



Module 1

Web Browser Basics





Objectives

- Session 1.1
 - Define the terms associated with the Internet and the World Wide web
 - Differentiate between web servers and web clients
 - Identify the name of the language used to create webpages and understand how it is used
 - Identify the shared features of modern Web browsers
 - Ensure easy access to previously visited websites
 - Efficiently navigate the web
 - Identify and manage cookies
 - Use the associated private browsing mode
 - Use the Help features provided by each browser
 - Save and print webpages



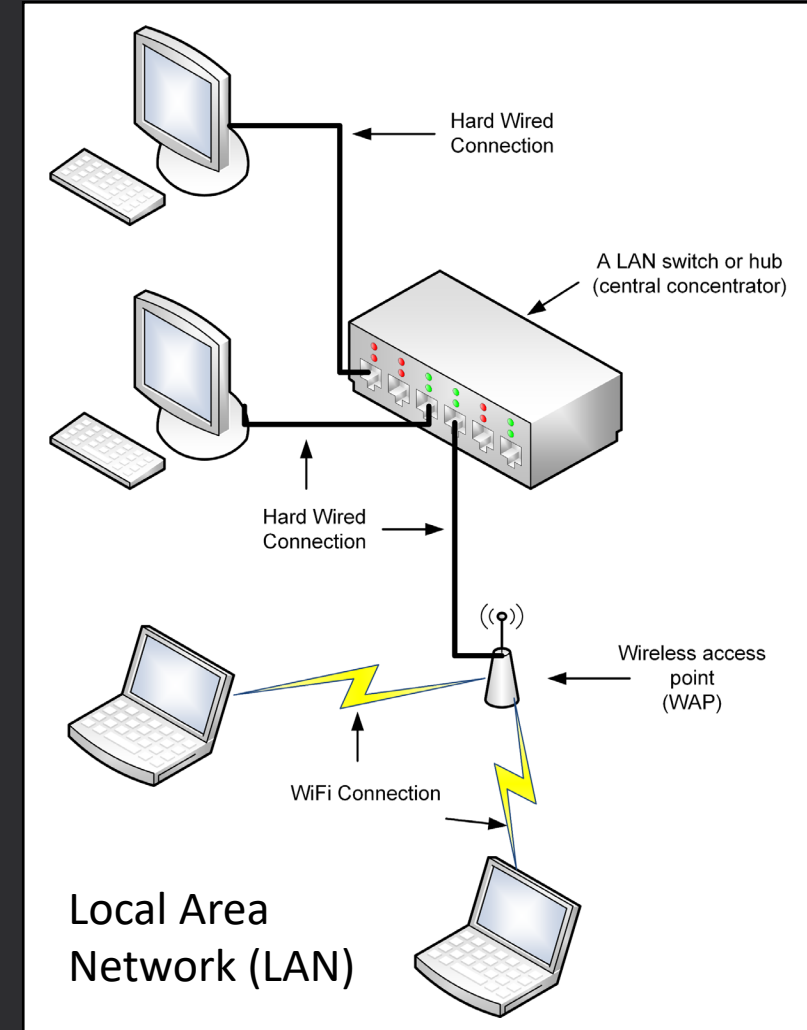
Objectives

- Session 1.2
 - Use Chrome's omnibox to complete calculations and conversions
 - Use Chrome to translate webpages from one language to another
 - Customize your Chrome browser with extensions and themes
 - Scroll and zoom Web pages easily and efficiently using Chrome
 - Use the Edge address bar to search
 - Use the Reading List and Reading View in Edge
 - Customize Edge by modifying default settings for searching and reading view
 - Save Web pages and their elements
 - Customize Firefox



Understanding the Internet and the Web

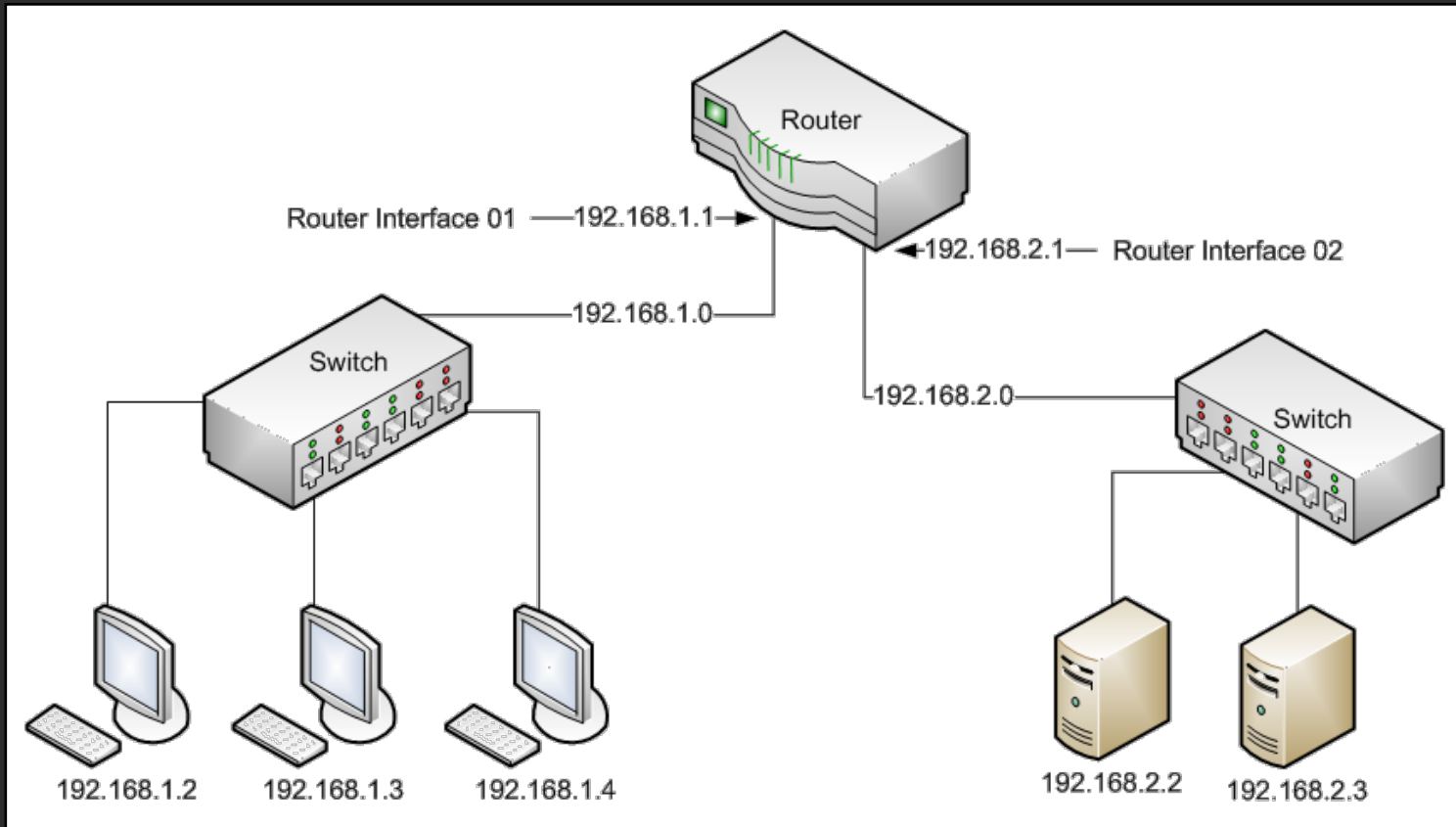
- Computers can be connected to each other in a configuration called a **network**
- To enable computers to communicate with one another they need to be connected to a device known as a data communications **switch** or **hub**.





Understanding the Internet and the Web

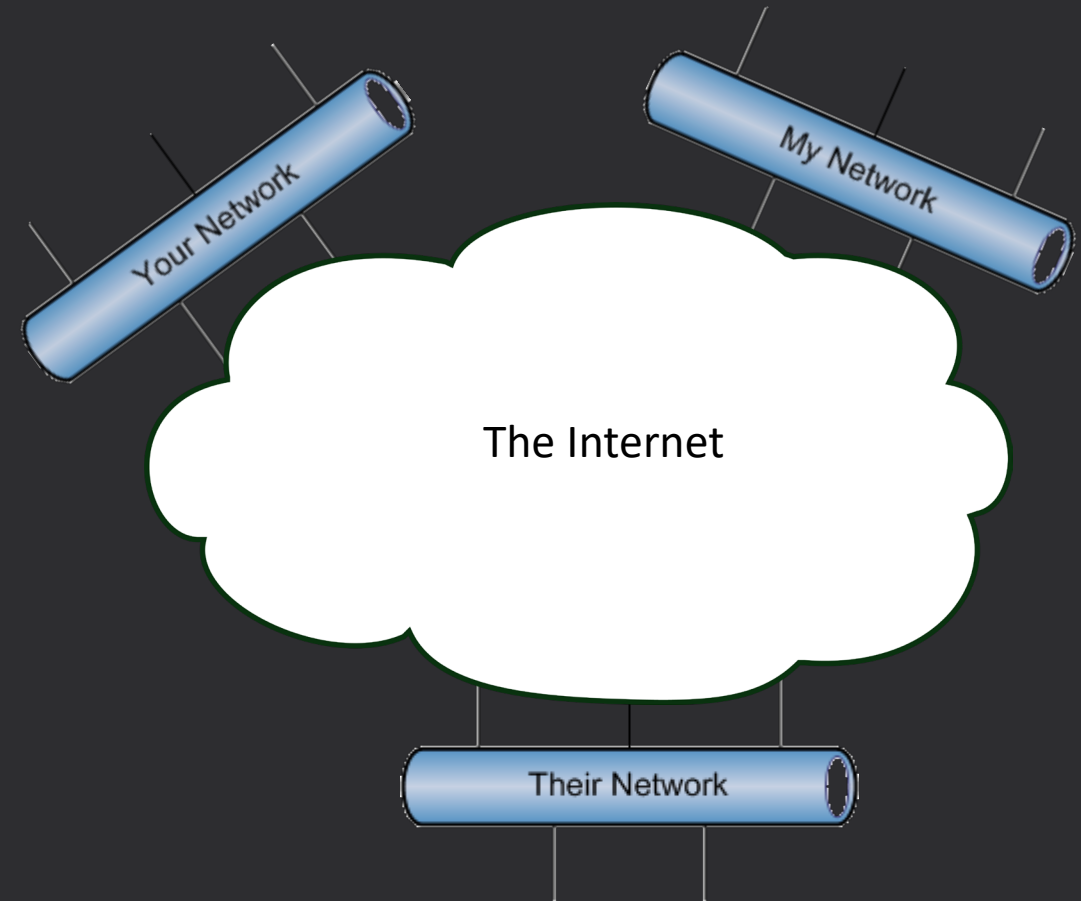
- When networks are connected to each other, the system is called an **interconnected network** or **intranet** (with a lowercase “i”)





