DELETING WEB BROWSER DATA

BACKGROUND

Web browsers that store sensitive data, such as cookies, typically allow users to either manually delete such data or configure the web browsers to delete all such data, such as when terminating execution of the web browser. Unfortunately, while such mechanisms provide a modicum of protection against malicious actors who attempt to access such data, they require a level of user awareness and diligence that is not always available.

SUMMARY

In one aspect of the present disclosure, a method is provided for deleting web browser data, the method including maintaining a set of hostnames of Uniform Resource Locators, where a hostname of a Uniform Resource Locator is added to the set of hostnames responsive to the Uniform Resource Locator being accessed by a web browser, and where the hostname of the Uniform Resource Locator is added to the set of hostnames responsive to determining that each condition in a set of one or more predefined grouping conditions that define a logical group is met by the Uniform Resource Locator, and deleting one or more types of data maintained by the web browser in association with Uniform Resource Locators associated with the hostnames in the set of hostnames, where the deleting is performed in accordance with a predefined deletion policy that specifies the one or more types of data that are to be deleted and one or more predefined deletion conditions, and where the deleting is performed responsive to determining that each condition in the set of one or more predefined deletion conditions is met and determining that the web browser is not currently accessing any Uniform Resource Locator associated with the hostnames in the set of hostnames.

In an example the predefined grouping conditions includes a condition that logically groups Uniform Resource Locators that have a predefined common Uniform Resource Locator portion.

In an example the predefined grouping conditions includes a condition that logically groups Uniform Resource Locators that belong to a predefined group of Uniform Resource Locators.

In an example the predefined grouping conditions includes a condition that logically groups Uniform Resource Locators that are associated with a predefined website category.

In an example the predefined grouping conditions includes a condition that logically groups Uniform Resource Locators that are associated with a predefined risk reputation.

In an example the deleting is performed after a predefined time period elapses after determining that the web browser is not currently accessing any Uniform Resource Locator associated with the hostnames in the set of hostnames.

In an example the deletion policy specifies one or more logical groups of hostnames to which the deletion policy is to be applied.

In an example the present disclosure further includes configuring the web browser to perform the maintaining and the deleting.

In another aspect of the present disclosure, a system is provided for deleting web browser data, the system including a hostname manager configured to maintain a set of hostnames of Uniform Resource Locators, where a hostname of a Uniform Resource Locator is added to the set of hostnames responsive to the Uniform Resource Locator being accessed by a web browser, and where the hostname of the Uniform Resource Locator is added to the set of hostnames responsive to determining that each condition in a set of one or more predefined grouping conditions that define a logical group is met by the Uniform Resource Locator, and a data deletion manager configured to delete one or more types of data maintained by the web browser in association with Uniform Resource Locators associated with the hostnames in the set of hostnames, where the data deletion manager is configured to delete the one or more types of data in accordance with a predefined deletion policy that specifies the one or more types of data that are to be deleted and one or more predefined deletion conditions, and where the data deletion manager is configured to delete the one or more types of data responsive to determining that each condition in the set of one or more predefined deletion conditions is met and determining that the web browser is not currently accessing any Uniform Resource Locator associated with the hostnames in the set of hostnames.

In another example the data deletion manager is configured to delete the one or more types of data after a predefined time period elapses after determining that

the web browser is not currently accessing any Uniform Resource Locator associated with the hostnames in the set of hostnames.

In another example the hostname manager and the data deletion manager are assembled with the web browser.

BRIEF DESCRIPTION OF THE DRAWINGS

Aspects of the invention will be understood and appreciated more fully from the following detailed description taken in conjunction with the appended drawings in which:

Fig. 1A is a simplified conceptual illustration of a system for deleting web browser data, constructed and operative in accordance with an embodiment of the invention;

Fig. 1B is a simplified flowchart diagram of an exemplary method of operation of the system of Fig. 1A, operative in accordance with an embodiment of the invention;

Fig. 2 is a source code example for adding a URL hostname to a set of hostnames, operative in accordance with an embodiment of the invention;

Fig. 3 is a source code example for detecting inactivity of webpages, operative in accordance with an embodiment of the invention;

Fig. 4 is an example showing how sets of URL hostnames may be maintained by a Google Chrome™ web browser using IndexedDB, operative in accordance with an embodiment of the invention; and

Fig. 5 is a simplified method of storing URL-related data on a computer, operative in accordance with an embodiment of the invention.

DETAILED DESCRIPTION

Reference is now made to Fig. 1A, which is a simplified conceptual illustration of a system for deleting web browser data, constructed and operative in accordance with an embodiment of the invention, and additionally to Fig. 1B, which is a simplified flowchart diagram of an exemplary method of operation of the system of Fig. 1A, operative in accordance with an embodiment of the invention. In the system of Fig. 1A and method of Fig. 1B, a web browser 100 is configured to incorporate the functionality of conventional web browsers, such as those based on the Google™ Chromium™ architecture, and is