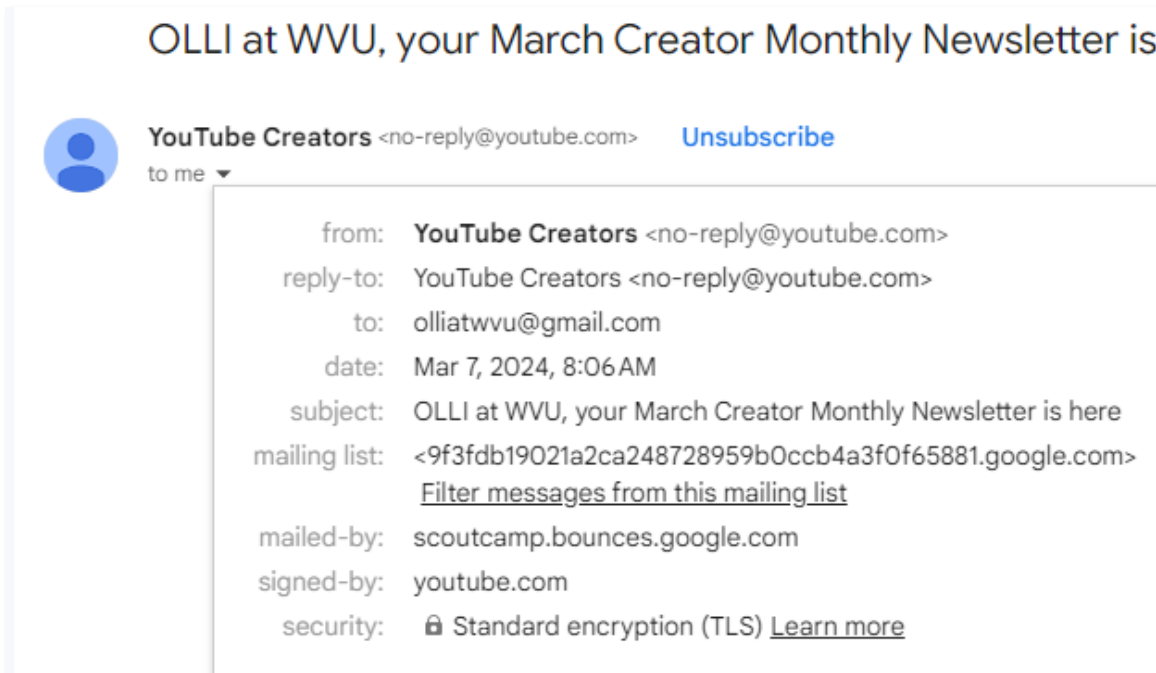


Folders are generally located along the left pane on the email webpage/program window.

You can place email into folders manually, or you can create rules to automatically file messages for you.

Common Header Information

Email programs hide the complicated bits of the header information from plain sight. Why do you care? Because looking at this information can sometimes help determine if the message is genuine.



Spam

Spam is email—solicited or unsolicited—that you don’t want to read. Solicited emails come when you make a purchase from a store and give them your address; you will then receive daily emails from them for the rest of time. If the spam comes from a company you have done business with, you can usually “unsubscribe” to stop the emails, and you may have the option to change the frequency of emails you receive.

Select the ingredients & frequency that are right for you:

- | | |
|--|-----------|
| <input type="checkbox"/> Recipe inspiration, tips & techniques | 1-3/week |
| <input checked="" type="checkbox"/> Product announcements, special offers & promotions | 1-3/week |
| <input type="checkbox"/> Events at our Vermont bakery, store & café | 1-2/month |
| <input type="checkbox"/> News and upcoming classes from our Baking School | 4/year |
| <input type="checkbox"/> Show me gluten-free recipes & content when possible | |

Unsolicited emails come when a company you have done business with “shares” your information with another company. [Facebook is infamous for this](#). Unsubscribe may or may not work for these types of messages—it depends upon how ethical the email sender is.

Home Internet

Wi-Fi

Wi-Fi is the abbreviation for a wireless internet connection; it's simply a play on the term Hi-Fi.

Wi-Fi is what allows us to not trip over multiple cords when using our laptops on the sofa, to check our email on our phones when we're somewhere without cell service, and to get on the internet away from home and work. It is incredibly convenient but also the easiest way for someone unscrupulous to steal data.



WiFi Extender vs Mesh Network

Both of these options allow you to extend the range of the wireless throughout your house. Neither of these are things you will want to set up yourself. Find a technical family member or hire a professional to set things up for you.

Smart Phones

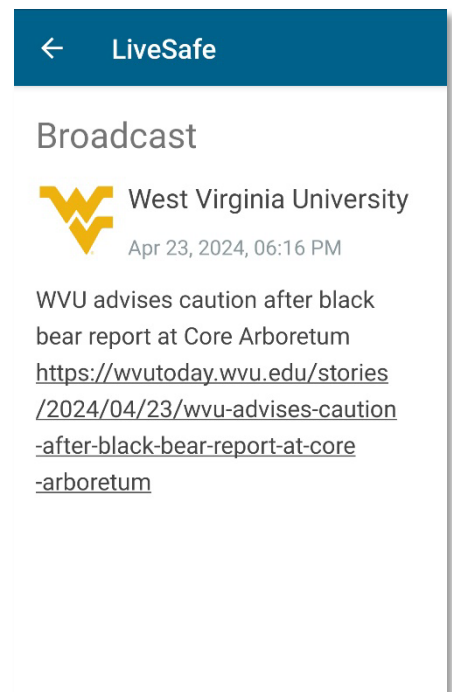
: a cell phone that includes additional software functions (such as email or an Internet browser)
-- Merriam-Webster

Smart phones are becoming ubiquitous (according to PEW, 90% of US adults have a smart phone—including 76% of adults over 65. Worldwide there are 8.9 billion mobile phone subscriptions, and 69% of users worldwide have smartphones. (In lower-income countries, many people who never had access to landlines have cell phones.

But smartphones are far more than simple communication devices. Straight out of the box a cell phone is a communication device, camera (and video recorder), [GPS](#), music player, address book, internet browser, and calendar. And once you add your own apps, it can become much more.

Parents of teens immediately discovered that “Find My Phone” told them exactly where their kids were at all times—and the same can be true of spouses and elderly parents. Additionally, there are a variety of safety and medical apps that can do anything from medication reminders (and warn of adverse interactions between medications) to tracking blood pressure and pulse rate to detecting falls.

That is not to say that smartphones don't have their negatives. How many times have you seen people at a restaurant ignoring each other for their phones? But if used with awareness, smart phones can be literal lifesavers.



Internet of Things (IoT)

The Internet of Things, or IoT, is the network of collection of internet embedded devices that have some to surround us. These devices can be coffee makers, thermostats, dog collars, blood pressure cuffs—anything that that collects information and sends it to your smart phone or computer. These sensors allow us to do everything from turning on the porch light when we're coming home after dark, to reminding you to change your furnace filter and much more.

Smart Devices

An electronic device that connects to other devices or the internet through a wireless protocol such as Bluetooth or Wi-Fi that can to a degree operate autonomously.



The smart device that you might be most familiar with is a smart speaker. Smart speakers are wireless devices that allows you to ask verbal questions and give voice prompted commands.

But smart devices do a lot more than answer questions.

Smart devices can be used to control your lights, secure your home, see who is at the door, monitor your health and more.

The problem with smart devices is that to do all the amazing things they do, they can be incredibly intrusive, and collect a LOT of information they might share with other companies.



Headphones with Hearing Assist

Although not formally announced, in recent years Apple has pushed out additions to both the iPhone and AirPods that can allow them to work like hearing aids and has added Beats to the devices that can use Apple's Listen Live feature on iOS.



Samsung's Galaxy Buds Pro are also touted as functioning as entry level hearing aids when paired with Samsung phones running Android 11 or later with 1.5 GB of RAM and the Galaxy Wearable app.

Social Media

According to [Merriam-Webster](#), Social Media are : forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (such as pictures and videos)

But what does this actually mean?

