

Assignments - 4

Q.1

Web Browser Extensions - How risky are extensions and how can you choose safe ones.

Ans.

Web browser extensions are double-edged swords. On one hand they can add valuable functionality, streamlining tasks and enhancing your browsing experience. On the other hand malicious extensions pose significant security risks. They can act as Trojan horses, stealthily stealing your data, injecting intrusive ads, or even hijacking your entire browsing session for nefarious purposes. So how do you navigate this minefield and choose safe extensions.

First prioritize extensions from reputable developers. Stick to established companies with a proven track record of security and privacy. Check extension reviews on trusted platforms and don't be swayed by inflated ratings or overly promotional descriptions. Remember if the offer seems too good to be true, it probably is.

Second scrutinize the permissions requested by each extension. Don't grant carte blanche access to your data and browsing activity. Be wary of extensions that require excessive permissions beyond their core functionality. Only install extensions that genuinely need the requested access to perform their advertised tasks.

Third stay updated just like your browser itself extensions require regular updates to address security vulnerabilities and fix bugs. Enable automatic updates for your extensions whenever possible and manually check for updates periodically.

Q.2

Ans 1

Securing your browser - Best methods & their trade offs for a safer browsing experience. (2)

Securing your web browser is not a one size fits all solution. Instead it's about layering different defenses to create a robust security posture. Here are some key methods and their trade offs to consider.

Security Plugins: - Tools like ad blockers and anti malware extensions offer valuable protection against malicious websites and intrusive ads. However they can sometimes slow down your browsing ~~less~~ experience, especially if you have many plugins running simultaneously. Weigh the security benefits against the potential performance impact and choose plugins that offer a good balance.

Disabling unnecessary features: - Modern browsers come loaded with features that cater to diverse needs. However not all features are created equal. Disabling features like location tracking cookies for third party sites and automatic form-filling can significantly enhance your privacy. But remember some features provide convenience benefits, so disabling them might require adjustments to your browsing habits.

Keeping your browser updated: - This might seem obvious but it's crucial. Browser updates often include crucial security patches that address newly discovered vulnerabilities. Leaving your browser outdated is like leaving your browser front door wide open - attackers can easily exploit to gain access.

Q.3

Two-Step authentication, compare methods, strengths & weaknesses & choose the right one. (3)

Ans:-

Two Step authentication adds an extra layer of security to your online accounts going beyond just a password. Here is a breakdown of common methods and their pros and cons.

SMS verification: convenient and widely available but vulnerable to SIM-swapping attacks where attackers hijack your phone number. Not for SMS only as a backup option of low-sensitivity accounts.

Authenticator apps: Generate unique codes for each login attempt on your smartphone, offering good security and offline functionality. However require constant smartphone access and can be inconvenient if you lose your phone.

Security keys: Physical devices plugged into your computer or used near your phone via near field communication for ultra-strong protection. Highly resistant to phishing and other attacks but require compatible devices and might not be suitable for all situations.

So, which one is right for you? Consider the sensitivity of the account you are protecting and your own technical comfort level. For critical accounts like email or banking, security keys are the gold standard. For everyday accounts like social media authenticator apps offer a good balance.