Understanding the Internet and the Web

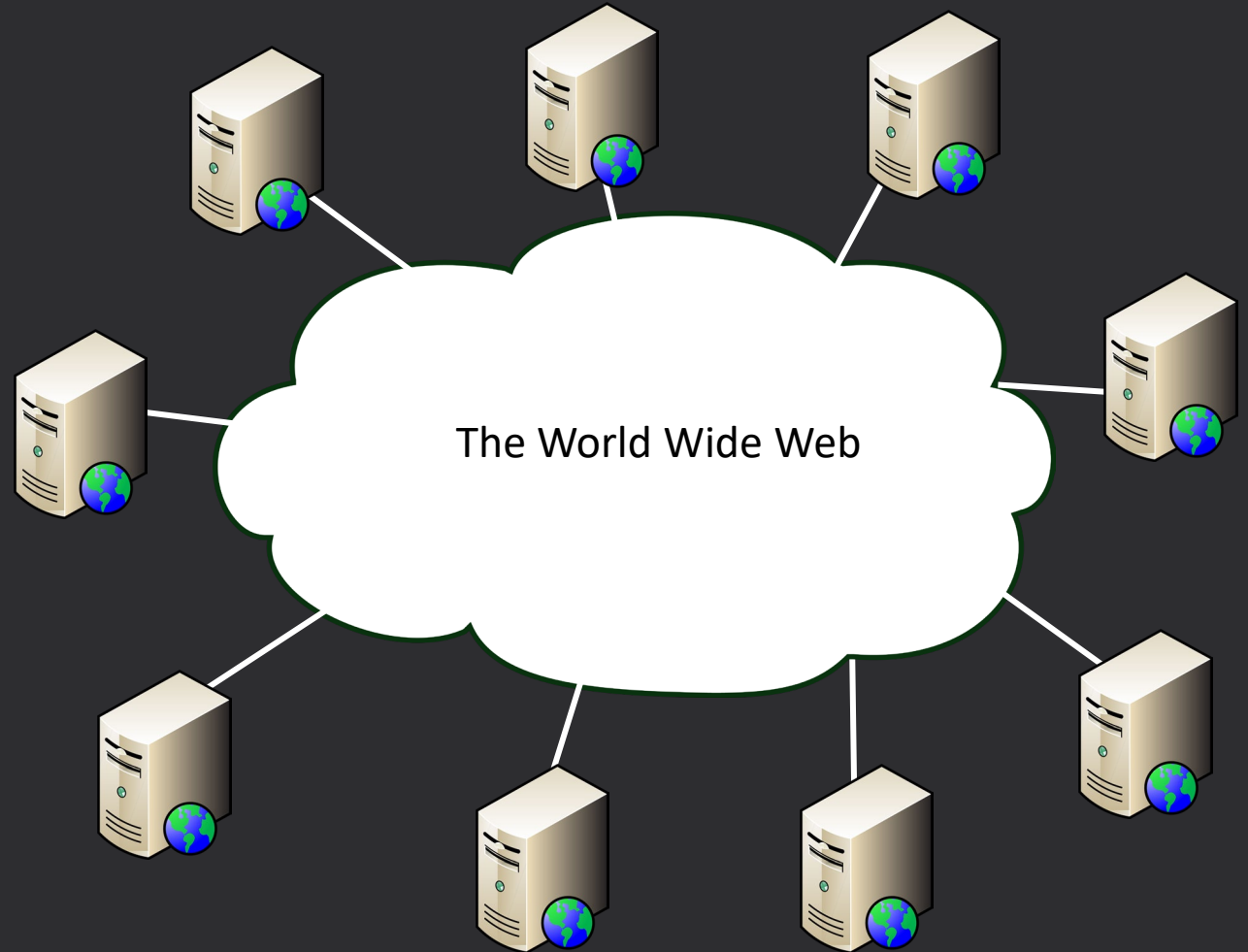
- The **Internet** (with an uppercase “I”) is a specific interconnected network that connects computers all over the world using a common set of interconnection standards
 - Associated Press (AP) has a new style guide which has the word **internet** with a lower-case “i”





Understanding the Internet and the Web

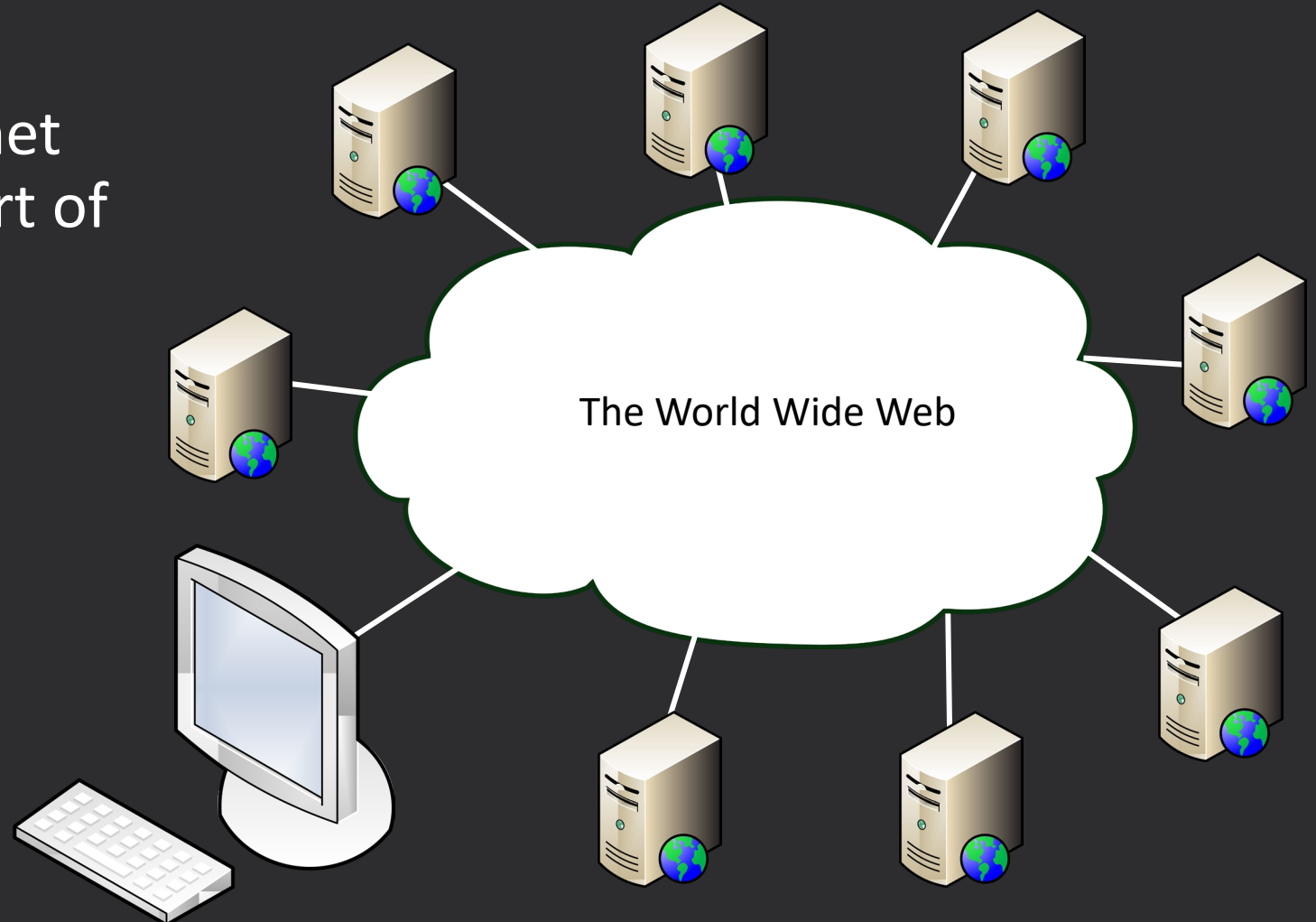
- The part of the Internet known as the **World Wide Web** (or the **Web**) is a collection of files that reside on computers called **Web servers**, that are connected to the Internet.





Understanding the Internet and the Web

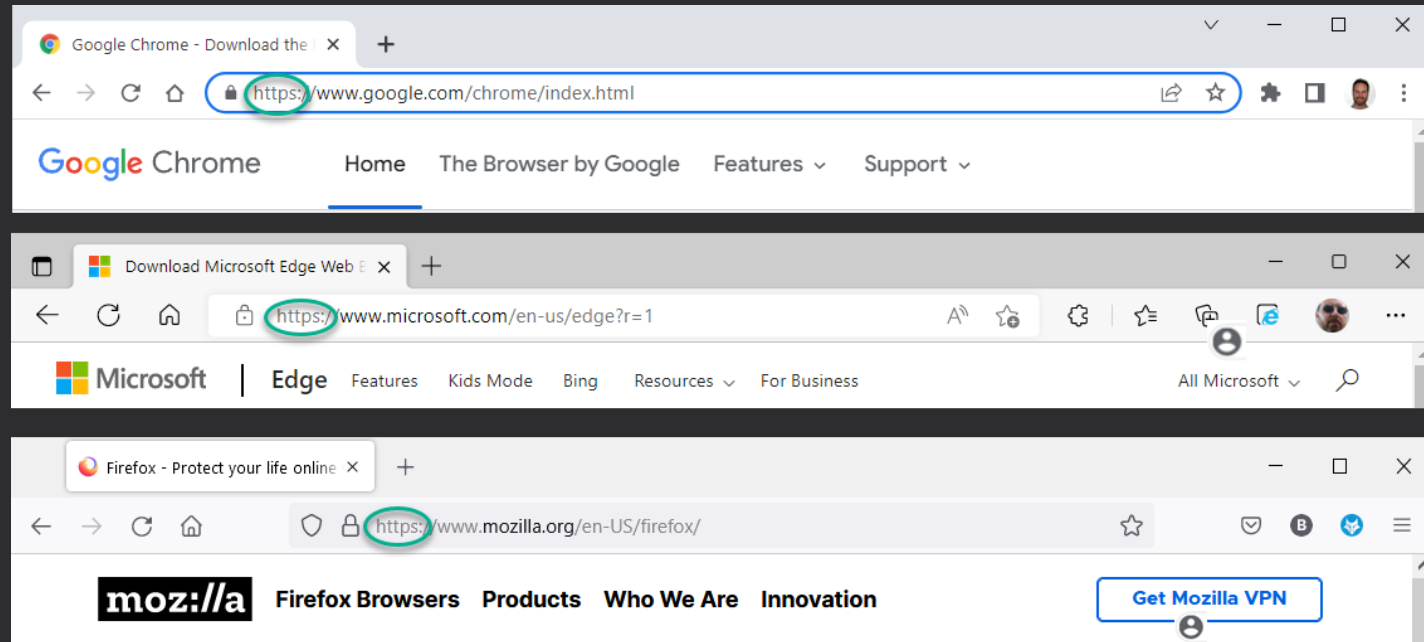
- When you use your Internet connection to become part of the Web, your computer becomes a **Web client**.





