

## Browser Basics--Extensions

(Here is the link to Jim's Browser Basics from November 2020 for review:

<http://donna.members.sonic.net/Browser%20Basics.pdf> )

A **browser** (or web/internet browser) is the software you use to view information on the Internet (or World Wide Web).

The best-known **desktop** browsers are \*



Chrome (69.53%)



Safari (10.13%)



Edge (8.04%)



Firefox (7.97%)



Opera (2.16%)



Brave (percentage not included)

Chrome, Edge, Opera and Brave are all based on the Chromium software developed by Google. Each has been customized by its creator to add or remove features in the basic underlying software. Firefox is developed by an independent group known as Mozilla. Safari is from Apple and only runs on Apple devices.

*(Mobile devices have their own version of these browsers (or apps) and some are device specific. For information about mobile browsers see footnote +)*

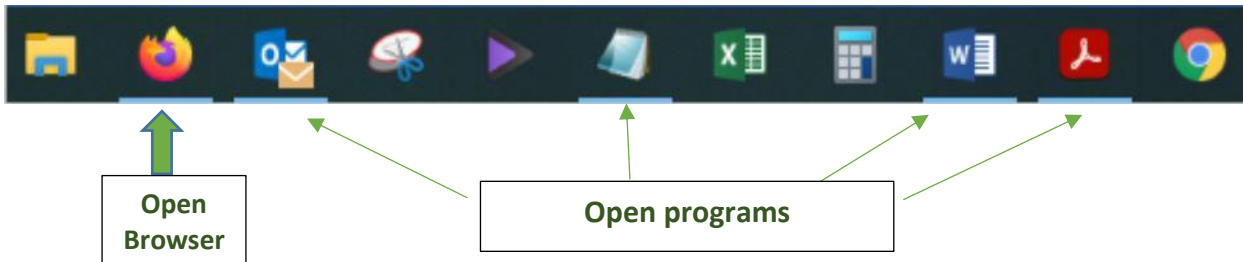
It is a good idea to have more than one browser installed, so you can repair if your browser of choice has a problem. All Browsers serve the same function, to display information from the Internet. Because they may use different underlying software, each browser may display web pages slightly differently. No matter which browser# you use, be sure it is up to date.

### **Why is knowing which browser you are using important?**

Each browser has different capabilities. Some websites work better in a specific browser. If you have an Internet issue, it is the first question Tech Support will usually ask you and will help them identify any technical issues specific to that browser. And having more than one browser installed is a good idea.

You can usually tell which browser you are using by the icon you click on to go to the Internet. But what if you already have the browser open, and are searching the internet. How can you tell which browser you are using? You can determine which browser you are using by looking at the icon in the taskbar tray at the bottom of your screen (Refer to the icons above). Many of us have the icons of the programs we use most frequently pinned to the taskbar. The browser you have open/active will have its icon underlined on the taskbar. All programs you have open/active at the moment will have their respective icons underlined as well. **Can you tell which browser is open in the screen shot below?**





If you guessed Firefox, that is correct. Notice there is also an icon for the Chrome browser on the taskbar, but it does NOT have its icon underlined. It is NOT open. The other programs I have open are Outlook, Notepad, Word, and Adobe Reader. Each of their icons is underlined with a bluish line. Very subtle but useful.

## Extensions



This is a quick introduction and overview of extensions or add-ons. For more in-depth information, check out the resources section.

### What is an extension?

A browser **extension (add-on)** is a small software module for customizing a web browser. "They may work to organize your notes, protect you from malicious actors, or just transform how that information appears. Of course, browser extensions by nature have access to all of the myriad things we do online, from shopping to checking our bank account. A poorly-secured browser or a malicious extension can expose personal information to unscrupulous eyes, risking identity theft or fraud." (<https://brave.com/learn/what-are-web-browser-extensions/>)

Browsers can allow extensions to do a variety of things including making user interface modifications, doing ad blocking, helping with password management and conducting cookie management.

### **a) Did You Know Browser Extensions Are Looking at Your Bank Account?** by Chris Hoffman, 03.09, 2021.

"Whenever you sign in to your bank account, your browser extensions watch. They can see your account balances, your transactions, and your online banking password. They see everything in your browser: passwords, credit card numbers, private messages, and the websites you visit.

Have you ever paid attention to the message you see when installing a browser extension in Chrome, for example? For most browser extensions, you'll see a message stating that the add-on can 'Read and change all your data on the websites you visit.' If the extension is malicious, it could gather all that private data of yours—from web browsing activity and the emails you type to your passwords and financial information—and send it to a remote server on the internet.

Not every extension can see your online banking account. There is a permission system for browser extensions in modern web browsers like Google Chrome, Microsoft Edge, Mozilla Firefox, and Apple Safari. Some browser extensions use much fewer permissions. However, the vast majority of browser extensions that most people use have permission to run on every website the browser loads.