Social media are [websites](#) or [apps](#) (or both) that allow you to share things with other people. On some sites you can post anonymously, and you have as many accounts as you want (Twitter, Tumblr). Other sites limit you to a single personal account and you may have to prove your identity (Facebook, LinkedIn). Some types of social media are for sharing things with one or a few friends (WhatsApp) while others are for broadcasting to the world (Reddit, Pinterest)

Platform	Company	CEO / Chair	Country
Facebook	Meta	Mark Zuckerberg	US
YouTube	Alphabet	John L. Hennessy, Sundar Pichai	US
WhatsApp	Meta	Mark Zuckerberg	US
Instagram	Meta	Mark Zuckerberg	US
TikTok	ByteDance	Zhang Yiming, Liang Rubo	China
WeChat	Tencent	Pony Ma, Martin Lau	China
Messenger	Meta	Mark Zuckerberg	US
LinkedIn	Microsoft	Satya Nadella, Brad Smith	US
Telegram	Telegram	Pavel Durov	UAE
Snapchat	Snap Inc.	Evan Spiegel, Bobby Murphy	US
X (Twitter)	X Corp.	Elon Musk	US
Reddit	Reddit	Steve Huffman	US
Pinterest	Pinterest	Bill Ready, Ben Silberman	US
Twitch	Amazon	Jeff Bezos, Andy Jassy	US
Threads	Meta	Mark Zuckerberg	US



Owner	Subsidiary
Amazon	Audible , Goodreads , IMDB , PillPack , Ring , Twitch , Whole Foods, Zappos
Meta	Facebook, Giphy , Instagram , Messenger, Oculus , Threads, WhatsApp
Alphabet	Android, CrowdStrike, DoubleClick , FitBit, Google, Nest , Waze , Uber, YouTube
Microsoft	Activision Blizzard, Bing, GitHub, LinkedIn , Minecraft , MSN, Nokia, Skype , XBox
Independent	Bluesky, Pinterest, Reddit, Signal, Snapchat, Telegram, Twitter/X

Social Media Uses

	Keep in Touch	Make Friends	Research / Learn	News	Entertain Me	Argue	Network	Images / Videos	Share Ideas	Inspiration	Organize / Track
Bluesky	Bluesky	Bluesky	Bluesky	Bluesky	Bluesky	Bluesky					
Discord		Discord		Discord	Discord	Discord					
Facebook	FB	FB			FB		FB	FB	FB		
Flickr	Flickr				Flickr		Flickr	Flickr		Flickr	Flickr
Goodreads	Goodreads		Goodreads	Goodreads	Goodreads		Goodreads			Goodreads	Goodreads
Instagram	Insta				Insta			Insta		Insta	
LinkedIn	LinkedIn		LinkedIn	LinkedIn			LinkedIn		LinkedIn		
Pinterest			Pinterest		Pinterest				Pinterest	Pinterest	Pinterest
Ravelry		Ravelry	Ravelry				Ravelry	Ravelry	Ravelry	Ravelry	
Reddit		Reddit	Reddit	Reddit	Reddit	Reddit		Reddit	Reddit		
Signal	Signal			Signal				Signal			
Snapchat	Snap				Snap			Snap			
Threads	Threads				Threads	Threads		Threads			
TikTok			TikTok	TikTok	TikTok			TikTok	TikTok	TikTok	
Tumblr			Tumblr		Tumblr	Tumblr		Tumblr	Tumblr		
Twitter / X	X	X	X	X	X	X					
Untappd		Untappd	Untappd							Untappd	
WhatsApp	WhatsApp							WhatsApp			
YouTube			YouTube	YouTube	YouTube	YouTube		YouTube	YouTube		

Shopping

If you live in a remote area without access to a variety of local stores, or are limited in your ability to leave your home, online shopping is the best thing ever—all the things you need comes right to your door! And for the most part—especially with large retailers—online shopping is safe and secure.

However, that doesn't mean you shouldn't take precautions.

- Make purchases from known retailers.
- If you're unsure about a retailer, use [PayPal](#) to make your purchase.
- Make purchases **ONLY** with a credit card, **NOT** a debit card.
- Have a credit card dedicated to online purchases.
- Log into our bank site regularly to check for unapproved purchases.
- Bookmark websites you frequently visit.
- Turn off shopping apps on your phone when you're not actively using them.
- Avoid sending credit card information across Wi-Fi.
- **NEVER** send credit card information over public or unencrypted Wi-Fi.
- Carefully check URLs before clicking on links from emails.
- Create an email address that you use *only* for shopping.

Payment Apps

Payment apps are a common way to avoid carrying cash. These digital wallets can be linked to a bank account or credit card to allow you to send & receive money the way use a credit card or used to write a check.

An example of when you might use one is a lunch date with friends. Instead of trying to get separate checks, or handing the server multiple credit cards with notes as to which meal goes on which card, you have one person pay the whole thing, and then everyone else sends the person who paid the bill money via a cash app.

Some landlords only take payment through apps, since it means they no longer have to deal with checks (and the associated “the check is in the mail”). Additionally, these apps don't have the overhead of credit cards, so many small vendors and businesses use them to avoid high fees.

Some payment apps:

Apple Pay (Apple)
Cash App (Square Inc)
Google Pay (Google LLC)
Venmo (PayPal Inc)
Zelle (Early Warning Services LLC)



Resources and Quick Steps

Security

[Internet Top Level Domains](#)

[How Secure Is My Password](#) (Security.org)

[How Secure Is My Password](#) (LastPass)

[Cybersecurity Best Practices](#) (CISA.gov)

[Blacklight](#) (Markup)

History

[A short history of the internet](#) (Science + Media Museum)

[The sound of the dialup, pictured](#) (Absorptions)

[Analyzing Every Second of the Classic Dial-Up Modem Sound](#) (Popular Mechanics)

[A Dial-up Handshake, Visualized](#)

[Phone Phreaking: Hacking Before the Internet](#) (Cybercrime Magazine)

Explainers

[The Internet, Explained](#) (Vox)

[What Is the Internet? Meaning, Working, and Types](#) (Spiceworks)

[Wi-Fi Range Extender vs. Mesh Network: What's the Difference?](#) (PC Mag)

[Megabytes, Megabits, Gbps & TB: What you need to know](#)

[Earbuds & Smart Phones as Hearing Aids](#) (OLLI at WVU)

[Payment Apps](#) (OLLI at WVU)

[Get Off of My Cloud \(Service\)](#) (OLLI at WVU)

[Assistive Technologies](#) (OLLI at WVU)

[Electronic Calendars](#) (OLLI at WVU)

[Internet Speed Test](#)

[How is the Internet Made](#)

Social Media

[Mark Zuckerberg leveraged Facebook user data to fight rivals and help friends, leaked documents show](#) (NBC News 2019)

[Top Social Media Statistics And Trends Of 2024](#) (Forbes)

Smart Phones

[Mobile Fact Sheet](#) (PEW, 2024)

[15 Smartphone Apps for Older Adults to Use While in Isolation During the COVID-19 Pandemic](#) (Pub Med Article, 2020)

[Best Medical Alert Apps for Seniors](#) (Senior Living, 2024)

[8 Incredibly Easy & Helpful Mobile Apps for Older Adults](#) (Alden Gardens of Waterford, 2023)

[Top Safety Apps for Seniors: Technology for Security and Independence](#) (Sonata Senior Living)

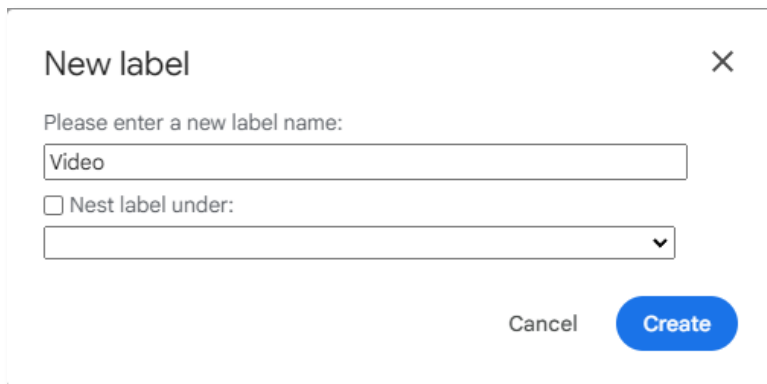
Email Providers, Free

Gmail	https://mail.google.com
iCloud Mail	https://www.apple.com/icloud
Mail.com / GMX	https://www.mail.com
Outlook	https://outlook.live.com/owa
Proton Mail	https://protonmail.com
Tutanota	https://tutanota.com
Yahoo	https://login.yahoo.com/account/create