Understanding the Internet and the Web

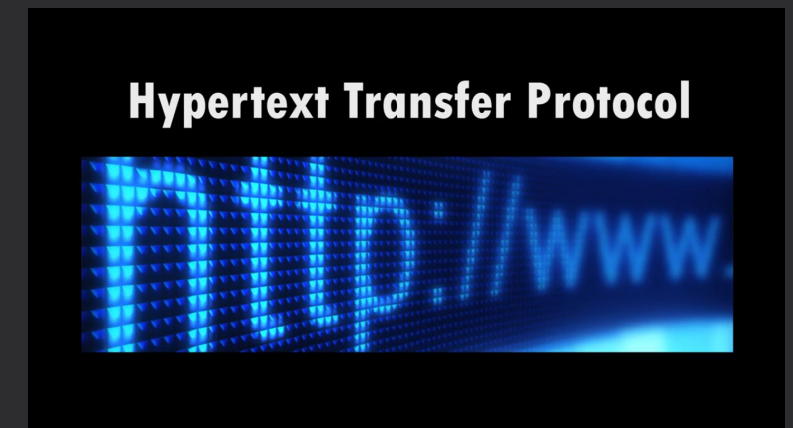
- A **Web browser** is the software that allows your computer to connect to, locate, retrieve, and display Web content using the *http* protocol.
 - It is the *http* protocol that makes the Web the “Web”





Understanding the Internet and the Web

- View this video, <https://www.youtube.com/watch?v=1O3VzejMZN0>, for the fundamental concepts of the World Wide Web
- View this video, <https://youtu.be/DNymwPXOues>, for a more detailed explanation of the Hypertext Transfer Protocol (HTTP)





Understanding the Internet and the Web

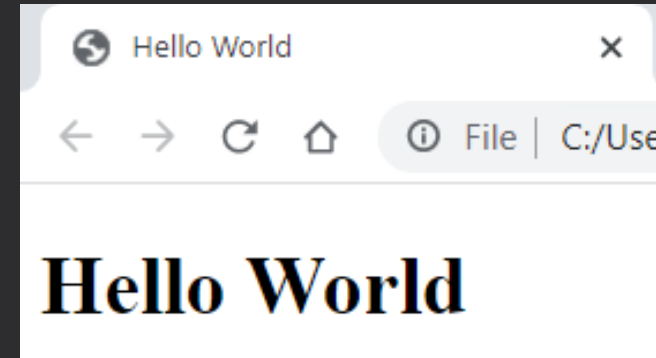
- Hypertext Markup Language and Hyperlinks
 - The standardized language used to create Web pages is **Hypertext Markup Language (HTML)**.





Understanding the Internet and the Web

- Hypertext Markup Language and Hyperlinks (continued)
 - HTML uses **tags** to create HTML **elements** which provide semantics (meaning) and structure to the contents of the Web page.

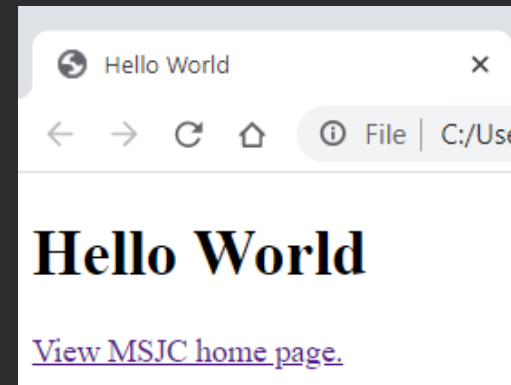




Understanding the Internet and the Web

- Hypertext Markup Language and Hyperlinks (continued)

- Anchor tags in HTML documents create **hypertext links**, which are instructions that point to other HTML documents or to another section of the same document (called bookmarks).
- Hypertext links also are called **hyperlinks** or **links**.
- When a Web browser displays an HTML document, it is often referred to as a **Webpage**.



```
8
9
10 <body>
11   <h1>Hello World</h1>
12   <a href="https://msjc.edu">View MSJC home page.</a>
13 </body>
```



Understanding the Internet and the Web

- Hypertext Markup Language and Hyperlinks (continued)
- View this YouTube animation for more details:
<https://youtu.be/NILbPqDTAsY>



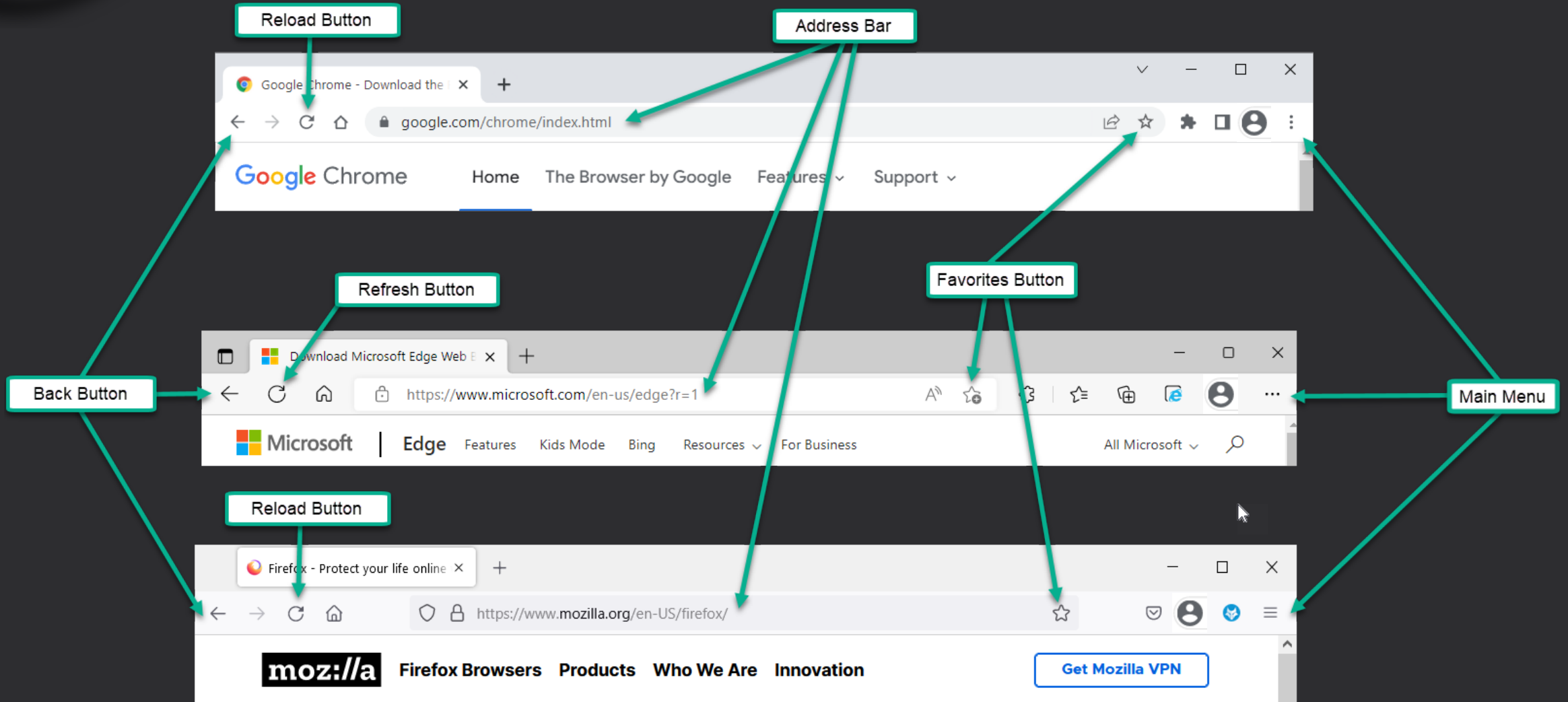


Starting a Web Browser

- Different Web browsers have similarities and differences, but all have some version of the following:
 - **Address bar** for displaying the URLs (uniform resource locators) used for locating webpages on the Web
 - **Back** and **Forward** buttons for navigating among previously visited pages
 - **Tabs** for open multiple webpages
 - **Home, Tools, View, Favorites, Feeds, and History** buttons or links to access the most common functions
- Users can customize their browsers to suit their needs.



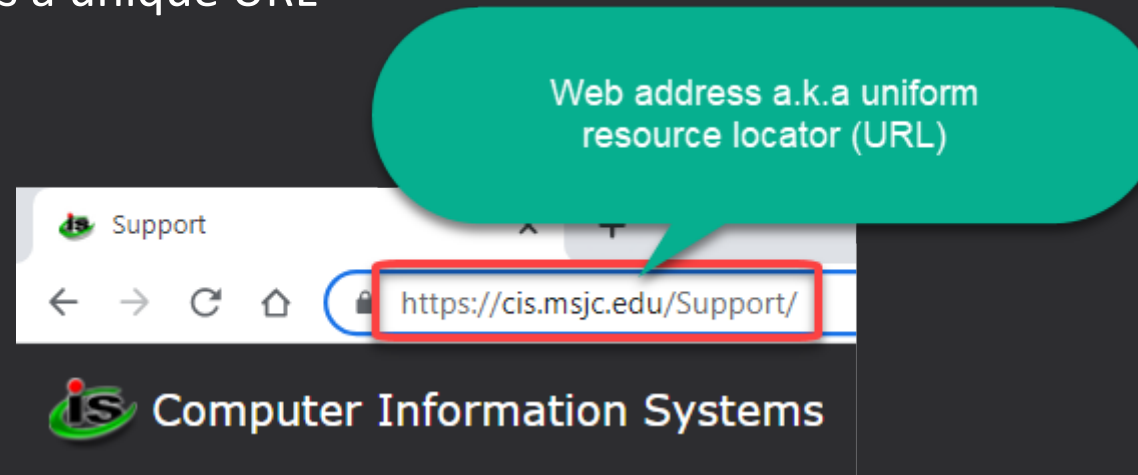
Features of Modern Web Browsers





Navigating Webpages

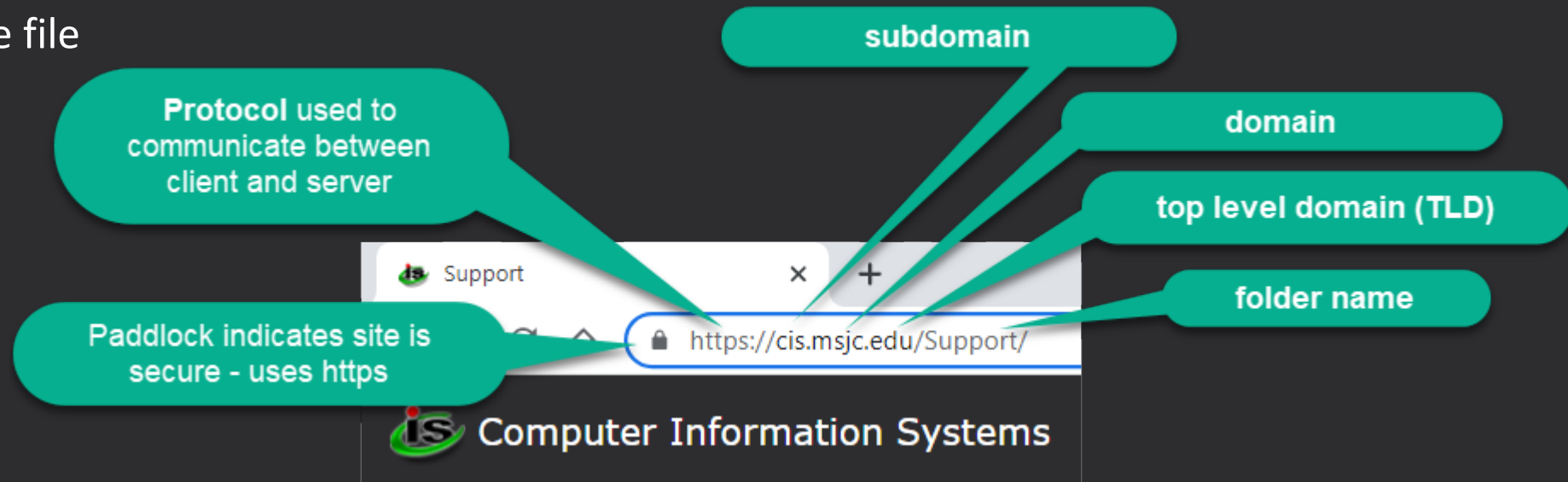
- To identify a particular webpage's exact location on the Internet, web browsers rely on an address called a **Uniform Resource Locator (URL)**
 - the URL is the address of a specific webpage
 - every webpage has a unique URL





