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Cybersecurity Prework

Research the following concepts about the Google Chrome web browser. Answer these questions about each concept.

1. What is *cache*, and why is it relevant to broader cybersecurity and privacy issues?
    A. With regards to computing, a *cache* can be a software (or hardware) component within an operating system (or machine) whose primary function is to store data in such a way that it may be easily recalled or served to a request made by the user, or the system. A cache (which is generally small) differentiates itself from other methods of storage and recall by being highly efficient and fast. An example of a cache can be found in any internet browser; the cache is responsible for collecting cookies and other website data so that a website can quickly be reloaded. Since a cache is in essence a collection of saved computations that are optimized for quick recall, it may be necessary to empty the cache if a new computation or applied setting does not register in the current cache. With regards to privacy and security, regular mode browsing of the internet creates an evidence trail, as well as tasks performed by the OS kernel or through the command line/terminal.

2. What is an *incognito window*, and why is it relevant to broader cybersecurity and privacy issues?
    A. An *incognito window* is in reference to a special mode (or particular collection of settings) for an internet browser window session. What makes this window session unique within the browser is that the cache is temporary and isolated to that particular session instance, and will then be dumped once the session is over. This may be useful when browsing a website that you do not wish to recognize or register previous settings that have been collected in the overall browser cache. In essence, the cache is unique to the session, and empties after the session terminated. With regards to privacy and security, using an incognito window to access websites will prevent the website from loading previously applied settings, and registering new data or cookies to the overall browser cache. It should be noted that the overall browser cache can also be emptied, but it is more efficient and practical to use incognito mode to prevent data from being collected (or applied) than to constantly be emptying the overall browser cache. Moreover, that overall browser cache is helpful when logging into the same website often as it helps automate the login process through collected cookies.

3. What are *Access Controls* in Google Drive, and why is it relevant to broader cybersecurity and privacy issues?
    A. Within a Google Drive account, the single, primary user has administrative-level access to all their data stored within the account. **Access controls** allow the user to give **view** (read) or **edit** (write) access to other users that are not the single,

primary user. This is achieved through selecting different levels of access for individual users (referenced by email), or by creating a link that is accessible to any user outside the organization (or only users within an organization). In regards to privacy and security, it is important to understand how to assign and change access permissions when letting outside users have access to your Google Drive files.