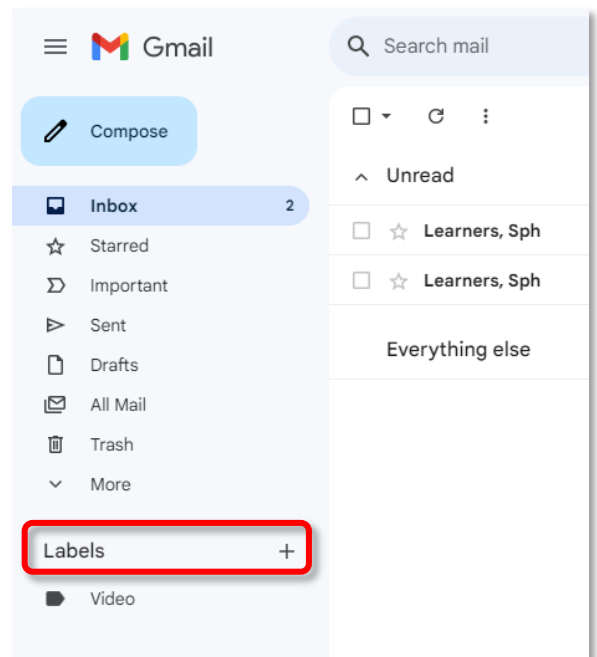
Gmail

Creating a Gmail Label

1. In the left pane, beside **Labels** click the **+**.

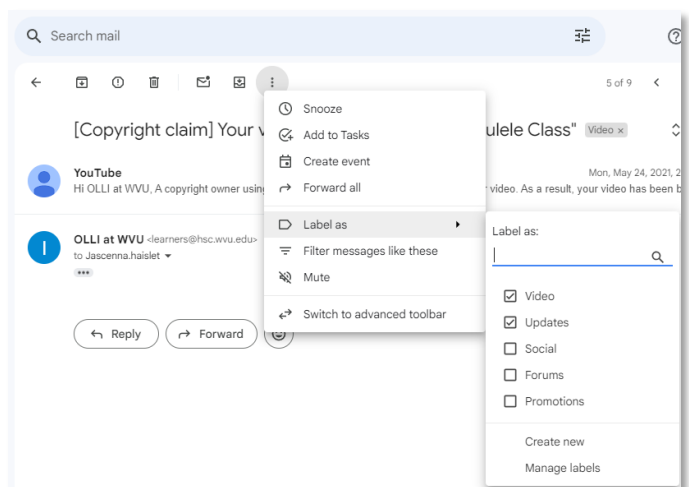


2. In the New label dialog box, type a label name.
3. Click **Create**.



Adding a Label to a Gmail Message

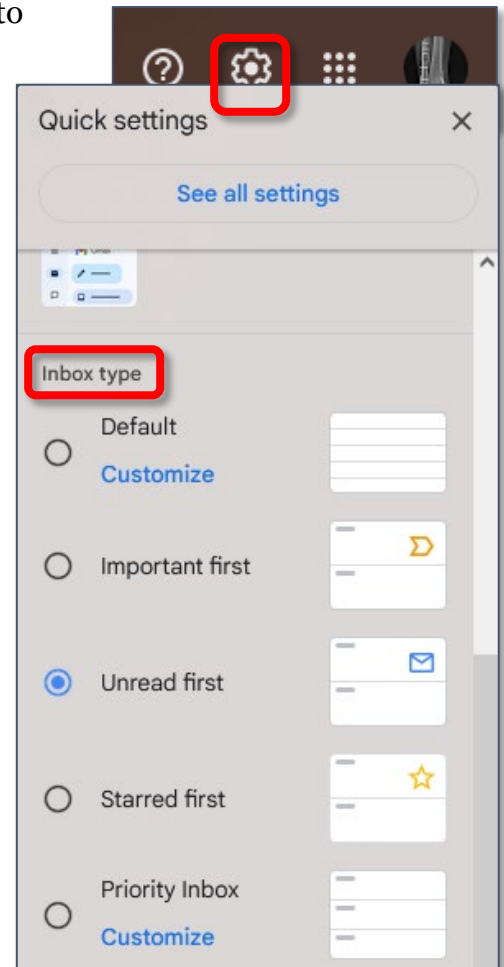
1. In the open message, click the vertical ellipse.



A quick note about Gmail—Gmail will try to help you by organizing your email messages for you. Sometimes this is helpful, but sometimes it makes it difficult to find specific messages.

Changing Your Inbox Type

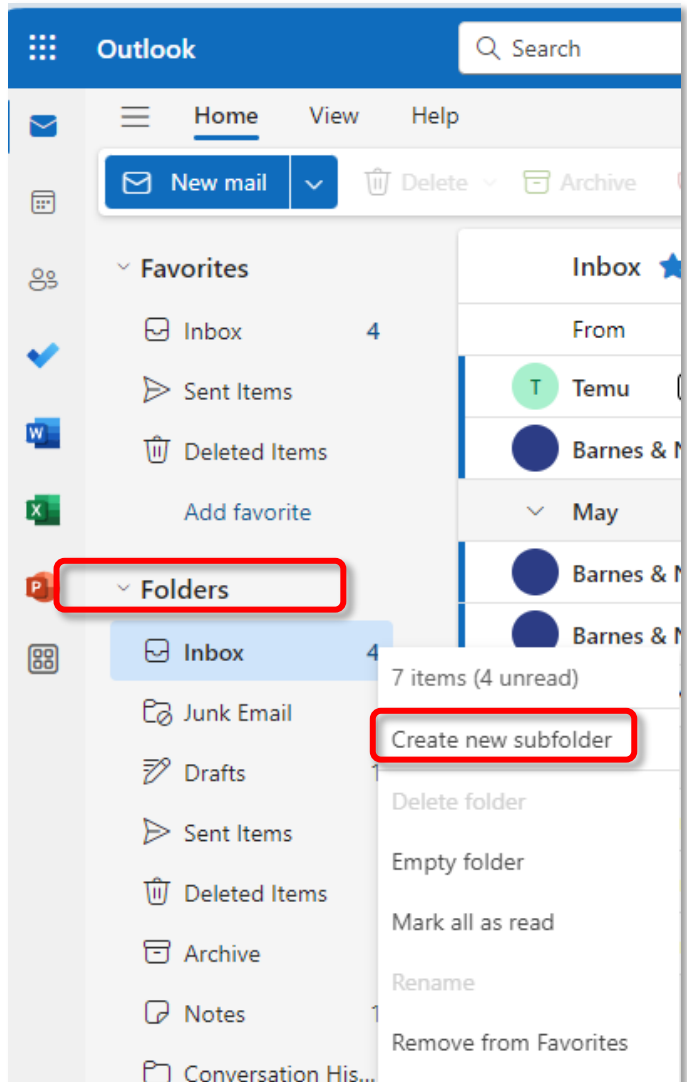
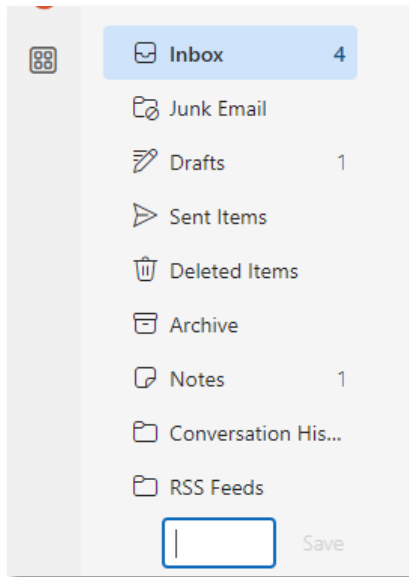
1. In the upper right corner of Gmail, click the **Settings** icon to view **Quick Settings**.
2. In the Quick Settings section, scroll down until you see **Inbox type**.
3. Select the inbox type you feel would work best for you—if you aren't sure, try one, then change it if you don't like it.