Navigating Webpages

- Every URL has four parts
 - the protocol to use when transporting the file
 - the domain name of the computer on which the file resides
 - the path for the folder or directory on the computer in which the file resides
 - the name of the file



- See <https://cis.msjc.edu/Tutorials/Internet/WWW/URLs>



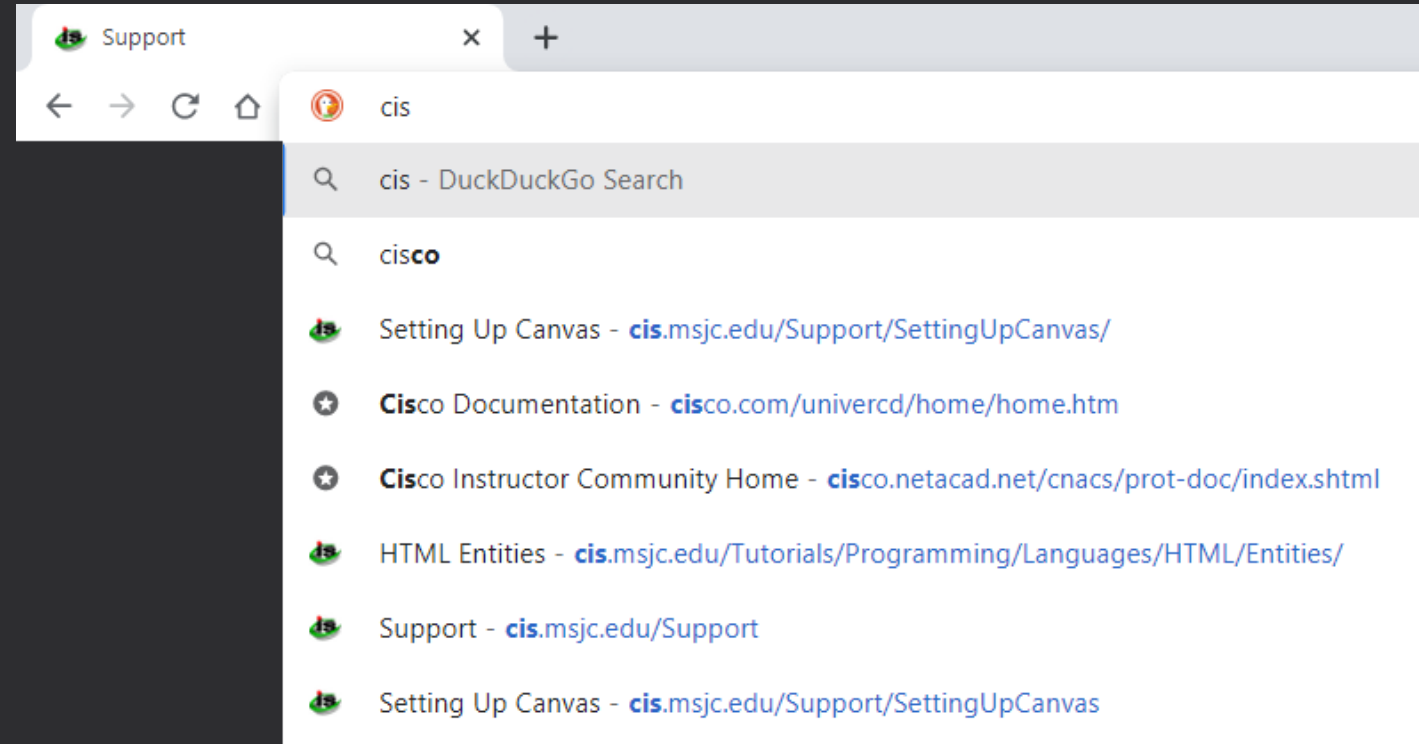
Navigating Webpages

- The two most common protocols used to transfer files on the Internet are Hypertext Transfer Protocol (HTTP) and File Transfer Protocol (FTP).



Navigating Webpages

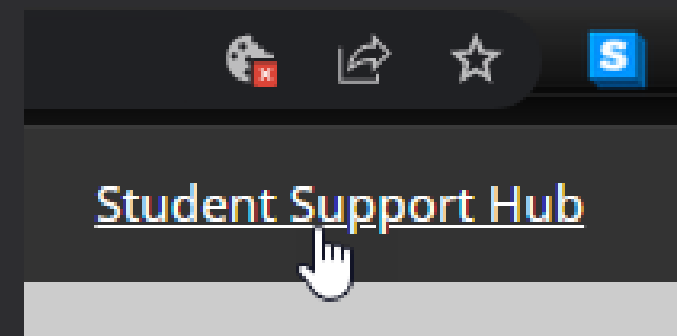
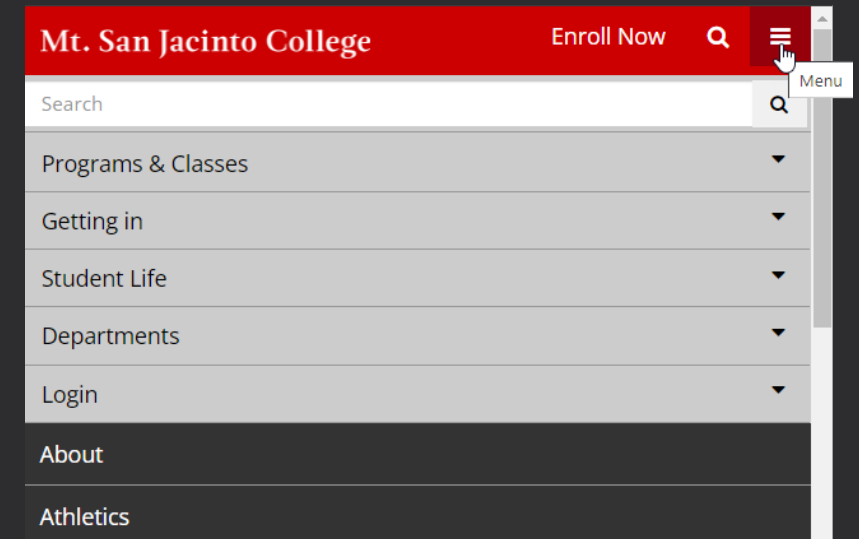
- Entering a URL in the Address Bar
 - You can use the Address bar, which is located on the Navigation bar, to enter a specific URL and go directly to that webpage.
 - If you don't see the URL you want in the Address bar list, you can enter a partial URL or a search word.
 - A **search engine** performs a search based on the text you type in a search box and displays the search results.





Navigating Webpages

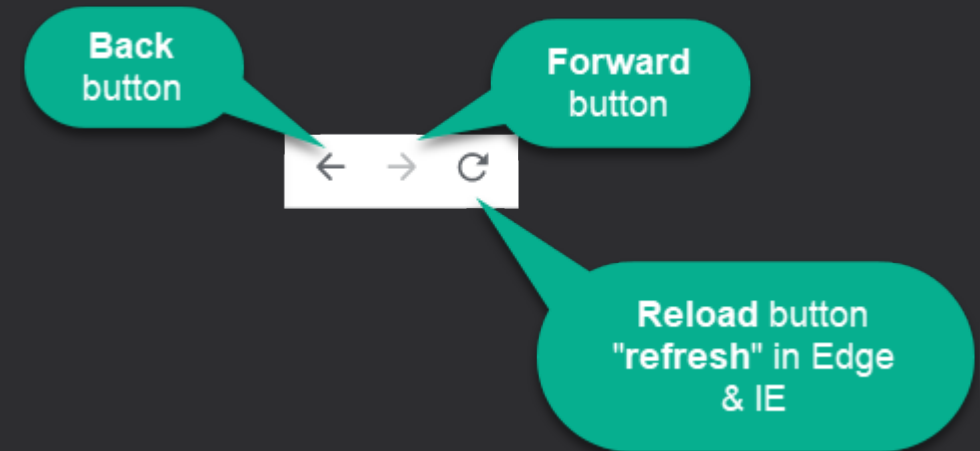
- Clicking Links
 - Most webpages include links to other webpages.
 - A link might
 - open a webpage that is related to the original webpage
 - be a link to a company
 - open a webpage with related information or an advertised product or service
 - open a menu with additional links
 - The cursor often changes to a hand when it is over a link.





Navigating Webpages

- Navigating Visited Webpages
 - The Back and Forward buttons let you navigate among the pages you have just visited.
 - The Reload/Refresh button loads a new copy of the webpage that currently appears in the browser window.
 - Browsers store a copy of every webpage they display on your computer's hard drive.
 - This is called "caching"

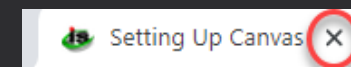
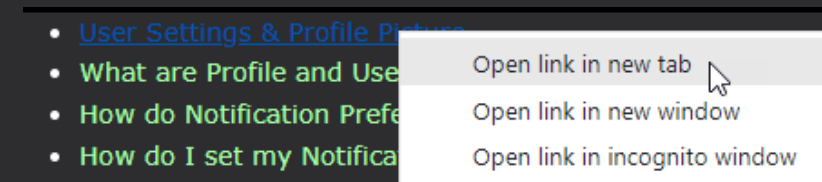
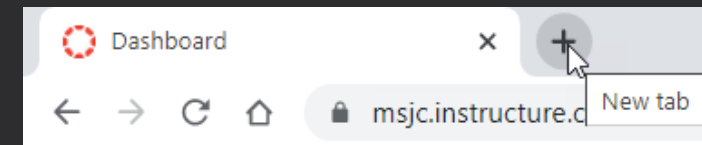
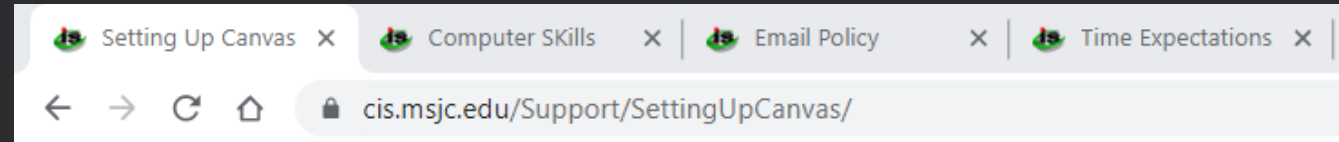




