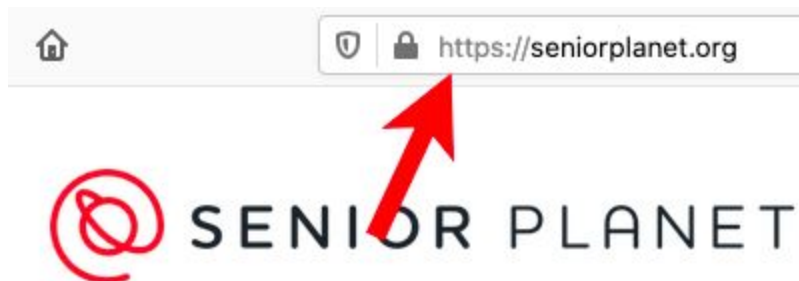# Understanding Web and Email Addresses

A web address or URL (Uniform Resource Locator) is a string of characters used to identify information on the Internet or on your computer. You see these on the top of the display of all web browsers. For example, the Senior Planet national website has a URL of "**https://seniorplanet.org**"

The Google search website URL is **"https://www.google.com"**
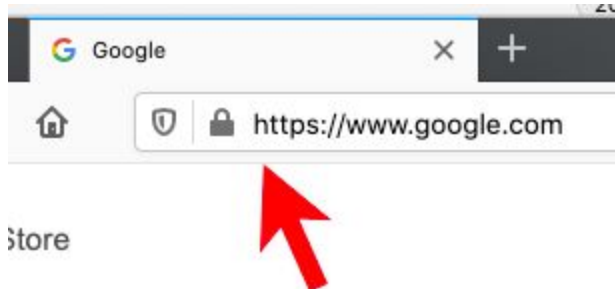
The Inbox in Gmail is a bit more complex:
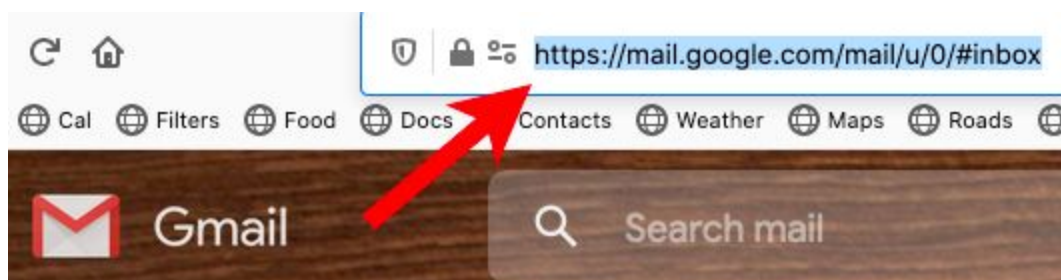
The web address is usually made up of several parts:

protocol://computer/path?parameters

The characters shown in red are used to separate the parts of the URL.

The **protocol** is normally one of these for web pages:

- **http://** - web page (HyperText Transfer Protocol)
- **https://** - secure web page (HyperText Transfer Protocol Secure)

There are several other common URL protocol strings:

- **file:///** - used when you open a file on your computer *(has 3 slashes)*
- **mailto:** - used to email address links *(has no slashes)*

The **computer** part of a web address identifies the computer your browser will communicate with to display the web page. This is often called the "**domain name**". It has several parts which are separated by the period character:

subdomain.domain.top-level-domain

It is usually read from right to left. The **top-level-domain** originally was used to indicate the type of the web site. The original ones were:

- **.com** - commercial web sites
- **.edu** - educational institutions
- **.gov** - government websites
- **.mil** - military websites
- **.net** - network provider websites
- **.org** - non-profit organizations

There are now hundreds of other top level domains. Wikipedia has a good list of these at:

https://en.wikipedia.org/wiki/List_of_Internet_top-level_domains

There are two letter country codes like:

- **.au** - Australia
- **.co** - Columbia (not commercial)
- **.tv** - Tuvalu (not television)
- **.uk** - United Kingdom

A complete and up to date list is at:

https://www.iana.org/domains/root/db

The **domain** part of the computer or domain name is usually the company or other entity (e.g. educational institution) that has purchased that domain, so the Google company owns the **google.com** domain and **cu.edu** is owned by the University of Colorado. This is done by registering the domain with a domain registration service.