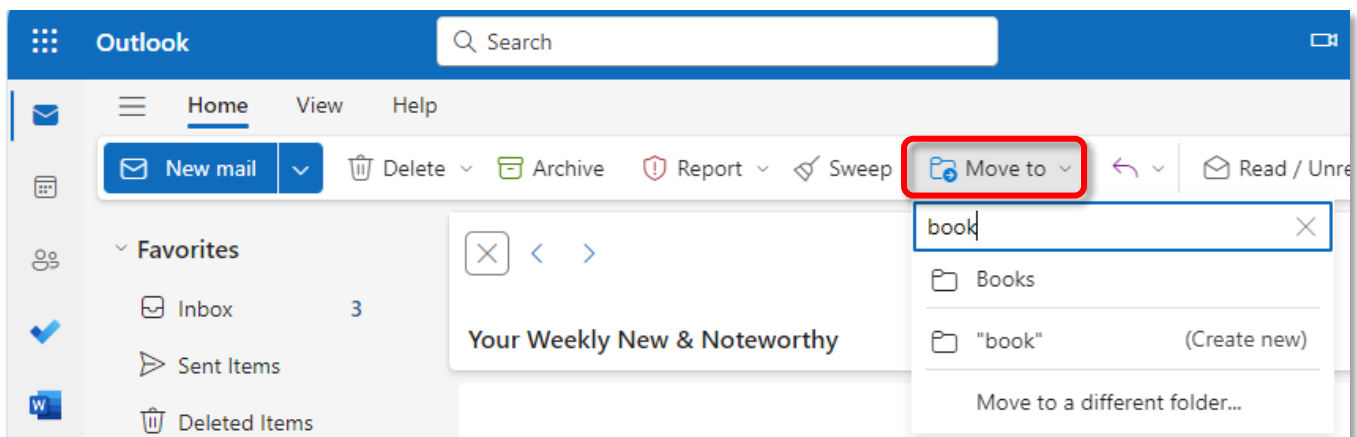
Office 365

Creating a Folder in Office 365

1. In the left pane, **right click** on your Inbox and select **Create new subfolder**.
2. A blank space opens at the bottom of your folder list. Type in a name for the folder.
3. Press the **Enter** key on your keyboard to finish creating the folder.



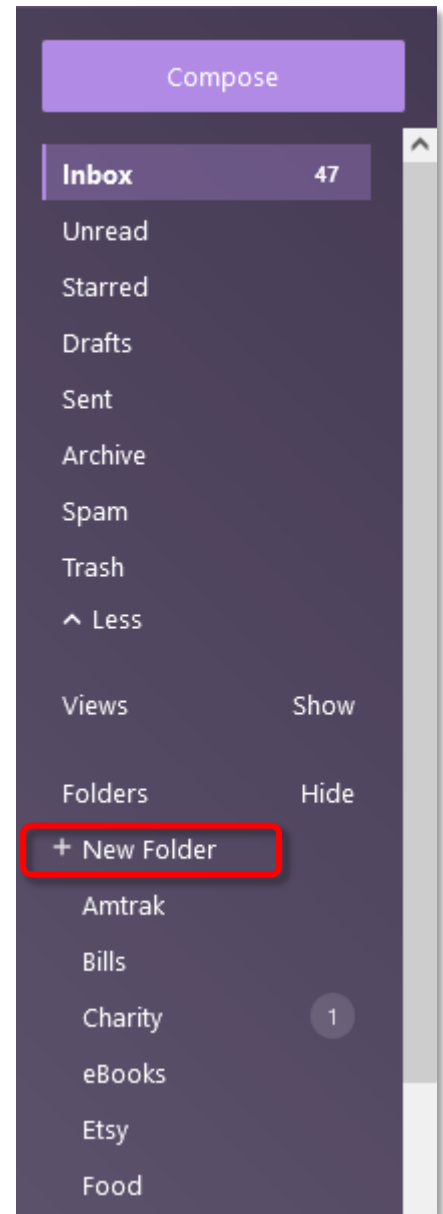
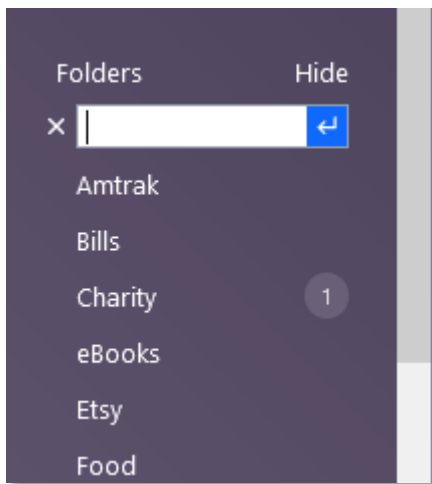
Adding a Message to a Folder in Office 365



Yahoo Mail

Creating a Folder in Yahoo Mail

1. In the left pane, scroll down until you see **Folders**. Click on + **New Folder**,
2. A blank space opens at the **top** of the Folder list. Type in a name for the folder.
3. Press the **Enter** key on your keyboard to finish creating the folder.



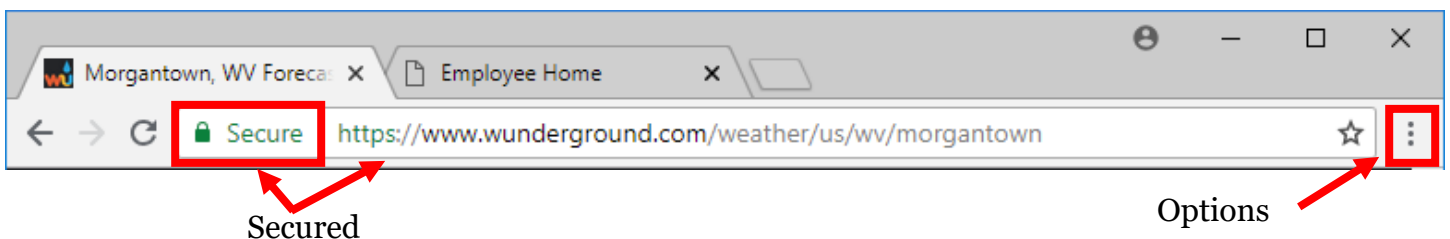
Web Browsers

Product	Site
Chrome	https://www.google.com/chrome/
Firefox	https://www.mozilla.org/en-US/firefox/new/
Opera	https://www.opera.com/
Vivaldi	https://vivaldi.com/

Web Browser Add-Ons

Product	Availability	Site
Disconnect	Firefox, Chrome, Safari, Opera	https://disconnect.me/disconnect
Privacy Badger	Firefox, Chrome, Edge, Opera	https://privacybadger.org
Privacy Spy	Firefox, Chrome	https://privacyspy.org/
Terms of Service Didn't Read	Firefox, Chrome, Opera, Safari, Edge	https://tosdr.org/

Browser Settings: Chrome



Chrome Settings

1. Click **Options** (Customize and control), and from the drop-down menu, select **Settings**.
2. The left pane contains a variety of browser settings.

To Clear Cache

1. In the left pane, select **Privacy and security**.
2. Select **Clear browsing data** and in the pop-up window, set the Time Range as desired, select the items to be deleted, and click **Clear data**.

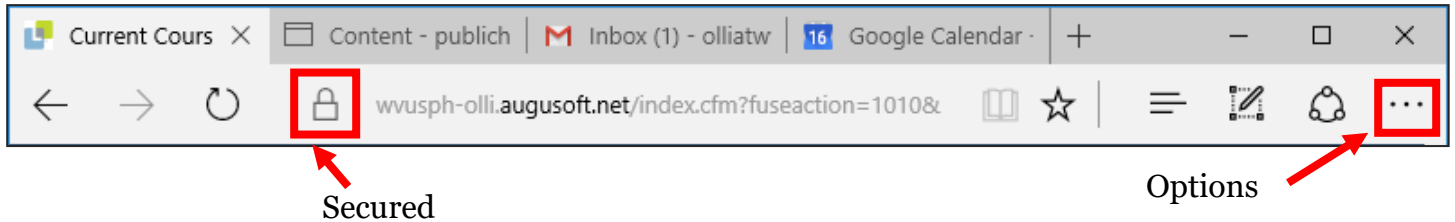
To Clear Saved Passwords

1. In the left pane, select **Autofill**.
2. In the main window select **Password Manager**.
3. Beside Offer to save passwords, switch the toggle to off.

Chrome Add-Ons

1. Open **Options** (Customize and control) and from the menu select **More Tools**.
2. From the pop-out menu, select **Extensions**.
3. In the top Left corner, click on the **three parallel lines** beside Extensions.
4. From the drop-down menu, click on **Open Chrome Web Store**.