Navigating Webpages

- Using the Page Tabs

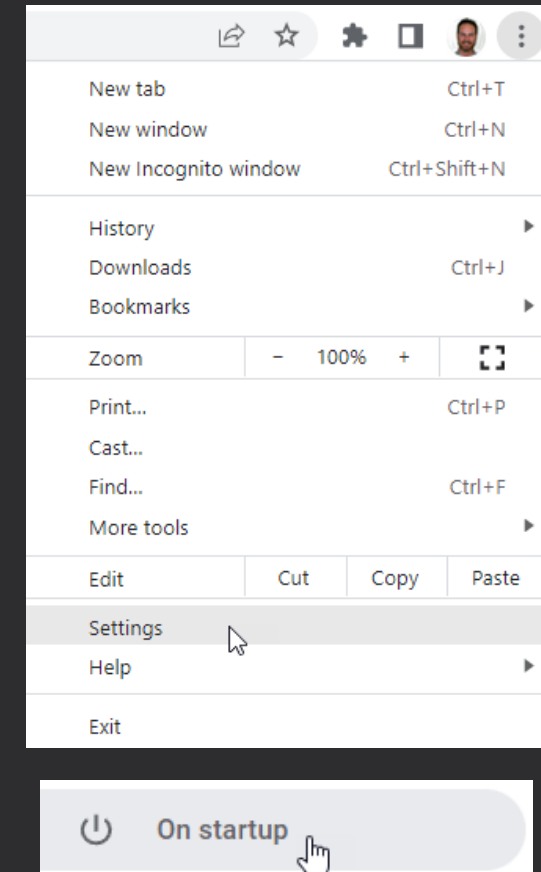
- You can open additional page tabs on the tab row above to the Address bar and load different webpages on each tab instead of opening additional webpages in separate browser windows.
- There are several methods for opening a webpage in a new tab:
 - Click the *New tab* button on the tab row, and then open a webpage as usual
 - Right-click a link on a webpage, and then click the *Open link in new tab* command on the shortcut menu
 - Press the Ctrl key as you click a link
- To close a tab, you click the Close Tab button on that page tab.





Navigating Webpages

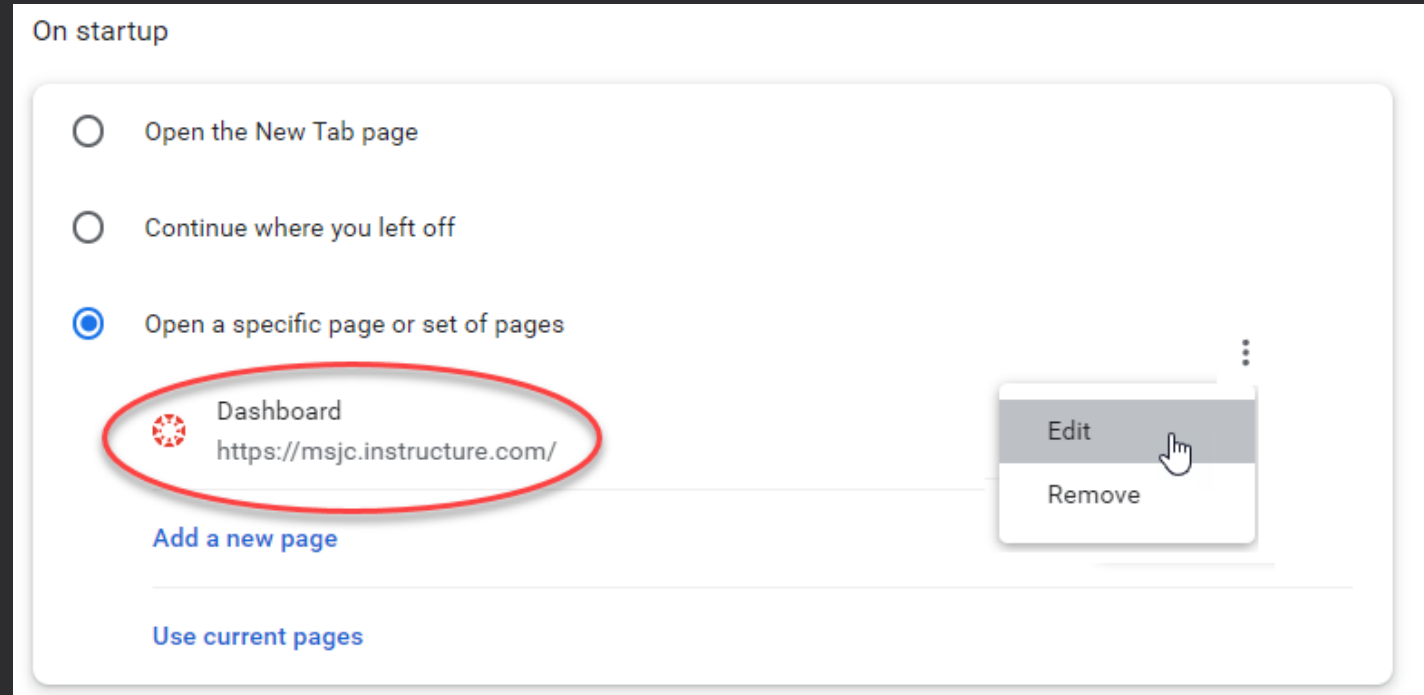
- Changing Your Home Tab
 - Users can customize their browser to display they want as the home page when the browser first opens.
 - To change the home page of your browser, select the webpage you want to be your new home page and then set it as the default home page.
 - Search on the key phrase “changing my browser’s default home page” for the most up-to-date steps on how to change the home page for your browser.





Navigating Webpages

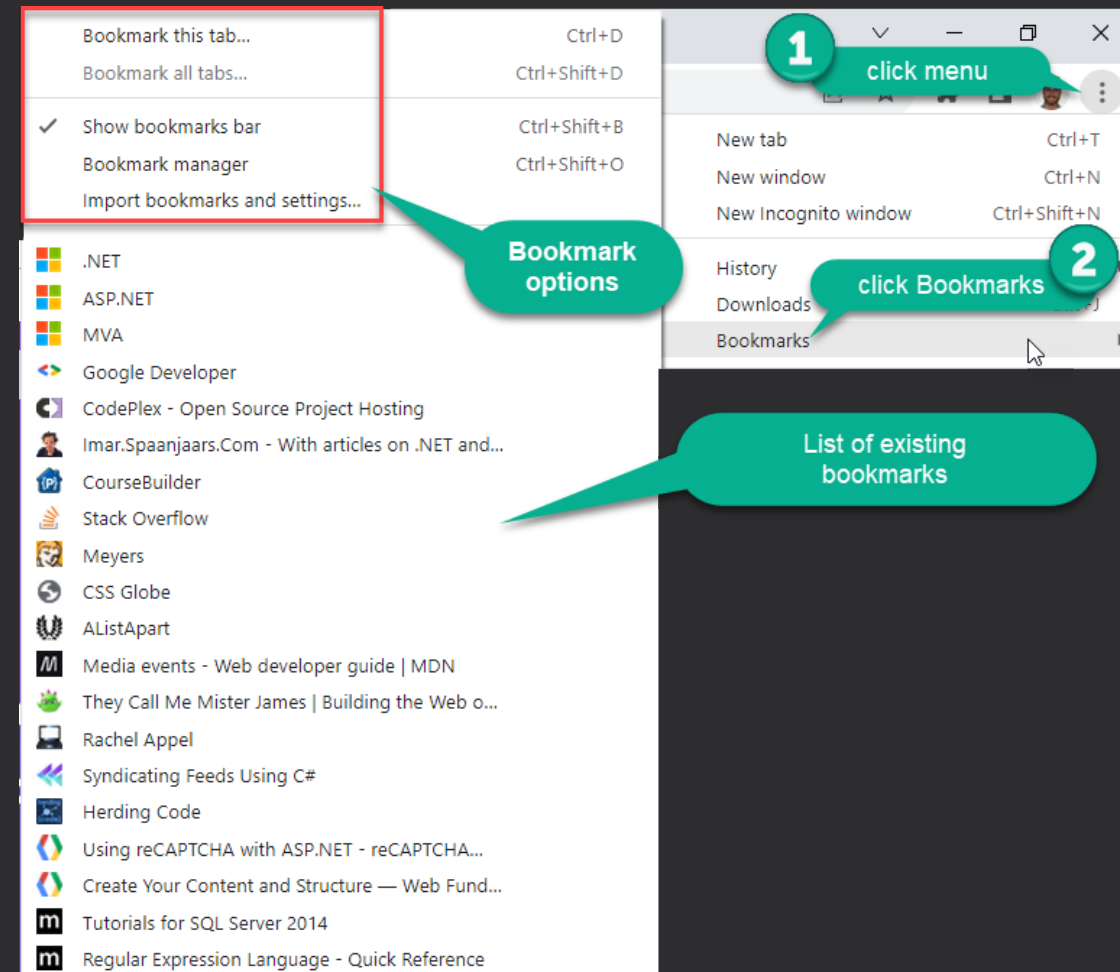
- On startup options:
 - Open the New Tab page
 - Continue where you left off
 - Open a specific set of pages
 - Add a new page
 - Use current pages





Using Bookmarks and Favorites

- The terms “bookmarks” (Chrome and Firefox) and “favorites” (Edge) are often used interchangeably to describe webpages users save for easy access at another time.
- When you start accumulating favorites, it is helpful to keep them organized so that you can quickly locate the site you need.
- Users can add, delete, and organize bookmarks into folders that best suit your needs and working style.

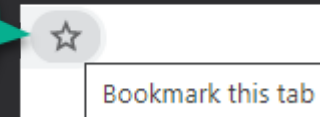




Using Bookmarks and Favorites

- Users can add bookmarks that they want to access frequently, using the Bookmark this tab button in the address bar.