You can get more information on who has registered a domain using and Internet program called "whois" or a web site like:

https://www.whois.com/whois/

The domain name is also used in email addresses, e.g.

judy@seniorplanet.org

Is the user "**judy**" at the "**seniorplanet.org**" **domain**.

The **sub-domain** is the part of the computer or domain name to the left of the **domain** and **top-level-domain**. Common values are:

- **www** - web page (World Wide Web)
- **support** - customer support pages for a web site

This part of the computer or domain name can be any string. For example Google uses this for their applications:

- **docs.google.com** - Google Docs
- **mail.google.com** - Google Mail (Gmail)

The subdomain can be made of of several parts separated by periods but this is less common and can be empty, e.g.

https://seniorplanet.org/

This has a top level domain of "**.org**" since Senior Planet is a non-profit organization and a domain of "**seniorplanet**".

The computer or domain name can be followed by an optional slash "**/**" and a **path** which determines what part of the web site you are viewing. This can optionally be followed by a question mark "**?**" and **parameters.**

You can normally ignore the **path** and **parameters** parts of the URL but they are often not too hard to understand

https://seniorplanet.org/locations/colorado/

is in the **seniorplanet.org** web site and has a **path** of **locations/colorado**

The path part of the URL is totally determined by the creator of the website you are visiting. It sometimes makes sense, e.g.

https://seniorplanet.org/locations/new-york-city/

Is the New York page on the Senior Planet website and all the locations have a path that starts with "**locations/**" but not all websites use simple readable URLs.

The last part of the URL is after an optional question mark "**?**" and is called the **parameters**. It is normally a set of values in the form of:

name=value

which are separated by ampersand "**&**" characters. This is often used for searching, e.g. searching for "whois" on **duckduckgo.com**:

https://duckduckgo.com/?t=ffab&q=whois&atb=v224-1&ia=web

This has four parameters ("**t=**", "**q=**", "**atb=**" and "**ia=**"). The parameters often don't make any sense but in this case it looks like "**q=**" is used for the search string.

The main things to look at in a URL are the **protocol** and **computer** (or domain name). Here are some simple rules to follow:

- Don't enter any important information on a **http:** website. Make sure the protocol is **https:**
- Make sure the domain name makes sense to you. If you get an email from Xcel Energy it should be from the **xcelenergy.com** domain which means it should like **something@xcelenergy.com**
- If you see a link in an email from Amazon, it will normally have a domain of **amazon.com**

Here is an example of a Phishing (fake) email:

From: "amazon.ben1@yahoo.com" <amazon.ben1@yahoo.com>
Date: July 14, 2020 at 9:43:45 AM MDT
To: joelmweissman <joelmweissman@hotmail.com>
Subject: Billing Receipt (Thank you for your Purchase!)

amazon

.Dear Customer,

Thank you for shopping with us. We thought you'd like to know that your item has shipped, and that this completes your order. Your order is on its way, and can no longer be changed.

Your guaranteed delivery date:
Monday, July 27

Shipping Confirmation

Order #402-412618-631729

Shipment Details

ACEPC AK1 Mini PC, Windows 10 (64-bit) Intel Celeron Apollo Lake J3455 Processor(up to 2.3GHz) Desktop Computer,8GB DDR3/64GB eMMC,2.4G+5G Dual WiFi,Gigabit Ethernet,BT 4.2,4K $ 489.09

Item Subtotal:	$ 489.09
Shipping and handling:	$ 14.01
Tax Calculated (GST/HST):	$ 7.18
Total:	**$ 510.28**
Paid by Card:	**$ 510.28**

This appears to be sent by Amazon but take a closer look at the sender information:

From: "amazon.ben1@yahoo.com" <amazon.ben1@yahoo.com>
Date: July 14, 2020 at 9:43:45 AM MDT
To: joelmweissman <joelmweissman@hotmail.com>
Subject: Billing Receipt (Thank you for your Purchase!)