Browser Settings: Edge



1. Click the **Options** (Settings and more) button in the right corner of the window.
2. From the drop-down menu select **Settings**.

To Clear Cache

1. In the top left corner, in the Settings Search box, type in **Cache**.
2. Click **Choose what to clear**, then select your desired options and click **Clear now**.

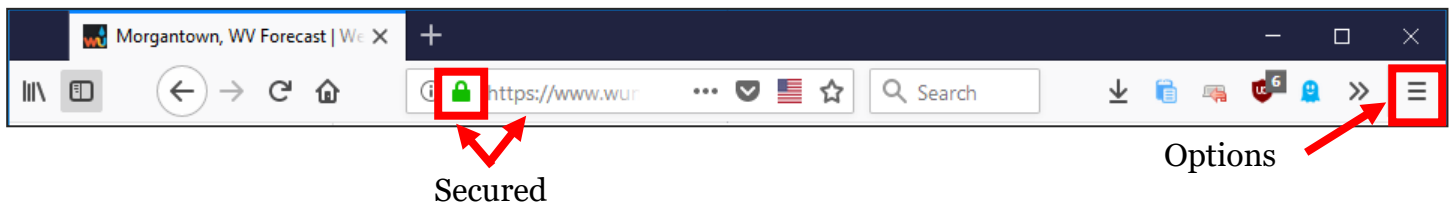
To Clear Saved Passwords

1. In the top left corner, in the Settings Search box, type in **Password**, then select **Passwords**.
2. Toggle off Offer to save passwords.
3. Click on **Manage my saved passwords** to delete existing saved passwords.

Edge Add-Ons

1. Open **Options** (Settings and More) and from the drop-down menu select **Extensions**.
2. Click the link for **Get extensions** from the store.

Browser Settings Firefox



1. Click the **Options** (Open application menu) button in the right corner.
2. From the drop-down menu select **Settings**.

To Clear Cache

1. Along the left side select **Privacy & Security**.
2. In the Cookies and Site Data section, click the **Clear Data** button.

To Clear Saved Passwords

1. Along the left side select **Privacy & Security**.
2. In the Logins & Passwords section, click the Saved Logins button to delete existing saved data.

Firefox Add-Ons

1. Click the **Options** (Open menu) button in the right corner.
2. From the drop-down menu select **Add-Ons**.

Anti-Virus and Security Suites

Product		Site
Avast	Free AV option	https://www.avast.com
AVG	Free AV option	https://www.avg.com
BitDefender	Free AV option	https://www.bitdefender.com
ESET NOD32	No free option	https://www.eset.com/us
F-Secure	No free option	https://www.f-secure.com
McAfee	No free option	https://www.mcafee.com
Norton	No free option	https://us.norton.com/antivirus
Trend	No free option	https://www.trendmicro.com
Webroot	No free option	https://www.webroot.com
Sophos	No free option	https://www.sophos.com

Search Engines

Ask	https://www.ask.com	Bing	https://www.bing.com
Duck Duck Go	https://duckduckgo.com	Google	https://www.google.com
Google Scholar	https://scholar.google.ca	Lycos	https://www.lycos.com
MetaCrawler	https://www.metacrawler.com	Yahoo	https://www.yahoo.com

How-Tos

Email Providers, Free	25	Creating a Folder in Yahoo Mail	28
Gmail	25	Web Browsers	29
Creating a Gmail Label	25	Web Browser Add-Ons.....	29
Adding a Label to a Gmail Message	25	Browser Settings: Chrome	29
Office 365	27	Browser Settings: Edge.....	30
Creating a Folder in Office 365	27	Browser Settings Firefox	30
Adding a Message to a Folder in Office 365	27	Anti-Virus and Security Suites.....	31
Yahoo Mail.....	28	Search Engines.....	31

Technology Glossary

5G

The fifth generation technology standard for cellular networks. It can support up to 10,000 devices per cell and have download rates up to 10 gigabits per second

Add-on

An accessory piece of software designed to increase the capability of the software to which it is appended.

Address Bar

In a web browser or windows explorer, it is a rectangle, usually towards the top of the window, that shows you the current location or address of your web page or file.

Address Book

See [Contacts](#)

Adobe Digital Editions (ADE)

Adobe proprietary format for eBooks.

Alexa

Amazon's virtual assistant.

Algorithm

A set-of rules to be followed in calculations or problem-solving operations. Algorithms are frequently used to manipulate data sets.

Android

Googles mobile operating system, built on open source software.

Anti-Virus

A program that protects you from malicious software. Most anti-virus programs have options for purchasing additional security measures such as firewalls, email scanning, etc.

App

Short for [Application](#).

Apple ID

This is the username and password that you create with Apple to link a specific device to your Apple account. If you have an iPad and an iPhone, you use the same Apple ID with both of those devices.

Apple

Technology company that designs and develops hardware and software.

Application

An application is a piece of software that lets your device do something, like play music or give directions. An application is the same thing is a program.

ARPANET

Advanced Research Projects Agency NETwork. The first true internet, it connected military installations, a handful of universities, and some third-party contractors together.

Autocorrect

Auto correct is when your phone automatically changes what you were typing to what *it thought* you wanted to type.

Autoplay

When you visit a website and music or video starts playing without asking.

AVI

Audio Video Interleave. A multimedia format for audio and video files.

AZW / AZW3

Amazon proprietary eBook format.

Backbone

Long-distance networks that carry data between data centers and consumers

Backup

A copy of computer data that is taken and stored somewhere else, to be used in the event of data loss.

Bandwidth

The amount of data that can be transmitted at one time. It is measured in bits per second

BCC

Blind carbon copy. Covertly send a copy of the message to a third party. The primary recipient cannot see the person was added.

Biometric

Unique physical characteristics that are be used for recognition. The most common types of biometric identifiers are fingerprints, voice, face, iris, and palm/finger veins.

Blockchain

Also Block Chain. A list of records (blocks) linked using cryptography. These records are a cryptographic hash of the previous block, a timestamp, and transaction data. Blockchains are generally used on a peer-to-peer network. Data in one block cannot be altered without changing all other blocks.

Bluetooth

A wireless technology that allows data to be shared over short distances using short-wave UHF radio signal. The name comes from Harald "Bluetooth" Gormsson, king of Denmark and Norway, who united the Scandinavians.

Boolean

A system of logical propositions. Common Boolean operators: AND, OR, NOT, “ “, () . Based on the work of George Boole.

Broadband

A fast, reliable, always-on connection to the internet.

Browser Add-on

See [Browser Extension](#).

Browser Extension

A small software module that is used to customize a web browser.

Browser Hijack

Where a malicious piece of software modifies a web browser's settings without your permission.

Browser

Short for [Web Browser](#).

Brute Force Attack

Where a hacker tries many passwords for passphrases in an attempt to break into an account. The longer the password (or passphrase) the harder it is for someone to succeed with this type of attack.

Byte

A unit of digital information that consists of eight bits. A byte is the number of bits used to encode a single character of text.

Cache

Temporary storage space that allows your computer to quickly bring up information, such as previously viewed web pages.

Cambridge Analytica

A British political consulting firm that used misappropriated digital assets, data mining, and other processes to influence political elections around the world.

Causation

Relation that holds between two temporally simultaneous or successive events when the first event (the cause) brings about the other (the effect). **NOT** the same as [correlation](#).

CC

Carbon copy. Send a copy of the message to someone else. The primary recipient can see this person received the message.

Cellular Data

The connection a cell phone makes to a cell tower that allows you to do things like surf the internet, download emails, and send MMS messages.

Cloud

Storage that is physically somewhere other than where you are. Cloud storage is generally accessible from multiple devices, because those files are stored on a hard drive that belongs to a company that hosts the cloud service. Cloud storage is like a self-storage unit for your electronic files, except you can access your stuff from anywhere.

Cloud Service

A service provided by a third party or company that allows you to provide access to files and applications remotely.

Codec

A device or program that encodes/decodes a data stream, such as an audio file, for storage.

Contacts / Contact List

A collection of screen names and the various data associated with them, such as email addresses and telephone numbers.

Cookie

A piece of data that a website saves on your computer. Cookies were designed to save user information such as preferences or logins but can sometimes be read by third parties. Cookies are also used to collect browsing data long-term.

Correlation

A mutual relationship or connection between two or more things. See also [Causation](#).

Cortana

Microsoft's virtual assistant.