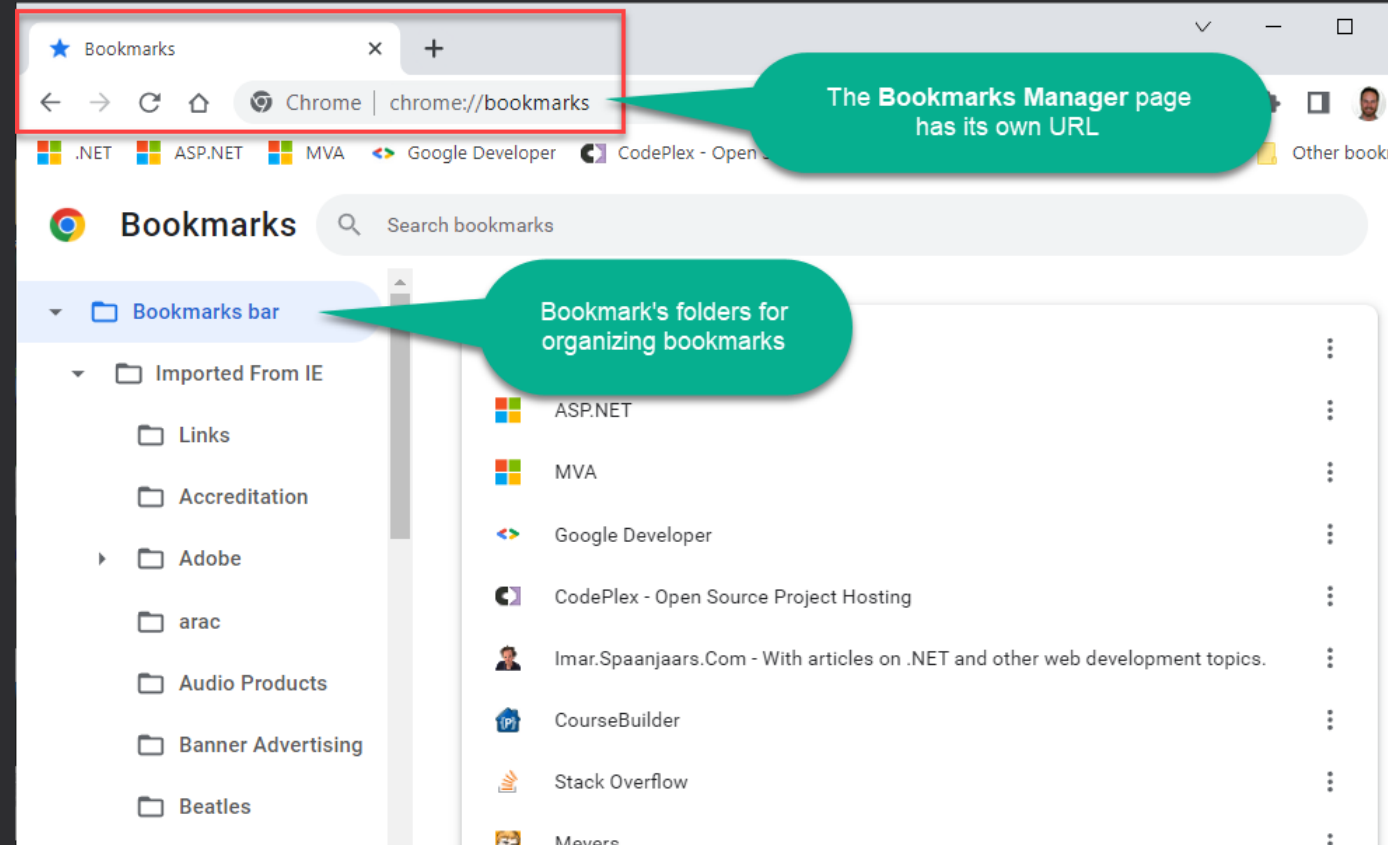
Click star in address bar to bookmark the page you're viewing





Using Bookmarks/Favorites Manager

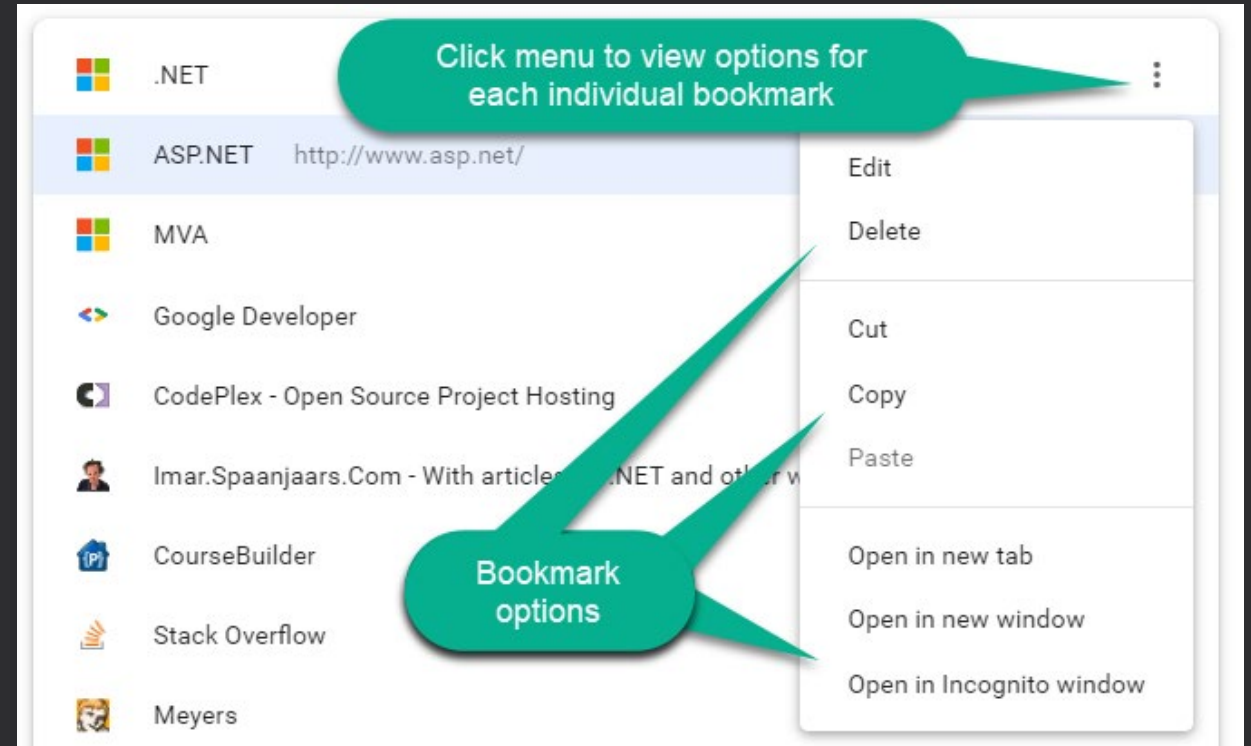
- Users can use the Bookmark Manager to create folders and organize bookmarks.





Using Bookmarks/Favorites Manager

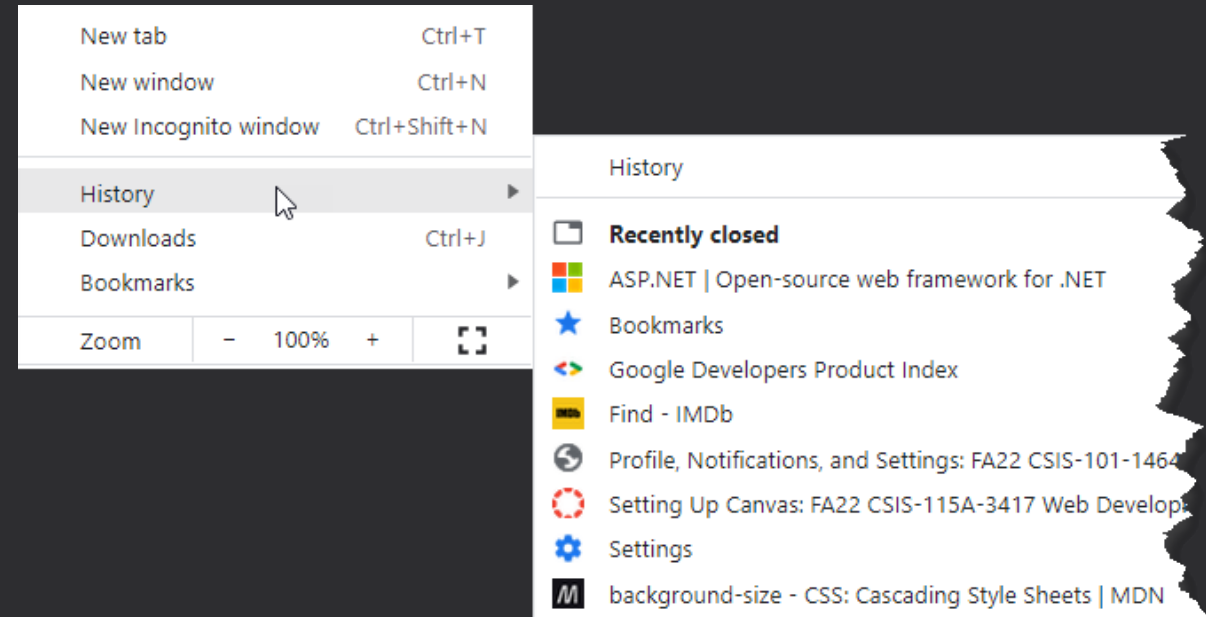
- Users can edit, delete, cut, copy and open bookmarks from the Bookmark Manager.





Using Browser History

- Open the browser's menu and click **History** to view the History list
- The History list is useful when you know you visited a site recently, but you did not create a favorite and you cannot recall the URL of the site.
- From the History tab, you can view a list of the sites that were visited on that computer during the last three weeks.
- You can also press Ctrl + H to open the History list.





Managing Cookies

- A **cookie** is a small text file that a web server saves on the hard drive of the computer that is running the web browser software.
- A cookie is used to store information about your visit to a specific website.
- When the site you are visiting places a cookie on your computer, it is called a **first-party cookie**.
- Cookies that are placed by companies other than the company whose website you are visiting are called **third-party cookies**.



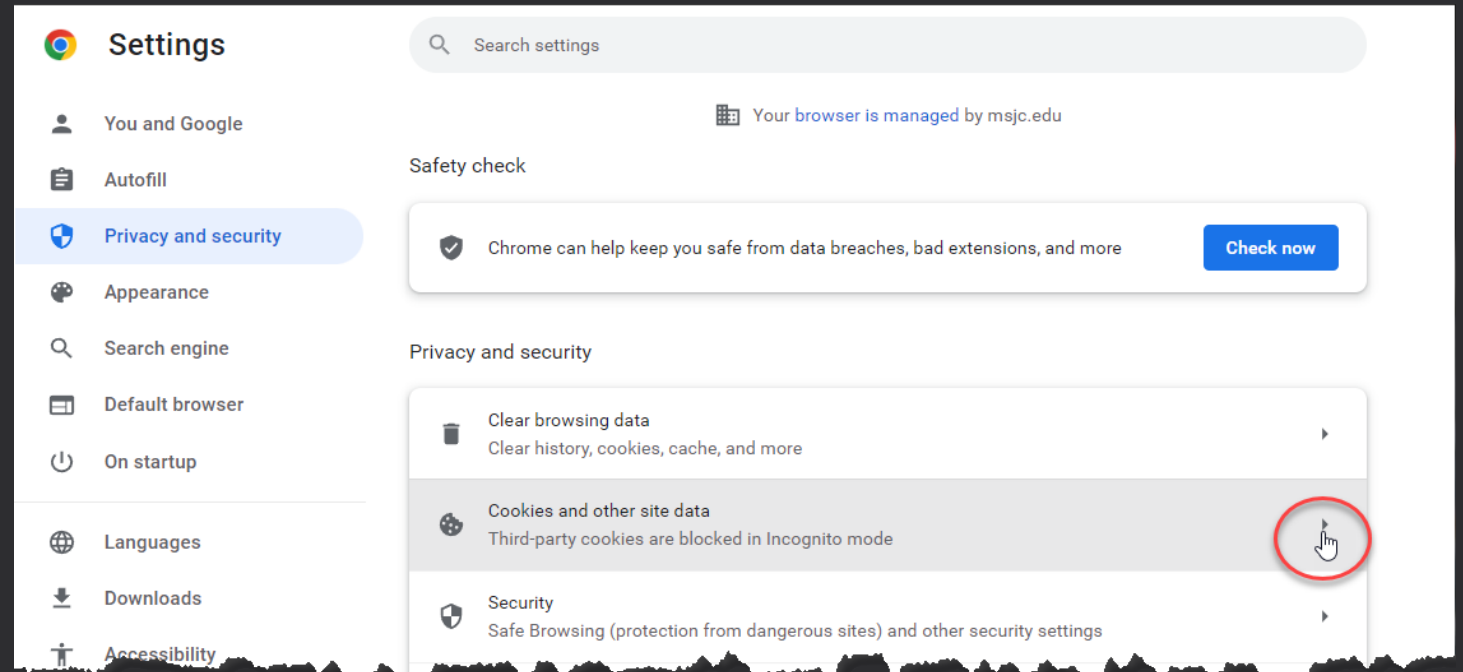
Managing Cookies

- Most web browsers allow you to block cookies from your computer or to specify general categories of cookies (such as first-party or third-party) to block.
- You can delete cookies.
- Some cookies benefit users, so it is important to consider the pros and cons of cookies before you delete all of them from your computer.