This Amazon "Billing Receipt" was sent from a **yahoo.com** address. This cannot be right.

This is what a real Amazon receipt looks like:

Your Amazon.com order #112-2955199-3259408

Amazon.com <auto-confirm@amazon.com>
to dtaenzer ▼   *Click the triangle to see full address*

Amazon.c│
www.amaz│   from: **Amazon.com** <auto-confirm@amazon.com>
         │ reply-to: no-reply@amazon.com
─────────│   to: dtaenzer@iname.com
         │   date: Jun 2, 2020, 3:29 PM
Hello Davi│   subject: Your Amazon.com order #112-2955199-3259408
         │ mailed-by: iname.com
Thank you│ signed-by: amazon.com
         │ security: 🔒 Standard encryption (TLS) Learn more
We'll send│   ▶:   Important because it matched one of your importance filters.

It will come from and address at **amazon.com**

When you are looking at a website or email that has a link, it sometimes shows a URL in the text but actually goes to a different URL when you click on it. It may display as **https://seniorplanet.com** in the text but actually be linked to a completely different URL.

If you are not sure, always take a look at where a link is going before you click on it. Do not be fooled by the text of the link. Look at where the link will send you.

On laptops and PCs this is shown in the status display at the bottom of the web browser (you may need to enable this via a View menu). On a phone or tablet you can often press down and hold on a link to see a preview of where it will take you.

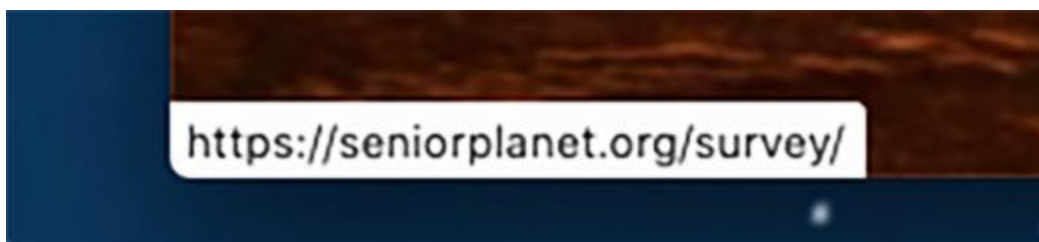For example, in this Senior Planet email, there is a survey link:

We are thrilled that you are attending our sessions and contributing such great Monyett!
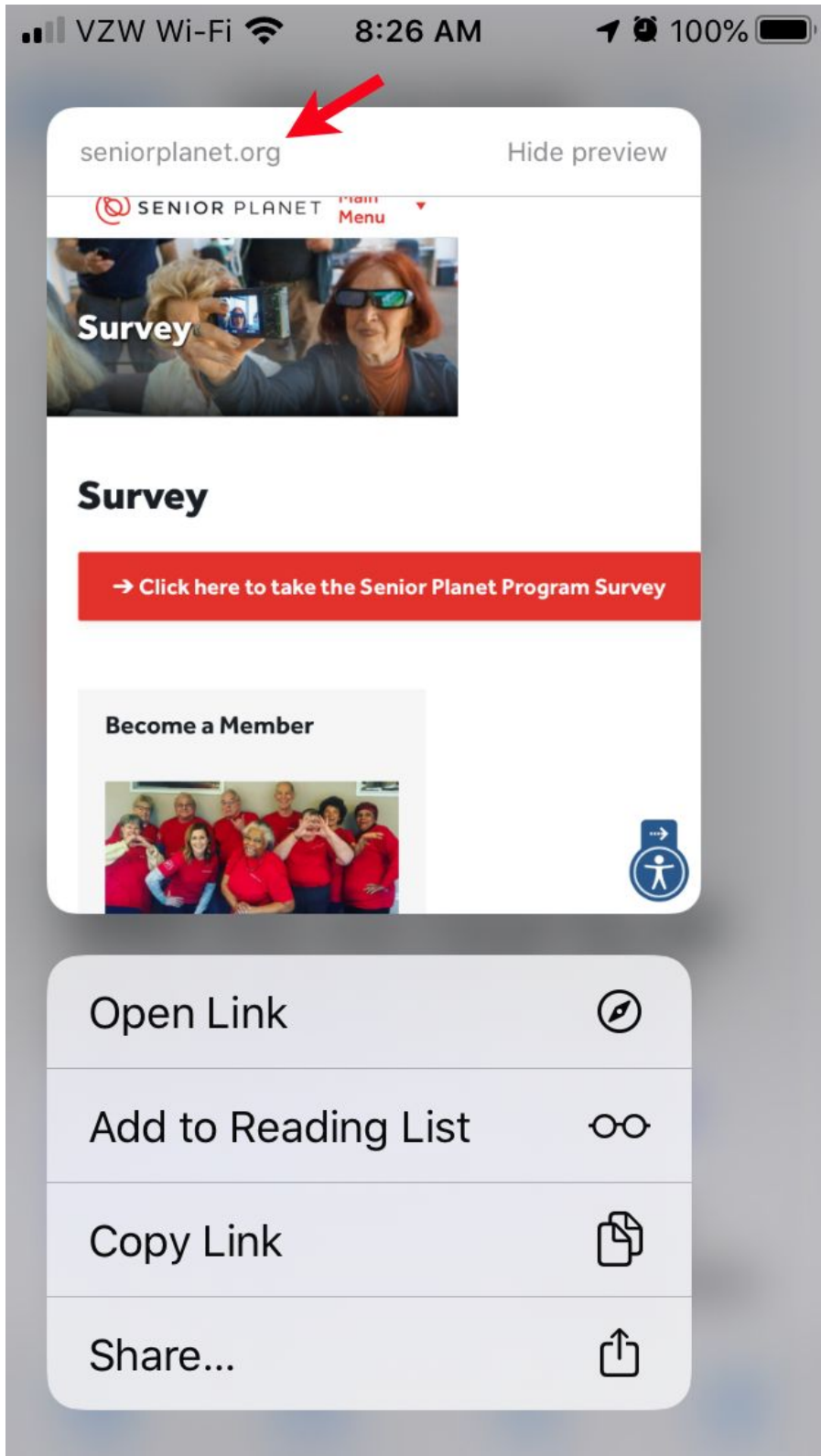**Please Give Us Your Feedback:** https://seniorplanet.org/survey/

The text of the link is:

    https://seniorplanet.org/survey/

When you move the cursor over the link and hover there you will see the same URL in the status display at the bottom of the bottom of the window:

https://seniorplanet.org/survey/

On the iPhone, when you press and hold on this link it shows a preview:

Sometimes the link text you see does not match where the link will go. Often this is used for email tracking. For example:

is linked to:

https://seniorplanet.us1.list-manage.com/track/click?u=61ca89833a6a 4180db0721be1&id=e326db4ad4&e=d1e5df7c1e

This is actually going to a computer in the **list-manage.com** domain. Don't be fooled by the "**seniorplanet**" in the subdomain.

This link looks reasonable because the path is "**track/click**" so this is probably just the location of a computer that tracks the fact that you have clicked this link and then forwards your browser display to the correct URL.

If the visible link shows a reasonable URL but the real link goes to a different county or makes no sense, please don't click on it!