CPU

Central Processing Unit. The bit of a computer or electronic device that processes information.

Cryptocurrency

A digital asset that uses strong cryptography and is designed to work as a form of money. They used decentralized control, or a public financial database to keep track of who owns what.

Cryptography

Greek for "hidden writing", it is the study of secure communication—creating protocols to keep third parties from reading private messages.

Data Breach

The release of secure or private information. A data breach can be accidental or malicious, such as when an individual hacks into a system to steal information.

Database

An organized collection of information. Complicated databases link information between multiple tables allowing for analysis of the contained information. An address book is a basic database.

Data Center

Room(s) full of servers that store user data and host online apps and content.

Denial of Service Attack (DOS)

A cyber-attack where the malefactor seeks to make a network resource (such as a website) unavailable by flooding the target with requests or visits.

Dial-up

An early way to connect a home computer to the internet. A phone line was used to connect a personal computer to the Internet Service Provider.

Directory

A system that catalogs / organizes computer files.

Displayport

A high-quality audio-visual cable capable of transmitting HD and 4k.

DMCA

Digital Millennium Copyright Act. The 1998 United States copyright law that criminalizes production and dissemination of technology, devices, or services that circumvent measures to control access to copyrighted works (DRM).

DNS

Domain Name System. The phonebook of the Internet.

DNS Hijacking

Where a malefactor redirects visitors from a valid website to a different destination—often one that exists to steal data.

Domain Name

The string of text that identifies a place on the Web. A basic domain name is a word or abbreviation followed by a period followed by the domain extension: wvu.edu

Domain

The sometimes arbitrary grouping that designates what a website does or where it is based. The most common domains are .com .net .edu and .org. The domain is what you should check first when you want to verify the authenticity of a website.

Download

To move data and files from the internet or a server to your computer or mobile device.

DRM

Digital Rights Management. A format that protects electronic media from being illegally copied.

DVD

Digital Video Disc / Digital Versatile Disc. A digital optical disc data storage system.

DSL

Digital Subscriber Line. A fixed connection to the internet that runs through copper phone lines.

DSLR

Digital Single-Lens Reflex

DVI

Digital Video Interface. A video display interface that connects your computer to your monitor.

eBook

An electronic file formatted (for the most part) to be read on a small handheld device, or on a computer screen in an eReader program / app.

eInk

A brand of electronic paper (e-paper) display technology from the E Ink Corporation (1997)

Email Header

The portion of an email message that contains the routing information. The header can be used to help determine if a message is fraudulent.

Email

Email is an electronic letter sent from one email address to another email address. Email addresses always have an @ (at sign) in them. Sending an email on your phone requires the use of cellular data. Each email address is unique, and email addresses are often used as unique identifiers or login credentials by databases.

Emoji

Small images used to represent emotions, ideas, or expressions. 😊

Emoticons

Representations of facial expressions using keyboard characters. These are used to portray moods or feelings. For example, a smiling face could be :) or ☺

Encryption

The encoding of data so that only authorized persons or devices can read/view the information. The stronger the encryption, the more unlikely it is that a malfeasant could decode the intercepted data through a brute force attack.

EPUB

Electronic Publication. A digital book format that allows you to read your eBook on any electronic device. EPUB files are reflowable.

eReader

eBook reader that use black and white eInk screens that give a similar reading experience to physical books.

Ethernet

Wired networking technology that allows multiple computers to talk to one another via a protocol (set of rules). Ethernet is used when speed, stability, and security are needed.

EULA

End-User License Agreement. The legal contract between a software vendor and the user of that software. It specifies the rights and restrictions which apply to the use of the software.

External Storage

Devices that store data outside of a computer or other electronic device. They are often removable, such as USB thumb drives.

Facebook

An online media and networking company.

Facial Recognition

Technology capable of identifying or verifying a person from a digital image. Facial recognition can be used to unlock an electronic device.

Fiber Optics

A flexible glass or plastic fiber that can transmit light signals with very little loss of strength

File Extension

Also called a filename extension or file type, is the identifier suffix for a computer file name, and tells you the kind of program needed to open the file. By default, these extensions are hidden, but can still be used in search. If you change a file extension, that file will most often break.

Firewall

A security system that monitors incoming and outgoing network traffic to prevent unauthorized access to a system.

Fixed-layout

Content remains locked in a specific place, when the document is enlarged you often have to scroll around to read the entire thing. A pdf is a fixed-layout document

Folder

See [Directory](#).

Follow

Choose to see another user's posts in their content feed.

Force Stop

A way to completely stop an app that is running in the background. An app that has been closed may still have bits active and collecting data.

GB

Gigabyte. A computer memory unit equal to 1000 megabytes. The prefix giga means 10^9 .

GIF

Graphics Interchange Format. An image format that is often used in logos and animated pictures.

Google

A technology company that specializes in services and products related to the internet.

GPS

Global Positioning System is a piece of hardware that allows a device to contact a satellite to determine the location of the device in latitude and longitude. On most devices, software makes these data points usable to the end user by placing them on a map.

GUI

Graphical User Interface (pronounced gooey). The windows, icons, menus, and pictures that allow you to interact with your computer using your mouse. Windows 10 and Mac OS (Big Sur) are operating system GUIs.

Hard Drive

A data storage devices that stores and retrieves digital data. In your computer, this is where all your programs are installed and files saved.

Hardware

The electronic components of a device; the bits you can touch. A cell phone, a keyboard, and a CPU are all hardware.

HD

High Definition. Generally a higher resolution and quality than standard definition video.

HDMI

High-Definition Multimedia Interface. Audio/video interface for transmitting uncompressed data. Cable that connects your computer to your monitor, or your DVD player to your TV.

HDR

High Dynamic Range. A photographic process where a camera takes multiple pictures at different exposures and combines them into a single image—this allows all areas of your image to be well-exposed, but can also look unreal if used too much.

Heat Map

A heat map is a visual representation of data that allows you to see phenomenon as clusters or over space.

Home Screen

The main screen of a computer or mobile device. Home screens are typically personalized by the user so that no two home screens will look alike.

Hotspot

A type of Wireless Access Point. A device that allows you access the internet from a public place. Hotspots are generally open and unsecured and you should assume any data you submit is visible to people with ill-intent.

Hover text

When you hold your cursor over a hyperlink, the document should display the URL for that link. This allows you to verify links.

http

Hypertext Transfer Protocol is how data is moved between a website and an end user.

https

Hypertext Transfer Protocol (Secure) is an encrypted form of http. This protects against interference or snooping by third parties.

iCloud

Apple's cloud service.

Icon

A graphic representation of a program, file or function.

Information Security

The protection of data and the mitigation of risks, generally on computer networks.

Install

A process that writes the code used to run the program (application) onto the hard drive of your device. Installing a piece of software embeds it into the device and allows it to work.

Internet

A system of inter-connected computer networks.

iOS

Apple's mobile operating system.

iPad

Apple's tablet computer, running iOS.

iPhone

Apple's cellular phone, running iOS.

iPod

Apple's music player. The iPod is general similar to an iPhone, only without cellular service.

ISBN

International Standard Book Number. A numeric commercial book identifier that is unique for every edition and variation of a book.

ISP

Internet Service Provider. Company you pay so you can have internet at home.

iTunes

Apple's music service.

JPG / JPEG

Joint Photographic Experts Group. A [lossy](#) compression format for digital images.

Keylogger

Keystroke logger (also keyboard capture). A piece of hardware or a software program that can record every key struck on the keyboard.

LAN

Local Area Network. A group of computers / devices that share a common communications line.

Last Mile

The service from your local provider to your home.

Latency

The time delay between the sending and receiving computer.

Location Bar

See [address bar](#).

Location Services

Information from GPS, wireless access points, cell towers, and Bluetooth devices that helps your phone know where you are.

Lock Screen

The opening screen or interface of an operating system. A lock screen keeps unauthorized users from accessing the data and information on a device.

Lossless Compression

A form of data encoding that maintains the original quality of the file but at the cost of having a large file size.

Lossy Compression

A form of data encoding used to reduce file size at the cost of data quality.

LTE

Long-Term Evolution, A technology for mobile wireless broadband communication.

Malware

Software is specifically designed to disrupt, damage, or gain unauthorized access to a computer system.

Mbps

Megabits Per Second. The speed of your internet service.

Messenger

An app that allows users to send text messages and images to other users in a system.