Managing Cookies

- Click the arrow to the right of ***Cookies and other site data*** on the Setting page.





Managing Cookies

- Adjust the cookies settings as you see fit.
- The image to the right is showing the default settings in Chrome.
- Be careful – cookies mostly improve your browsing experience

General settings

☐ Allow all cookies

☒ Block third-party cookies in Incognito

Blocks third party cookies only when in incognito mode.

Sites can use cookies to improve your browsing experience, for example, to keep you signed in or to remember items in your shopping cart

While in Incognito, sites can't use your cookies to see your browsing activity across different sites, for example, to personalize ads. Features on some sites may not work.

☐ Block third-party cookies

Blocks all third party cookies

☐ Block all cookies (not recommended)

Blocks all first and third party cookies

Clear cookies and site data when you close all windows
When on, you'll also be signed out of Chrome

Send a "Do Not Track" request with your browsing traffic

Preload pages for faster browsing and searching
Preloads pages that Chrome thinks you might visit. To do this, Chrome may use cookies, if you allow cookies, and may encrypt and send pages through Google to hide your identity from sites.

See all cookies and site data

Customized behaviors

Sites that can always use cookies

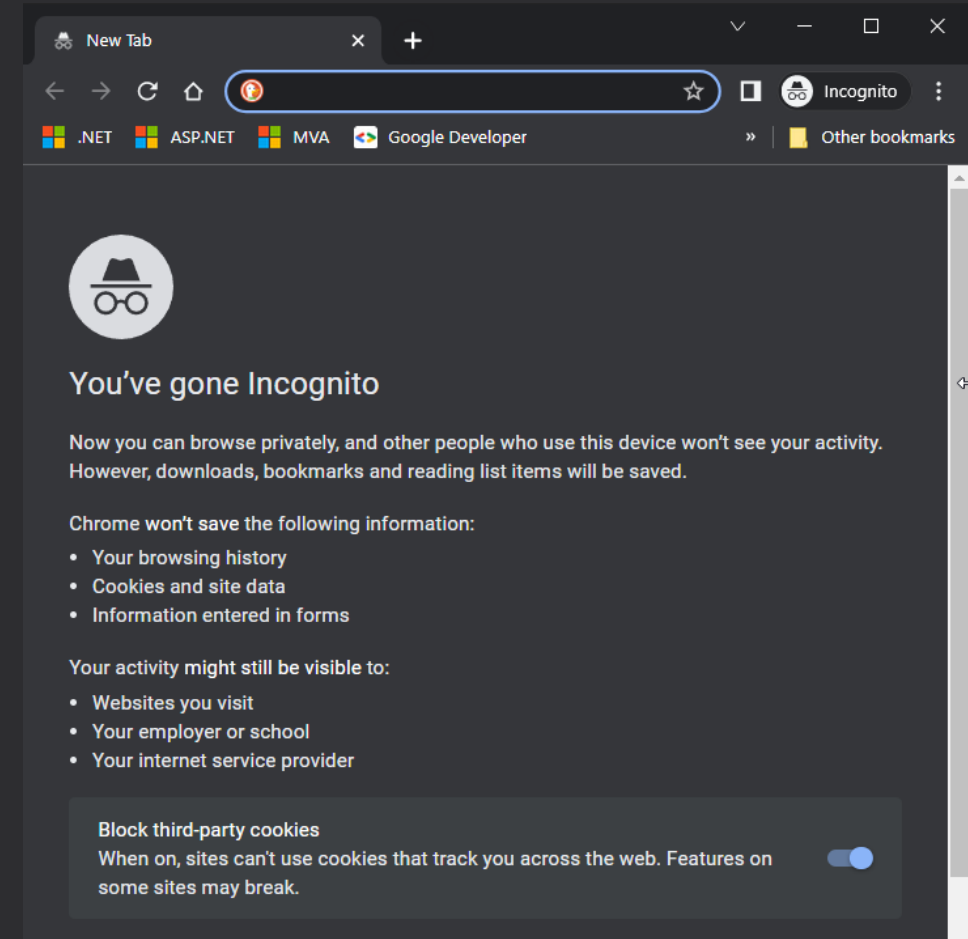
Add

No sites added



Using Private Web Browsing

- Browsers store copies of all or part of the webpages you visit on whatever computer you are using.
- Browsers also add the URL for each page you visit in the browser's History
- If you do not wish to have this information stored, you can use the browser in **Private Browsing mode**.
 - Private browsing mode is called different things by different browsers.
 - Incognito Browsing in Chrome, InPrivate Browsing in Edge, Private Browsing mode in Firefox
 - Private Browsing mode can help protect your privacy and security.
 - Ctrl+Shift+N is the shortcut for switch to Incognito mode





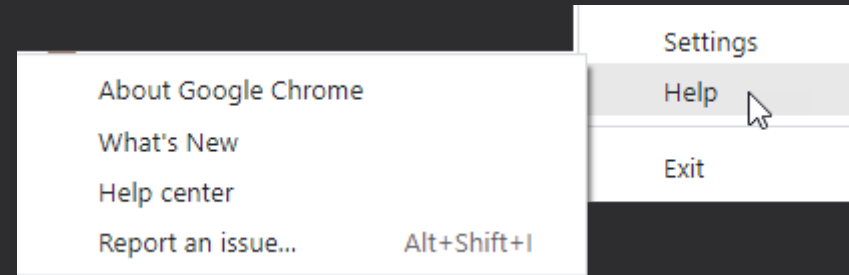
Using Private Web Browsing

- In general, when you are in Private Browsing mode, the history list, cookies, and temporary Internet files you view save only while you are in Private Browsing mode; ending the Private Browsing mode session deletes this information.
- Downloads or bookmarks saved during a Private Browsing mode session remain on the computer even after the session ends.
- Remember: Your Internet Service Provider and your employer can still track pages that you visit during Private Browsing mode.



Getting Help with Your Web Browser

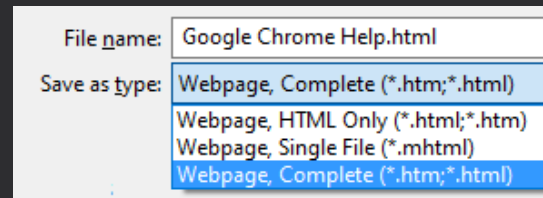
- Web browsers have extensive online help systems including information about:
 - how to use the browser
 - how to customize the browser
 - how to protect your privacy





Saving Web Page Content

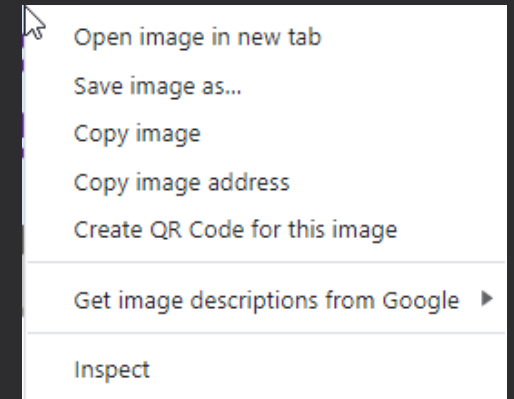
- You can save entire webpages, selected graphics, or selected portions of webpage text
- Saving Webpages
 - When you save the entire webpage, you can select different formats
 - Webpage complete
 - Webpage HTML only
 - Text file
 - Ctrl+S is the shortcut for saving a Web page.





Saving Web Page Content

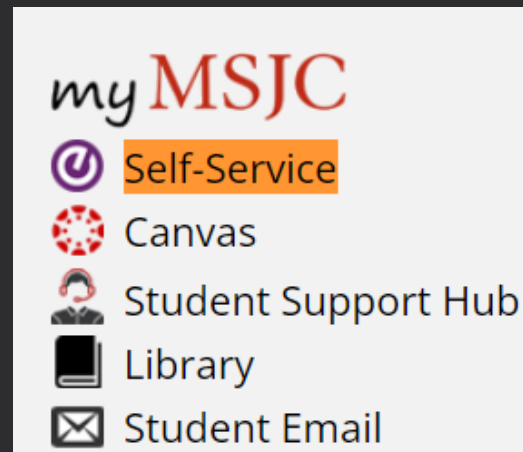
- Saving an Image from a web Page
 - You can save a graphic or picture instead of the entire webpage, usually by
 - Right-clicking the image that you want to save.
 - Clicking the option available through your browser, such as Save image, Save picture, or Save image as option.
 - Navigating to the location at which you want to save the image, and change the default filename, if necessary.
 - Clicking the Save button
- Copying Text from a web Page
 - You can copy and paste portions of a webpage to a file or email.





Efficiently Searching a Web Page

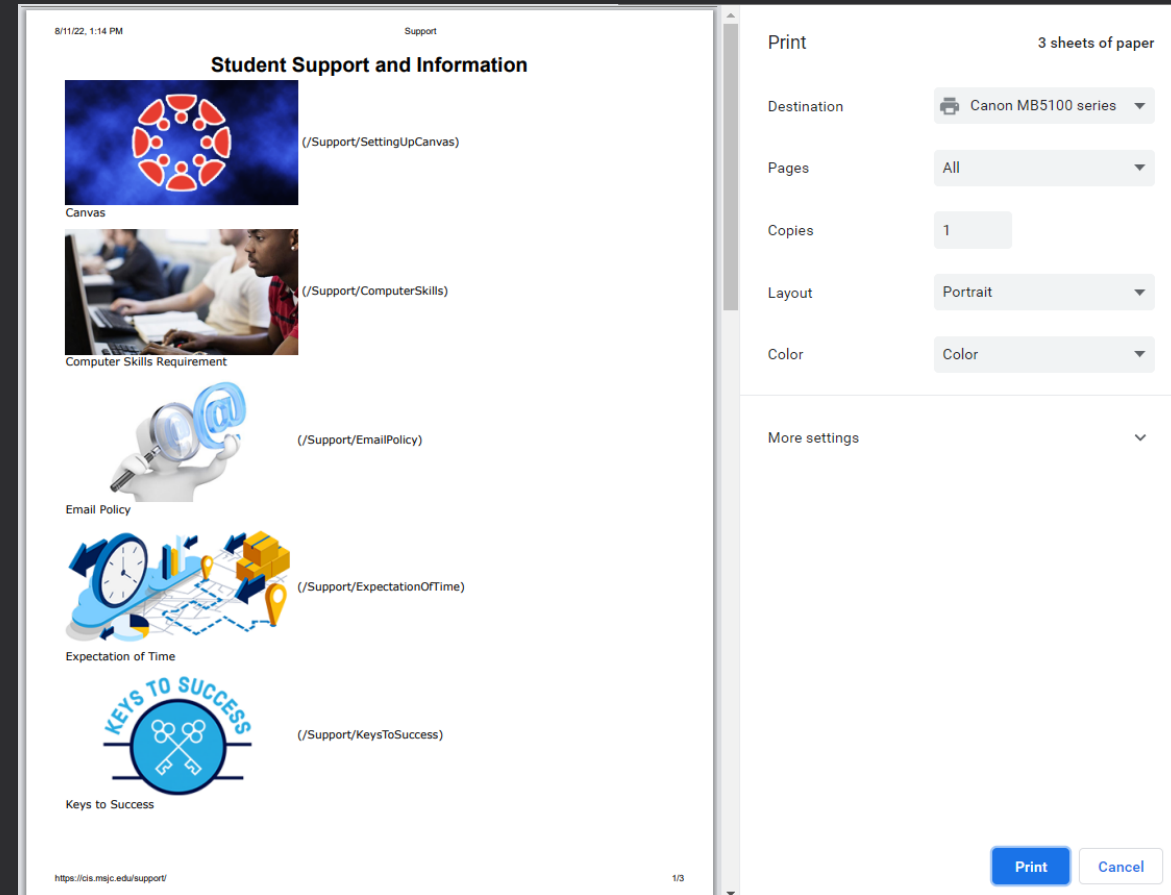
- Users can use the **Find** tool to search for specific information on a webpage.
- The Find tool will show how many instances of the word or phrase occurs on a page.
- The Find tool will highlight each instance of the word or phrase on the page.
- Use the up and down arrows in the Find tool to locate each match on a page.
- Ctrl+F is the shortcut for opening the **Find** tool