If a browser extension is totally trustworthy and reliable, that's fine. The browser extension can behave responsibly and not capture any data or interfere with your banking information.

Even if all your extensions are fine right now, ...: [A safe extension could transform into malware overnight](#). A developer might sell the extension to another company, and that company might add tracking code, keyloggers, or anything else. This sort of thing is big business. An extension could display more ads in the web pages you load and track you to better target ads, or criminals could capture your passwords, personal information, and credit card numbers.

...realize the immense access you're giving to the browser extensions you install, and act accordingly. If you trust an extension's developer, then by all means, install that extension.

You might also want to limit the access that the extension has. For example, you could install an extension and configure it to only run on specific websites in Chrome or Edge, or you could use a separate browser that doesn't


have any potentially dangerous extensions installed to do your online banking.”

<https://www.howtogeek.com/716771/did-you-know-browser-extensions-are-looking-at-your-bank-account/>


**b) Browser extension security: Check to see if these add-ons can access your bank info** by Charlie Fripp, 03.15.2021

“Extensions are coded to do a limited set of functions, but some of them request access to information they don’t need if you look closer. This is troubling, given the sensitive data that could be exposed. Most popular browsers that use extensions have a system where you can regulate what extensions can see and do. Some extensions need permission to read and change site data. You can change your extensions’ permissions anytime.



Here is how on Chrome and Microsoft Edge:”

- Open your **Chrome** or **Edge** browser.
- At the top right, click Extensions . Or ‘...’>Extensions
- Click ‘Details’ for each extension listed
- Decide which permission to give the extension:
  - **When you click the extension:** This setting only allows the extension to access the current site in the open tab or window when you click the extension. If you close the tab or window, you’ll have to click the extension to turn it on again.
  - **On [current site]:** Allow the extension to automatically read and change data on the current site.
  - **On all sites:** Allow the extension to automatically read and change data on all sites.

Here is how to check permissions for **Opera**:

- Open your **Opera** browser.
- Click on Extension  shortcut in the navigation bar, >Manage Extensions
- Click on ‘Details’.
- Choose Permission (same as above)

Here is how to check permissions for **Mozilla Firefox**:

- Open your **Firefox** browser.
- Click on  in the navigation bar.
- Click **Add-ons**.
- Click on the Add-on, then click the cog  above the extension, choose ‘Manage Extension Shortcuts’. **Only choices will be how to use keyboard shortcuts to toggle pause/resume for all sites.** (see screen shots below)

“While you can’t turn off individual permissions, you can toggle the switch to disable the extension. When you want to use it again, enable it.

Mozilla is refreshingly transparent about what permissions mean and provides you with a complete breakdown about the terms and phrases used.” [https://www.komando.com/security-privacy/browser-extension-security/782731/?utm\\_medium=nl&utm\\_source=alerts&utm\\_content=2021-03-19](https://www.komando.com/security-privacy/browser-extension-security/782731/?utm_medium=nl&utm_source=alerts&utm_content=2021-03-19)

## Extension Permissions

Browser extensions that run in your web browser often require the ability to read or change everything on web pages you visit. If an extension has access to all the web pages you visit, it can do practically anything. It does not mean it IS doing these things, but it CAN. Browsers have a permission system for extensions, but many require access to EVERYTHING to work properly. "For example, an extension that modifies Google.com in some way will require access to everything on Google.com, and therefore have access to your Google account—including your email." (<https://www.howtogeek.com/188346/why-browser-extensions-can-be-dangerous-and-how-to-protect-yourself/>)

**Chrome** extensions permissions:

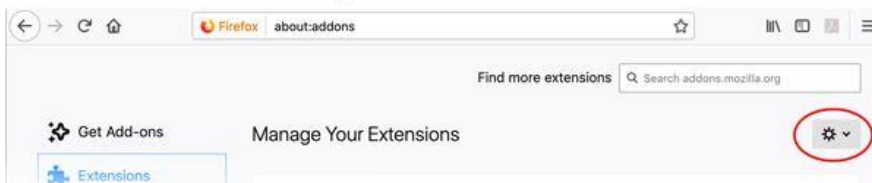
- **When you click the extension:** This setting only allows the extension to access the current site in the open tab or window when you click the extension. If you close the tab or window, you'll have to click the extension to turn it on again.
- **-On [current site]:** Allow the extension to automatically read and change data on the current site.
- **-On all sites:** Allow the extension to automatically read and change data on all sites.  
([https://support.google.com/chrome\\_webstore/answer/2664769?hl=en&ref\\_topic=6238977](https://support.google.com/chrome_webstore/answer/2664769?hl=en&ref_topic=6238977))