Metadata

A data set that give you information about other data. A card catalog contains metadata.

Micro-SD

Micro-Secure Digital Card. Smaller size [SD card](#), used in phones and lightweight devices. Comes with an adapter that allows for the transfer for files from a portable device to a computer.

MMS

Multimedia Messaging Service is a kind of text messaging that allows you to send text messages that contain pictures or audio, as well as messages longer than 160 characters or to multiple people.

MOBI

Mobipocket. The proprietary ebook format for the Amazon Kindle. MOBI files are reflowable.

Mobile Carrier

A wireless service provider that allows users to connect portable devices (such as phones) to the internet through a cellular service.

Mobile Data

Wireless internet access through a cellular data connection.

Modem

Modulator-demodulator. A device that converts data from a digital format to a format for analog transmission.

MP3

Moving Pictures Experts Group Layer-3. A coding format for digital audio.

MP4 / MPEG4

Moving Pictures Experts Group Layer-4. A coding format for digital multi-media, commonly video.

MPEG

Motion Picture Experts Group. A standard for encoding and compressing video.

NDA

Non-Disclosure Agreement. A legally binding contract where parties agree not to share sensitive or confidential information.

Network

A group of computers connected for the purpose of sharing resources. A network can be as small as two computers or as vast as the Internet.

News Feed

The main page of Facebook, where you see content posted by users you have chosen to follow. These content can be text or images.

Notification

A message displayed by an electronic device to provide an alert, reminder, or other communication.

Online Chat

Real time communication over the internet through (generally short) text messages.

OS

Operating System. The base upon which software and apps are added. An Apple device generally uses iOS (iPhones) or macOS (laptop computers). PCs typically used the Windows OS, but there are other operating systems, such as Linux that can be installed. Non-Apple cell phones frequently use some form of the Android OS. How your device looks and works is dependent upon the operating system installed.

P2P

Peer-to-Peer

Passcode

This is the secret code to get into a specific device. If you have an iPhone and an iPad, they can have different passcodes. You can sometimes use a fingerprint instead of a passcode to get into a device.

Password Manager

A program that stores electronic passwords.

Password

The secret code to access a restricted resources. Passwords are usually required to use a minimum of eight characters, and contain special characters, such as numbers or upper case letters.

PayPal

A method of online money transfer and payments.

PDF

Portable Document Format. Once an Adobe proprietary format, now one of the most common formats for sharing digital documents.

Peer-to-Peer

A distributed that shares tasks or work between devices of the same level.

Phishing

A fraudulent attempt to gain personal or sensitive information, by sending an email or creating a website that pretends to be from a real company or person, but is not.

Phreaking

An attack on the telephone system

Play Store

Goggle's app store, where users can download or purchase programs to run on their Android devices.

PNG

Portable Network Graphics. A [lossless](#) compression type for digital images.

Podcast

A digital audio file made available on the Internet for downloading to a computer or mobile device, typically available as a series, new installments of which can be received by subscribers automatically.

Post

A message, comment, image, or other item that is placed on the internet, generally on a website.

Predictive Text

An input technology that guesses what you want to type both from what you are currently typing and, if you have allowed the software to learn, from what you have typed in the past. Predictive text makes typing faster and easier if you have good software on the back end.

Privacy

The information that is shared between your device and the external resources to which it is connected, as well as how that information is used, and with whom that information is shared.

Program

A program is a piece of software that lets your device do something like send a text message or video chat. A program is the same thing as an application.

Public Network

An electronic connection where the traffic between devices is visible to anyone.

Reflowable

An ebook format that layout depending upon the output device. MOBI and EPUB are reflowable formats, which means the number of words on the page change, depending upon the page / text size.

Repeater

A device that extends the range of Wi-Fi signal.

Reply All

A response to an electronic message that is returned to ALL recipients of the original message.

Reply

A response to an electronic message.

Ripping

Extracting digital content from a container, such as a CD or DVD. Ripping a CD means that the music is copied without loss from the CD to your computer.

ROT-13

One of the most basic forms of encryption; a substitution encryption where characters are rotated 13 places.

Router

A networking device that forwards data between networks.

RTFM

Read The *Fantastic* Manual.

Scraping

Web scraping, web harvesting, web data extraction is extracting data from websites—gathering up information available on a public website.

SD

Standard Definition. The lowest quality rating for digital streaming.

SD Card

Secure Digital Card. Removable memory that is used in devices like cameras, because it can be easily switched out when full. Allows for easy transfer of files from device to computer without a cable.

Search

A computer command that allows you to find specific files on your computer that meet a designated category, such as file type, or date modified.

Search Engine

A software system designed to find information on the web. The results from a search engine can be webpages, files, or images. Generally, behind the scenes a program runs an algorithm that

crawls through the web cataloging everything it sees. This catalog is then organized by a different program where pages are associated with various terms.

Security

Protecting electronic systems from theft or damage. This can be protection from physical theft, but often refers to electronic damage, where systems can be disrupted or data stolen.

Server

A device (or program) that allows you to access something not on the device you are physically touching. A mail server stores your email and drops it to your device upon request. A web server allows you to connect to the internet.

Settings

An app that allows you to customize your computer, device, or program.

Siri

Apple's personal assistant.

Smart Device

An electronic device that connects to other devices or the internet through a wireless protocol such as Bluetooth or Wi-Fi.

Smart TV

A television with a network port to allow you to watch streaming services (and other internet content) without having to use an additional device.

SMS

Short Messaging Service. A brief message that is sent from one phone number to another phone number. SMS does not use cellular data.

Snooping

Unauthorized listening in to data transmission.

Snopes

One of the first internet fact-checking resources, Snopes started as a site to debunk urban legends, but expanded into general fact-checking. (<https://www.snopes.com/>)

Social Media

Interactive computer technologies and websites that allow for the sharing of information. Facebook is the most famous social media site, and allows friends to connect automatically, but LinkedIn is another type of social networking site, that focuses on career and job networking.

Software

The programs that run on your computer or phone. Can also be called an application.

Sort

To organize information in a prescribed sequence, such as alphabetically, or oldest to newest.

Spam

Unsolicited electronic messages (especially advertising).

Speed

Download speed is how quickly you can pull down data from the internet. Upload is how quickly you can send data out to the Internet.

Spoofing

When a person or program pretends to be someone else, by falsifying data, to gain access to your account or data.

Spyware

A piece of malicious software that secretly installs itself to gather information about the user or device.

SSD

Solid State Drive. A storage device for your computer that saves data on chips instead of a mechanical platters.

Status Bar

A graphical element, usually at the top or bottom of a device's screen, that displays information about the state of the device. Some settings commonly found on the status bar are sound/volume, time, and battery life.

Streaming Device

An object, such as Roku stick or Fire stick, you purchase that plugs into your existing TV so you watch video through the device on your existing television.

Streaming Service

An online provider of entertainment (music, movies, etc.) that delivers the content via an Internet connection to the subscriber's computer

Switch

A device that connects to a router and provides multiple ports for wired connections.

Sync

See [synchronize](#).

Synchronize

When a file is synced, changes to that file are saved are pushed from one device to all other devices with access to that file, via a remote server.

Tag / Tagging

A keyword or term added to the metadata of a piece of information. In social media, when someone is tagged, they are alerted to a post made by another user.

Taskbar

A graphical user interface (GUI) that is typically along the bottom of your window, and usually shows you what programs are actively running as well as important information about the operating system.

TB

Terabyte. A measure of computer storage equal to 1000 gigabytes or trillion bytes. The prefix tera means 10^{12} .

TCP

Transmission Control Protocol. The main protocol used on the internet that allows computers to send and receive data.

TCP/IP

Transmission Control Protocol/Internet Protocol

Terms of Service

The rules you agree to abide by when you sign up use an online service.

Text Message

A brief message that is sent from one phone number to another phone number via a protocol called SMS. Text messages are generally limited to 160 characters, and messages with more characters than that will be broken down into multiple messages when sent. Text messages are asynchronous: a message sent to someone whose phone is off is delivered when their phone is turned back on. Text messages generally do not require cellular data but do require a cellular connection.

Thumb Drive

[USB Flash Drive](#)

Thunderbolt

Interface reconfigured to be compatible with USB-C that carries data, video (PCIe and DisplayPort), sound, and power over a single cable.