Printing a Web Page

- You might need to print a webpage, for example
 - To keep a printed page of a resource
 - To keep a printed copy of a receipt for an online purchase
 - To print a coupon to bring to a store
- The Print Preview window shows how the current webpage will look when printed.
- Adjust printer options as needed to get the best results and to save time, paper, and ink.





Managing Downloads

- Generally, Web browsers download files into the **Download** folder on your hard drive.
 - You can change the folder where downloads are saved or have the Web browser ask you where to save each file before downloading
 - Change the location from the **Downloads** page.
 - Access the Downloads page from the **Settings** page

Downloads

Location

C:\Users\Bill\Downloads

Change

Ask where to save each file before downloading

☐



Understanding Copyrighted Content

- A **copyright** is the legal right of the author or other owner of an original work to control the reproduction, distribution, and sale of that work.
- A copyright comes into existence as soon as the work is placed into a tangible form, such as a printed copy, an electronic file, or a webpage.
- U.S. copyright law has a **fair use** provision that allows a limited amount of copyrighted information to be used for purposes such as news reporting, research, and scholarship.
- The source of material used should always be cited.



Objectives

- Session 1.2

- Use Chrome's omnibox to complete calculations and conversions
- Use Chrome to translate webpages from one language to another
- Customize your Chrome browser with extensions and themes
- Scroll and zoom webpages easily and efficiently using Chrome
- Use the Edge address bar to search
- Use the Reading List and Reading View in Edge
- Customize Edge by modifying default settings for searching and reading view
- Use Edge to make and share web notes
- Share webpages on social media
- Customize your Firefox browser with Add-ons
- Use the Firefox Find feature



More Web Browser Features

- Many browsers such as Chrome, Edge, and Firefox share basic features.
- Browsers also have unique features that help them stand apart from their competitors.
- Users must investigate and decide which browser
 - they are most comfortable using
 - seems most intuitive to them
 - offers the most efficient and effective experience for user needs



Advanced Features

- Extensions
 - Extensions are small programs that can enhance and extend the functionality of your Web browser.
 - Extensions are usually quite specific and narrow in their function.
 - They have a very small “footprint”, usually appearing as a single icon on the toolbar after they are downloaded and enabled.



Advanced Chrome Features

- Getting the Most Out of the Chrome Omnibox
 - The address bar in Chrome is called Omnibox
 - Omnibox can be used to meet a variety of needs, including as a
 - Calculator
 - Conversion tool
- Using Chrome on Foreign Language Websites
 - Chrome can translate a website from one language to another.



Advanced Chrome Features

- Using Chrome Efficiently
 - Chrome provides some methods for controlled scrolling.
 - Space bar: scrolls down one page
 - Shift key: scrolls up one page
 - Ctrl key and + key: zooms in (500% limit)
 - Ctrl key and – key: zooms out (25% limit)
 - Click the zoom icon, click Reset to default in the Zoom box to reset the page to 100%
- Customizing Chrome
 - Users can customize their Chrome browser using a **theme**, which is usually centered on a particular image or idea and makes the browser experience feel more personal and fun.
 - Themes have a distinct color palette and an identifiable style that reflect a user's personality and interests.



Advanced Edge Features

- Edge is the pre-loaded Microsoft browser
 - On new Windows 10 & 11 machines; it will not run on machines running Windows versions prior to Windows 10.
- Edge comes with the operating system.
- Searching from Edge Address Bar
 - Uses the Bing search engine by default
 - Displays the answer to a question entered in the search bar as the first hit in the results page and may include links to additional information; other hits follow the answer box



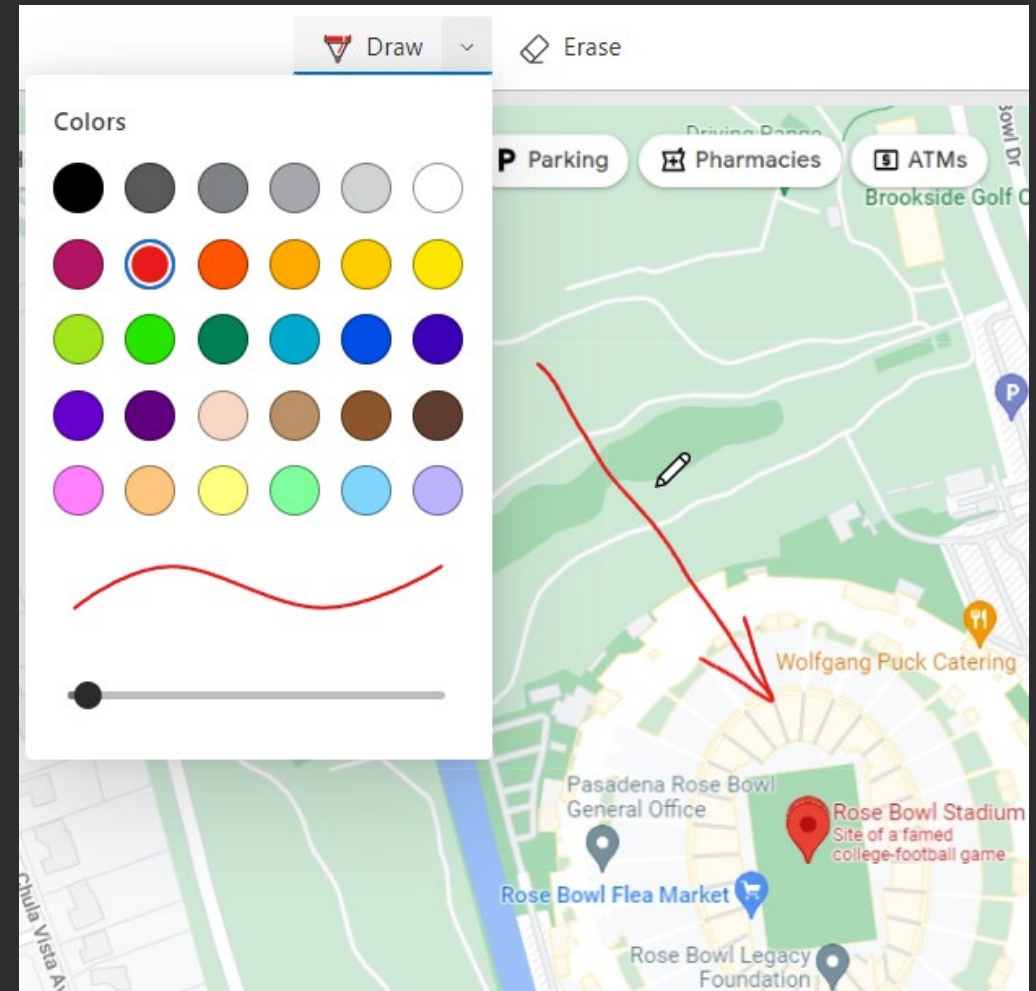
Advanced Edge Features

- Changing How Edge Searches the Web
 - You can change the setting to a different search engine when you don't want to use Bing as the default search engine
 - Navigate to the search engine you want to use as your default search engine in Bing
 - Usually go to the advanced settings for the search engine, be sure the search engine you want is selected
 - Click Add as default (or similar command)
 - The next time you use Edge to conduct a search, the search will be conducted using the search engine you set as the default
 - Edge Reading List and Reading View
 - Reading List helps users manage their online reading
 - Reading View provides a streamlined and less cluttered view of the selected reading material



Advanced Edge Features

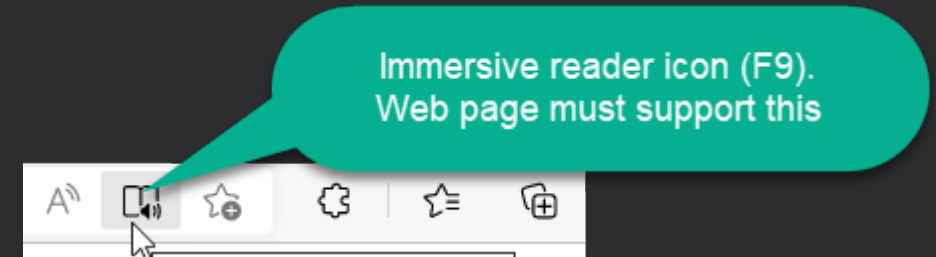
- Using Edge to Annotate and Share Webpages
 - Note compose is an Edge feature that let's you make annotations to a webpage using the following
 - a pen (with multiple colors)
 - a highlighter (also with multiple colors)
 - text notes
 - Use the shortcut Ctrl+Shift+S or click **Settings and more** button
 - Click **Web capture** on the menu that appears
 - click **Capture Area** or **Capture full page**
 - You can clip and copy your notes and share them in a variety of ways.





Advanced Edge Features

- Reading View
 - The default setting for Reading View is one of sixteen possible configurations.
 - You can customize Edge to find a combination of style and font size that best suits your needs.





Advanced Firefox Features

- Firefox is an open-source, free web browser software developed by the Mozilla Foundation.
- **Open-source** means that the copyright holder, in this case Mozilla, has given others the rights to study, modify, and distribute its software.
- Customizing Firefox
 - Allows for easy drag-and-drop modifications to its main menu of choices, allowing users to customize the menu to suit their particular needs
 - Uses Add-ons (similar to Chrome's extensions) to enhance and extend the functionality of the Firefox browser



Advanced Brave/Tor Features

- Brave

- Developed by [Brendan Eich \(Wikipedia page\)](#)
- [A brief History of JavaScript](#) (YouTube video)



- TOR

- Built-In Virtual Private Network (VPN)