**Edge:** Click on Menu>extensions> click 'details' in the installed extension> Site access: **'On all sites, On click, On specified sites'**

**Firefox** handles its add-ons permissions a little differently. (<https://support.mozilla.org/en-US/kb/permission-request-messages-firefox-extensions>)

1. Click the menu button ☰, click **Add-ons** and select **Extensions**.

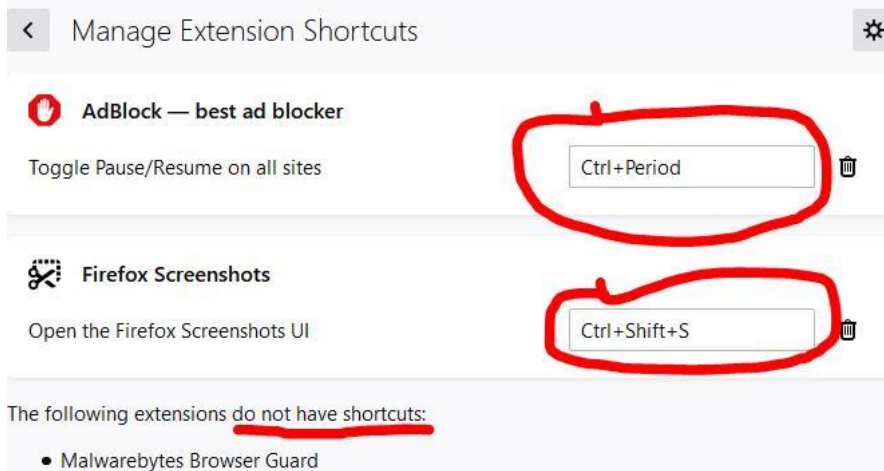
2. Click the *Tools for all add-ons* cogwheel.



3. Click **Manage Extension Shortcuts** in the menu.

4. You will see the shortcut options (if available) for your installed add-ons.

There are keyboard shortcuts to turn the extensions on or off (if available).



(<https://support.mozilla.org/en-US/kb/manage-extension-shortcuts-firefox>)



**Opera:** Menu>Extensions button >Click on the Extensions>Details> Site access: ‘**On all sites, On click, On specified sites**’

### **Where to get extensions?**

**Chrome:** Open Chrome, go to <https://chrome.google.com/webstore/category/extensions> and search.

**Firefox:** Click on the menu button>click on Add-ons> use the search feature at the top of this page or "Find more add-ons" at the bottom.

**Edge:** Click on menu> click on Extensions> click on Get extensions for Microsoft Edge

**Opera:** You can download the Chrome Extensions add-on from Google Chrome's Web Store, choose a chrome extension and click the Add to Opera button. Or use the extensions for Opera from here:

<https://addons.opera.com/en/extensions/>

### **Take Aways**

Most of us probably don't have many extensions installed, but we should be aware of them.

- Your browser is your connection to the internet. Use only trustworthy and necessary extensions.
- Keep your browser up to date.
- Know what extensions may be installed for each browser you use.
- When using extensions, check their permissions. Be aware of the extensions status for sites you visit.. (always on, when you click on the extension, or specific sites only).
- Consider disabling extensions or using a browser without extensions to access sensitive data sites: your health care provider, banks, stocks and investment sites, and any other sites that hold your personal information such as credit card companies, mortgage companies and credit bureaus.
- Uninstall any extensions you don't use/need.

### **Resources:**

[https://support.google.com/chrome\\_webstore/answer/2664769?hl=en#zippy=%2Carrange-on-your-toolbar](https://support.google.com/chrome_webstore/answer/2664769?hl=en#zippy=%2Carrange-on-your-toolbar)

<https://www.lifewire.com/use-chrome-to-control-extension-permissions-4587281>

<https://support.mozilla.org/en-US/kb/permission-request-messages-firefox-extensions>

<https://support.microsoft.com/en-us/microsoft-edge/change-site-access-permissions-for-extensions-in-microsoft-edge-7d1c889d-e267-4be0-15d4-3ed5d0c82ef5>

<https://www.groovypost.com/howto/use-google-chrome-extensions-in-opera-browser/>

<https://www.malwarebytes.com/browserguard/>

<https://www.tomsguide.com/round-up/best-adblockers-privacy-extensions>

### **Tips to accessing the safety of an extension**

<https://support.mozilla.org/en-US/kb/tips-assessing-safety-extension>

<https://www.techtimes.com/articles/245138/20190826/are-your-chrome-extensions-safe-here-s-what-you-can-do-to-find-out.htm>

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i\*(world-wide figures) <https://gs.statcounter.com/browser-market-share/desktop/worldwide>

+<https://www.lifewire.com/list-of-mobile-web-browsers-3486250>

#<https://www.whatsmybrowser.org/>