TIFF / TIF

Tag Image File Format. Lossless digital image format that was developed originally for scanners as an alternative to multiple proprietary formats.

Timeline

A display of items in chronological order. Twitter has a timeline; Facebook has a news feed.

TL;DR

Too Long, Didn't Read

TOS

Terms of Service

Trojans

A type of malicious computer virus that presents itself as a useful item, such as a document.

Two-Factor Authentication

This is a way to make both your device and your account more secure. When you log into your Apple ID on a new iPad (or iPhone) for the first time OR you log into iCloud from a computer you have never used before, Apple wants you to verify that YOU are the person attempting to access your account.

TXT

[Text message.](#)

Unfollow

To stop seeing a user's posts in your timeline or news feed. On Facebook, you can unfollow someone by still remain friends with them.

Uninstall

The removal of a software program or application from the operating system of a device. Although uninstall removes the visible aspects of a program, there are often bits and pieces of the program left behind.

Unique Identifier

A piece of data that is unique to a record. Telephone numbers and email addresses are often used as unique identifiers, because no two individuals have the same ones. Unique identifiers allow data records to be linked across databases.

Upload

To move files from your computer to a cloud service or network.

URL

Uniform Resource Locator is the address of a space on the web. Every website has a unique address, and that address can often tell you something about the web page you are visiting.

URL Bar

See [address bar](#).

USB

Universal Serial Bus. This is the industry standard for cables that connect devices and their peripherals through a wire. This connection can be used for both communication and power. There are several types of USB connections: USB-A, USB-A 3.0, mini-USB, micro-USB, and the newest standard, USB-C.

USB Flash Drive

Also: USB thumb drive. A small USB data storage device that is removable, rewritable, and can be easily carried in a pocket.

User Data

Any type of data generated by people interacting with software programs. User data includes: Explicit Data, which is given by a user directly such as name, address, email, and phone number; Implicit Data, which is not provided by the user directly but gleaned through analysis of user interactions, such as pages visited, session duration, or type of device; and finally External Data which has been gathered from third parties with whom an organization has a relationship.

Username

Also called account name, login ID, user ID. The credentials you use to access an electronic resources, such as your computer or a website. Every account on a website or device must be unique to that service, so as to keep account information separate.

VGA

Video Graphics Array. A connector that takes video signal from a computer and takes it to the monitor (or projector).

Virtual Personal Assistant

A software program that performs tasks or services based upon verbal commands. Some of the most well-known services are Siri and Alexa.

Viruses

A piece of malicious software that inserts itself into another software program that it uses to replicate itself. Ransomware is a software virus.

WAV

Waveform Audio File Format. An audio file standard for uncompressed audio.

Web

Also called the World Wide Web, this is an information space on the Internet that is accessible from devices such as computers, cell phones, and tablets, using a URL as the address.

Web Browser

A software program that allows you to access sites on the Internet, or web.

Web Cookie

See Cookie.

Website

a location connected to the Internet that maintains one or more pages on the World Wide Web

Wi-Fi

Short for wireless (the “fi” is an arbitrary syllable added on)

Widget

A graphical element that displays information or provides quick access to certain parts of an app. Mobile devices frequently have a weather widget that is linked to your weather app, and which tells you the current temperature and forecast.

Wireless Access Point

A device that allows your device to access the internet. If a wireless access point (or router) does not have a password, it is unsecure, and you should assume that anyone can see what you are doing on your device.

Wireless Router

A piece of hardware that allows devices to connect to the internet without being plugged into the wall. Your wireless at home should be password protected, so that strangers cannot access all devices in your home using that wireless network.

Wireless

A technology that allows computers to connect to a network and/or the internet without using a physical connection. Wireless is available in an area when a wireless access point (also called a hotspot) has been created and made accessible to devices. Public wireless is less secure and caution should be used (ie, don't make purchases or send private emails over a wireless network). Private wireless networks (such as in your home) should be secured with a password.

WWW

World Wide Web. An information system on the Internet which allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another.

Acronyms

AF: As (naughty word)
AFK: Away from Keyboard
ATM: At The Moment
BTW: By the Way
B/C: Because
BFD: Big *Freaking* Deal
BFF: Best Friends Forever
BRB: Be Right Back
CU: See You
CYT: See You Tomorrow
DGMW: Don't Get Me Wrong
Diss: Disrespect
EOD: End of Discussion
EOM: End of Message
F2F: Face to Face
FAQ: Frequently Asked Questions
(pronounced fak to rhyme with pack)
FFS: For *Freaks* Sake
FREX: For Example
FTW: For the Win
FWIW: For What It's Worth
FYI: For Your Information
GOAT: Greatest of All Time
GR8: Great
HTH: Hope This Helps
HMU: Hit Me Up
IANAL: I Am Not A Lawyer
ICYMI: In Case You Missed It
IDC: I Don't Care
IDK: I Don't Know
IIRC: If I Remember/Recall Correctly
IKR: I Know Right
IMHO: In My Humble Opinion
IMO: In My Opinion
IOW: In Other Words
IRL: In Real Life
IYKYK: If You Know, You Know
JK: Just Kidding
L8R: Later
LMK: Let Me Know
LOL: Laugh(ing) Out Loud
MYOB: Mind Your Own Business
NGL: Not Gonna Lie
noob / n00b: Newbie
NNTR: No Need to Reply
NOYB: None of Your Business
NP: No Problem
NRN: No Reply Needed
NSFW: Not Safe for Work
NVM: Never mind
OMG: Oh My God
OMY: On My Way
OOTD: Outfit Of The Day
OTOH: On the Other Hand
OT: Off Topic
OTP: On the Phone
PM: Private Message
RL: Real Life
RN: Right Now
ROTFL: Rolling on the Floor Laughing
RTFM: Read the *Fantastic* Manual
RQ: Real Quick
RU: Are You
SFLR: Sorry for Late Reply
SO: Significant Other
SMH: Shaking My Head
STFU: Shut the *freak* up
TBC: To Be Continued
TBH: To Be Honest
THX: Thanks
TIA: Thanks in Advance
TL;DR: Too Long Didn't Read
TMI: Too Much Information
TTYL: Talk to You Later
TUVM: Thank You Very Much
TYT: Take Your Time
UR: You Are / Your
w00t / W00T: Hooray! Yay! Yippee!
W0: WithOut
W8: Wait
WFM: Works for Me
WRT: With Regard To
WTH: What the *Heck*
WTF: What the (naughty word)
YMMV: Your Mileage May Vary

Be careful with emojis, as many have multiple meanings besides the obvious. Don't send eggplant or peach unless you are *clearly* talking about foods.

Emoticons

(.V.)	Alien
O:-)	Angel
X-(Angry
~:0	Baby
:-D	Big Grin
(*v*)	Bird
:-#	Braces
</3	Broken Heart
=^.^=	Cat
*<:o)	Clown
O.o	Confused
B-)	Cool
:_(Crying
:'(Crying
\:D/	Dancing
_	Dazed
:o3	Dog
#-o	Doh!
:*)	Drunk
//_ ^	Emo
>:)	Evil Grin
<><	Fish
:-)	Frown
:(Frown
:-)	Frowning
=P	Frustrated
:-P	Frustrated
8-)	Glasses
\$_ \$	Greedy

:->	Grin
=)	Happy
:-)	Happy
:)	Happy
#	Hashtag
<3	Heart
{}	Hug
:-	Indifferent
X-p	Joking
:-)*	Kiss
:-*	Kiss
:*	Kiss
(-){(-)	Kissing
XD	Laughing
=D	Laughing Out Loud
)-:	Left-handed Sad Face
(-:	Left-handed Smiley Face
<3	Love
=/	Mad
:-)(-:	Married
@	Mention
<:3)~	Mouse
~,~	Napping
:-B	Nerd
^ ^	Overjoyed
<!:0	Partying

:-/	Perplexed
=8)	Pig
@~)~~~~	Rose
=(Sad
:-)	Sad
:(Sad
:S	Sarcastic
:-@	Screaming
=O	Shocked
:-o	Shocked
:-)	Smile
:)	Smile
:-Q	Smoking
:>	Smug
:P	Sticking Tongue Out
:o	Surprised
:-J	Tongue in Cheek
:-&	Tongue Tied
=-O	Uh-oh
:-\	Undecided
:-E	Vampire
=D	Very Happy
;-)	Winking
;)	Winking
_O	Yawn
8-#	Zombie

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